

Crystal structure and packing energy calculations of (+)-6-aminopenicillanic acid

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SUPPLEMENTARY INFORMATION

Details of PIXELC calculations

The RETCIF, RETCOR and RETCHA modules of the CLP (Gavezzotti, 2011) package and user input were used to prepare input files for the PIXELC calculations.

A. Gavezzotti, *New J. Chem.* 2011, **35**, 1360-1368.

The contents of the .inp file for the calculations are as follows:

```
6-APA xx 'P 21 21 21
1 0 26 0
0.000 0.000
1 17 -0.4010 0.0000
2 13 -0.0460 0.0000
3 13 0.0302 0.0000
4 34 0.1433 0.0000
5 13 -0.0926 0.0000
6 13 -0.0827 0.0000
7 10 1.0362 0.0000
8 10 1.3909 0.0000
9 27 -1.2316 0.0000
10 27 -1.2215 0.0000
11 13 -0.9015 0.0000
12 13 -0.9037 0.0000
13 16 -0.6816 0.0000
14 27 -1.1578 0.0000
15 3 0.2880 0.0000
16 3 0.2692 0.0000
17 3 0.3281 0.0000
18 3 0.2975 0.0000
19 3 0.2959 0.0000
20 3 0.2961 0.0000
21 3 0.2958 0.0000
22 3 0.2967 0.0000
23 3 0.2957 0.0000
24 8 0.4860 0.0000
25 8 0.4835 0.0000
26 8 0.4870 0.0000
0.000 30.000 0
6.1954 10.4543 14.7654 90.0000 90.0000 90.0000
1.000 0.000 0.000 0.000 1.000 0.000 0.000 0.000 1.000
0.000 0.000 0.000
0.998498 -0.050071 -0.022244
0.034288 0.887723 -0.459100
0.042735 0.457647 0.888106
4.276260 6.273787 11.257248
4
1.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 1.00
0.000000 0.000000 0.000000
-1.00 0.00 0.00 0.00 -1.00 0.00 0.00 0.00 1.00
0.500000 0.000000 0.500000
1.00 0.00 0.00 0.00 -1.00 0.00 0.00 0.00 -1.00
0.500000 0.500000 0.000000
-1.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 -1.00
0.000000 0.500000 0.500000
```

The contents of the .pri file from the PIXELC calculations are as follows:

```
PIXEL intermolecular energy 26.4.2012
6-APA xx 'P 21 21 21

damp factors for Edisp, Epol coeffs for Erep
          3.000  150.00  4800.00  1200.000

First molecule ( A ) data
total charge of fragment      0.00

Atoms type,  x,      y,      z,      Z RvdW  polar.  elneg  I/beta  point  charge
17  N   0.0265  -0.9203  -0.3518  5.0 1.64  1.000   3.00  0.534  0.50 -0.16
13  C  -0.5241  -0.4999  0.9211  4.0 1.77  1.050   2.50  0.414  0.90 -0.02
13  C  -0.5808  1.0727  0.8766  4.0 1.77  1.050   2.50  0.414  0.90  0.01
34  S   0.7074  1.5965  -0.3780  6.0 1.81  3.000   2.50  0.381  0.40  0.06
13  C   1.1140  -0.1017  -0.8941  4.0 1.77  1.050   2.50  0.414  0.90 -0.04
13  C   0.6885  -0.5991  -2.2998  4.0 1.77  1.050   2.50  0.414  0.90 -0.03
10  C  -0.5608  -1.1526  -1.5688  4.0 1.77  1.050   2.50  0.414  0.90  0.42
10  C   0.3518  -1.0273  2.0685  4.0 1.77  1.050   2.50  0.414  0.90  0.57
27  O  -0.2373  -1.4408  3.1013  6.0 1.58  0.750   3.50  0.500  0.35 -0.50
27  O   1.5878  -0.9958  1.8914  6.0 1.58  0.750   3.50  0.500  0.35 -0.50
13  C  -0.2695  1.7410  2.2081  4.0 1.77  1.050   2.50  0.414  0.90 -0.37
13  C  -1.9525  1.5090  0.3769  4.0 1.77  1.050   2.50  0.414  0.90 -0.37
16  N   0.4614  0.3646  -3.3840  5.0 1.64  1.000   3.00  0.534  0.50 -0.28
27  O  -1.6288  -1.6029  -1.9022  6.0 1.58  0.750   3.50  0.500  0.35 -0.47
 3  H  -1.5005  -0.9452  1.0423  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H   2.1569  -0.3093  -0.7055  1.0 1.10  0.390   2.10  0.500  0.40  0.11
 3  H   1.3399  -1.1616  -2.9522  1.0 1.10  0.390   2.10  0.500  0.40  0.13
 3  H   0.7151  1.4444  2.5381  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H  -0.3011  2.8138  2.0885  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H  -1.0015  1.4389  2.9424  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H  -2.7189  1.0623  0.9928  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H  -2.0295  2.5850  0.4302  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 3  H  -2.0813  1.1891  -0.6466  1.0 1.10  0.390   2.10  0.500  0.40  0.12
 8  H   1.2094  1.0727  -3.3913  1.0 1.10  0.390   2.10  0.500  0.40  0.20
 8  H  -0.4678  0.8024  -3.3074  1.0 1.10  0.390   2.10  0.500  0.40  0.20
 8  H   0.4666  -0.1634  -4.2683  1.0 1.10  0.390   2.10  0.500  0.40  0.20

Density file title 6-APA xx 'P 21 2 fragm 1

min and max original density 0.0000E+00 0.3782E+02

Condensation level      4
Density steps,original 120 120 160 and condensed 30 30 40
steps and pixel vol(A) 0.3200 0.3200 0.3200 0.03277
original electron number 78.00131 remaining-pixels 77.99979 16439
q min and max 0.1000E-05 9999.00
screening: electrons out low and high 0.1521E-02 0.0000E+00
atom 1 condens.basin and real charge -4.841 5.000
atom 2 condens.basin and real charge -4.026 4.000
atom 3 condens.basin and real charge -4.209 4.000
atom 4 condens.basin and real charge -5.812 6.000
atom 5 condens.basin and real charge -4.253 4.000
atom 6 condens.basin and real charge -4.128 4.000
atom 7 condens.basin and real charge -4.164 4.000
atom 8 condens.basin and real charge -4.103 4.000
atom 9 condens.basin and real charge -6.282 6.000
atom 10 condens.basin and real charge -6.424 6.000
atom 11 condens.basin and real charge -4.334 4.000
atom 12 condens.basin and real charge -4.323 4.000
atom 13 condens.basin and real charge -4.947 5.000
atom 14 condens.basin and real charge -6.047 6.000
atom 15 condens.basin and real charge -0.858 1.000
atom 16 condens.basin and real charge -0.805 1.000
atom 17 condens.basin and real charge -0.896 1.000
atom 18 condens.basin and real charge -0.854 1.000
atom 19 condens.basin and real charge -0.866 1.000
atom 20 condens.basin and real charge -0.854 1.000
atom 21 condens.basin and real charge -0.868 1.000
atom 22 condens.basin and real charge -0.912 1.000
atom 23 condens.basin and real charge -0.864 1.000
atom 24 condens.basin and real charge -0.791 1.000
atom 25 condens.basin and real charge -0.776 1.000
atom 26 condens.basin and real charge -0.764 1.000
polarizability,raw, tot, renorm 0.20756E+02 0.20330E+02 0.20330E+02
renormalized total charges 78.000000 -78.000000
```

```

no. of charge points per atom
1 345 2 310 3 227 4 1822 5 440 6 526 7 530 8 448 9 1228 10 1079 11 935 12
1007
13 642 14 1212 15 401 16 490 17 522 18 377 19 524 20 482 21 516 22 534 23 327 24
514
25 464 26 537

```

==== Start energy calculations =====

```

collision parameter      0.160

center of mass distance limits      0.00  30.00

cell parameters      6.195  10.454  14.765  90.00  90.00  90.00
Space group matrices

1.0  0.0  0.0  0.0  1.0  0.0  0.0  0.0  1.0  0.000  0.000  0.000  x  ,  y
,  z
-1.0  0.0  0.0  0.0  -1.0  0.0  0.0  0.0  1.0  0.500  0.000  0.500  0.5-x  ,  -y
,  0.5+z
1.0  0.0  0.0  0.0  -1.0  0.0  0.0  0.0  -1.0  0.500  0.500  0.000  0.5+x  ,  0.5-y ,
0.5-z
-1.0  0.0  0.0  0.0  1.0  0.0  0.0  0.0  -1.0  0.000  0.500  0.500  -x  ,
0.5+y  ,  0.5-z
cells along a,b,c for lattice search      13  9  9
465 symm operations included

```

Computing cell dipole energy

A fragm, dipole mom.components and module, Debye

```
0.265  14.410 -13.594  19.812
```

A fragm, dipole mom.components and module, Debye

```
-0.265 -14.410 -13.594  19.812
```

A fragm, dipole mom.components and module, Debye

```
0.265 -14.410  13.594  19.812
```

A fragm, dipole mom.components and module, Debye

```
-0.265  14.410  13.594  19.812
```

cell dipole moment components and module,debye

```
0.000 -0.000  0.000  0.000 energy -0.0
```

A molecule, Epol,damp,no-damp -141.4 -1813.6

A...A A...B B...B total energies

```
coul -379.1  0.0  0.0 -379.1
```

```
disp -133.7  0.0  0.0 -133.7
```

```
rep 266.3  0.0  0.0 266.3
```

polarization energy -141.4

Pixel coul,pol,disp,rep,celdip,tot., per mol.

```
#6-APA xx -379.1 -141.4 -133.7 266.3 -0.0 -387.9
```

```
#6-APA xx Atom-atom energies LP,C,total -89.2 -127.6 -216.7
```

```
#6-APA xx cell dip moment(D) and Eceldip./molecule 0.000 -0.0
```

this is part of the lattice Coulombic energy

The contents of the .mlc file from the PIXELC calculations are as follows:

```

1 465 6-APA xx 'P 21 2 symmetry operations
1 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 0.0000 0.0000 0.0000
2 -1.0 0.0 0.0 0.0 -1.0 0.0 0.0 0.0 1.0 0.5000 0.0000 0.5000
3 1.0 0.0 0.0 0.0 -1.0 0.0 0.0 0.0 -1.0 0.5000 0.5000 0.0000
4 -1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 -1.0 0.0000 0.5000 0.5000
5 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -4.0000 -1.0000 0.0000
6 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -4.0000 0.0000 -1.0000
7 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -4.0000 0.0000 0.0000
8 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -4.0000 0.0000 1.0000
9 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -4.0000 1.0000 0.0000
10 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 -2.0000 0.0000
11 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 -1.0000 -1.0000
12 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 -1.0000 0.0000
13 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 -1.0000 1.0000
14 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 0.0000 -1.0000
15 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 0.0000 0.0000
16 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 0.0000 1.0000
17 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 1.0000 -1.0000
18 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 1.0000 0.0000
19 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 1.0000 1.0000
20 1.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 1.0 -3.0000 2.0000 0.0000

```


416	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-1.5000	1.5000
417	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-1.5000	2.5000
418	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-0.5000	0.5000
419	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-0.5000	1.5000
420	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-0.5000	2.5000
421	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	-0.5000	3.5000
422	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	0.5000	0.5000
423	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	0.5000	1.5000
424	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	0.5000	2.5000
425	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	0.5000	3.5000
426	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	1.5000	0.5000
427	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	1.5000	1.5000
428	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	1.5000	2.5000
429	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	2.0000	2.5000	1.5000
430	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-2.5000	1.5000
431	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-1.5000	0.5000
432	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-1.5000	1.5000
433	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-1.5000	2.5000
434	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-0.5000	0.5000
435	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-0.5000	1.5000
436	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	-0.5000	2.5000
437	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	0.5000	0.5000
438	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	0.5000	1.5000
439	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	0.5000	2.5000
440	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	1.5000	0.5000
441	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	1.5000	1.5000
442	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	1.5000	2.5000
443	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	3.0000	2.5000	1.5000
444	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-1.5000	0.5000
445	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-1.5000	1.5000
446	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-1.5000	2.5000
447	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-0.5000	0.5000
448	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-0.5000	1.5000
449	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	-0.5000	2.5000
450	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	0.5000	0.5000
451	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	0.5000	1.5000
452	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	0.5000	2.5000
453	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	1.5000	0.5000
454	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	1.5000	1.5000
455	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	4.0000	1.5000	2.5000
456	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	-1.5000	1.5000
457	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	-0.5000	0.5000
458	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	-0.5000	1.5000
459	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	-0.5000	2.5000
460	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	0.5000	0.5000
461	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	0.5000	1.5000
462	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	0.5000	2.5000
463	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	5.0000	1.5000	1.5000
464	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	6.0000	-0.5000	1.5000
465	-1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-1.0	6.0000	0.5000	1.5000
-379.1	-141.4	-133.7		266.3	-387.9		-89.2	-127.6	-216.7			

a...a energies

1	2	15.547	3.9	-0.1	-0.0	0.0	3.8	-0.1	2.4
1	3	23.876	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.6
1	4	18.150	2.5	-0.0	-0.0	0.0	2.4	-0.1	0.7
1	5	26.896	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.3
1	6	28.847	0.7	-0.0	-0.0	0.0	0.7	-0.0	0.4
1	7	24.782	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.6
1	8	28.847	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.3
1	9	26.896	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.5
1	10	27.975	0.1	-0.0	-0.0	0.0	0.1	-0.0	-0.2
1	11	25.938	1.3	-0.0	-0.0	0.0	1.3	-0.0	0.6
1	12	21.325	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.3
1	13	25.938	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	14	23.737	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.7
1	15	18.586	3.3	-0.0	-0.0	0.0	3.3	-0.1	1.4
1	16	23.737	0.9	-0.0	-0.0	0.0	0.8	-0.0	0.4
1	17	25.938	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	0.0
1	18	21.325	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.8
1	19	25.938	1.3	-0.0	-0.0	0.0	1.2	-0.0	0.6
1	20	27.975	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	21	28.438	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.3
1	22	24.304	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.4
1	23	28.438	-1.5	-0.0	-0.0	0.0	-1.5	-0.0	-0.8
1	24	21.928	2.0	-0.0	-0.0	0.0	2.0	-0.0	0.9
1	25	16.212	2.0	-0.0	-0.0	0.0	1.9	-0.1	-0.0
1	26	21.928	-2.2	-0.0	-0.0	0.0	-2.2	-0.0	-1.1
1	27	19.276	1.0	-0.0	-0.0	0.0	1.0	-0.1	1.0

1	28	12.391	9.9	-0.1	-0.1	0.0	9.6	-0.4	4.2
1	29	19.276	0.9	-0.0	-0.0	0.0	0.9	-0.1	0.5
1	30	21.928	-2.0	-0.0	-0.0	0.0	-2.0	-0.0	-0.5
1	31	16.212	2.2	-0.0	-0.0	0.0	2.1	-0.1	1.1
1	32	21.928	2.0	-0.0	-0.0	0.0	2.0	-0.0	1.0
1	33	28.438	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.5
1	34	24.304	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.1
1	35	28.438	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.4
1	36	26.336	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.4
1	37	21.807	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.8
1	38	26.336	-2.5	-0.0	-0.0	0.0	-2.5	-0.0	-1.2
1	39	19.123	2.9	-0.0	-0.0	0.0	2.9	-0.1	1.4
1	40	12.152	0.7	-0.3	-0.1	0.0	0.3	-0.4	-2.4
1	41	19.123	-6.0	-0.0	-0.0	0.0	-6.1	-0.1	-2.7
1	42	16.012	-0.0	-0.1	-0.0	0.0	-0.1	-0.1	1.2
1	43	6.195	40.4	-13.3	-20.4	18.5	25.3	-12.0	16.3
1	44	16.012	0.0	-0.1	-0.0	0.0	-0.1	-0.1	0.4
1	45	19.123	-5.7	-0.0	-0.0	0.0	-5.7	-0.1	-2.0
1	46	12.152	0.9	-0.4	-0.1	0.0	0.4	-0.5	-0.3
1	47	19.123	2.9	-0.0	-0.0	0.0	2.9	-0.1	1.4
1	48	26.336	-2.4	-0.0	-0.0	0.0	-2.4	-0.0	-1.0
1	49	21.807	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.6
1	50	26.336	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.4
1	51	25.597	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	52	20.909	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.9
1	53	25.597	-2.9	-0.0	-0.0	0.0	-2.9	-0.0	-1.4
1	54	18.092	3.3	-0.0	-0.0	0.0	3.3	-0.1	1.6
1	55	10.454	-1.8	-1.1	-0.3	0.0	-3.2	-1.0	-4.3
1	56	18.092	-8.9	-0.1	-0.0	0.0	-9.0	-0.1	-3.6
1	57	29.531	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	0.0
1	58	14.765	-1.4	-0.2	-0.1	0.0	-1.6	-0.2	0.5
1	59	14.765	-1.4	-0.2	-0.1	0.0	-1.6	-0.2	0.5
1	60	29.531	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	0.0
1	61	18.092	-8.9	-0.1	-0.0	0.0	-9.0	-0.1	-3.6
1	62	10.454	-1.8	-1.1	-0.3	0.0	-3.2	-1.0	-4.3
1	63	18.092	3.3	-0.0	-0.0	0.0	3.3	-0.1	1.6
1	64	25.597	-2.9	-0.0	-0.0	0.0	-2.9	-0.0	-1.4
1	65	20.909	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.9
1	66	25.597	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	67	26.336	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.4
1	68	21.807	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.6
1	69	26.336	-2.4	-0.0	-0.0	0.0	-2.4	-0.0	-1.0
1	70	19.123	2.9	-0.0	-0.0	0.0	2.9	-0.1	1.4
1	71	12.152	0.9	-0.4	-0.1	0.0	0.4	-0.5	-0.3
1	72	19.123	-5.7	-0.0	-0.0	0.0	-5.7	-0.1	-2.0
1	73	16.012	0.0	-0.1	-0.0	0.0	-0.1	-0.1	0.4
1	74	6.195	40.4	-13.3	-20.4	18.5	25.3	-12.0	16.3
1	75	16.012	-0.0	-0.1	-0.0	0.0	-0.1	-0.1	1.2
1	76	19.123	-6.0	-0.0	-0.0	0.0	-6.1	-0.1	-2.7
1	77	12.152	0.7	-0.3	-0.1	0.0	0.3	-0.4	-2.4
1	78	19.123	2.9	-0.0	-0.0	0.0	2.9	-0.1	1.4
1	79	26.336	-2.5	-0.0	-0.0	0.0	-2.5	-0.0	-1.2
1	80	21.807	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.8
1	81	26.336	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.4
1	82	28.438	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.4
1	83	24.304	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.1
1	84	28.438	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.5
1	85	21.928	2.0	-0.0	-0.0	0.0	2.0	-0.0	1.0
1	86	16.212	2.2	-0.0	-0.0	0.0	2.1	-0.1	1.1
1	87	21.928	-2.0	-0.0	-0.0	0.0	-2.0	-0.0	-0.5
1	88	19.276	0.9	-0.0	-0.0	0.0	0.9	-0.1	0.5
1	89	12.391	9.9	-0.1	-0.1	0.0	9.6	-0.4	4.2
1	90	19.276	1.0	-0.0	-0.0	0.0	1.0	-0.1	1.0
1	91	21.928	-2.2	-0.0	-0.0	0.0	-2.2	-0.0	-1.1
1	92	16.212	2.0	-0.0	-0.0	0.0	1.9	-0.1	-0.0
1	93	21.928	2.0	-0.0	-0.0	0.0	2.0	-0.0	0.9
1	94	28.438	-1.5	-0.0	-0.0	0.0	-1.5	-0.0	-0.8
1	95	24.304	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.4
1	96	28.438	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.3
1	97	27.975	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	98	25.938	1.3	-0.0	-0.0	0.0	1.2	-0.0	0.6
1	99	21.325	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.8
1	100	25.938	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	0.0
1	101	23.737	0.9	-0.0	-0.0	0.0	0.8	-0.0	0.4
1	102	18.586	3.3	-0.0	-0.0	0.0	3.3	-0.1	1.4
1	103	23.737	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.7
1	104	25.938	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	105	21.325	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.3
1	106	25.938	1.3	-0.0	-0.0	0.0	1.3	-0.0	0.6

1	107	27.975	0.1	-0.0	-0.0	0.0	0.1	-0.0	-0.2
1	108	26.896	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.5
1	109	28.847	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.3
1	110	24.782	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.6
1	111	28.847	0.7	-0.0	-0.0	0.0	0.7	-0.0	0.4
1	112	26.896	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.3
1	113	28.105	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.1
1	114	28.105	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.1
1	115	25.236	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.2
1	116	25.236	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.2
1	117	26.502	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.2
1	118	26.502	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.2
1	119	23.031	0.4	-0.0	-0.0	0.0	0.4	-0.0	0.3
1	120	23.031	0.4	-0.0	-0.0	0.0	0.4	-0.0	0.3
1	121	28.520	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	122	19.426	-0.7	-0.0	-0.0	0.0	-0.7	-0.1	-0.5
1	123	19.426	-0.7	-0.0	-0.0	0.0	-0.7	-0.1	-0.5
1	124	28.520	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	125	29.646	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	126	21.045	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.4
1	127	21.045	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.4
1	128	29.646	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	129	26.963	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.1
1	130	26.963	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.1
1	131	26.820	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.6
1	132	26.820	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.6
1	133	27.995	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.2
1	134	18.646	1.3	-0.0	-0.0	0.0	1.3	-0.1	0.9
1	135	18.646	1.3	-0.0	-0.0	0.0	1.3	-0.1	0.9
1	136	27.995	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.2
1	137	25.113	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.6
1	138	13.950	-2.5	-0.1	-0.0	0.0	-2.6	-0.2	-1.4
1	139	13.950	-2.5	-0.1	-0.0	0.0	-2.6	-0.2	-1.4
1	140	25.113	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.6
1	141	26.385	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	142	16.129	0.3	-0.0	-0.0	0.0	0.2	-0.1	-0.5
1	143	16.129	0.3	-0.0	-0.0	0.0	0.2	-0.1	-0.5
1	144	26.385	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	145	23.329	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	146	23.329	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	147	24.766	1.8	-0.0	-0.0	0.0	1.8	-0.0	1.0
1	148	24.766	1.8	-0.0	-0.0	0.0	1.8	-0.0	1.0
1	149	26.033	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.3
1	150	15.547	3.9	-0.1	-0.0	0.0	3.8	-0.1	2.4
1	151	26.033	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.3
1	152	22.906	-2.4	-0.0	-0.0	0.0	-2.4	-0.0	-1.0
1	153	9.415	-12.7	-1.2	-1.4	0.0	-15.3	-3.0	-4.7
1	154	9.415	-12.7	-1.2	-1.4	0.0	-15.3	-3.0	-4.7
1	155	22.906	-2.4	-0.0	-0.0	0.0	-2.4	-0.0	-1.0
1	156	24.294	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.6
1	157	12.416	2.9	-0.4	-0.2	0.0	2.3	-0.5	0.7
1	158	12.416	2.9	-0.4	-0.2	0.0	2.3	-0.5	0.7
1	159	24.294	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.6
1	160	29.569	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.0
1	161	20.935	2.3	-0.0	-0.0	0.0	2.3	-0.0	1.0
1	162	20.935	2.3	-0.0	-0.0	0.0	2.3	-0.0	1.0
1	163	29.569	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.0
1	164	24.169	2.2	-0.0	-0.0	0.0	2.2	-0.0	1.1
1	165	24.169	2.2	-0.0	-0.0	0.0	2.2	-0.0	1.1
1	166	25.466	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.5
1	167	14.577	6.0	-0.1	-0.0	0.0	5.8	-0.2	3.0
1	168	14.577	6.0	-0.1	-0.0	0.0	5.8	-0.2	3.0
1	169	25.466	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.5
1	170	22.259	-3.2	-0.0	-0.0	0.0	-3.2	-0.0	-1.4
1	171	7.709	-135.1	-38.7	-21.1	43.5	-151.4	-4.6	-52.6
1	172	7.709	-135.1	-38.7	-21.1	43.6	-151.4	-4.6	-52.6
1	173	22.259	-3.2	-0.0	-0.0	0.0	-3.2	-0.0	-1.4
1	174	23.685	-1.8	-0.0	-0.0	0.0	-1.8	-0.0	-0.7
1	175	11.179	5.1	-1.5	-0.5	0.0	3.2	-1.1	4.1
1	176	11.179	5.1	-1.5	-0.5	0.0	3.2	-1.1	4.1
1	177	23.685	-1.8	-0.0	-0.0	0.0	-1.8	-0.0	-0.7
1	178	29.071	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.0
1	179	20.225	3.1	-0.0	-0.0	0.0	3.1	-0.0	1.6
1	180	20.225	3.1	-0.0	-0.0	0.0	3.1	-0.0	1.6
1	181	29.071	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.0
1	182	25.134	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.8
1	183	25.134	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.8
1	184	26.383	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.5
1	185	16.126	3.7	-0.1	-0.0	0.0	3.6	-0.1	1.4

1	186	16.126	3.7	-0.1	-0.0	0.0	3.6	-0.1	1.4
1	187	26.383	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.5
1	188	23.303	-2.9	-0.0	-0.0	0.0	-2.9	-0.0	-1.3
1	189	10.344	-26.6	-1.4	-0.4	0.0	-28.5	-1.2	-13.8
1	190	10.344	-26.6	-1.4	-0.4	0.0	-28.5	-1.2	-13.8
1	191	23.303	-2.9	-0.0	-0.0	0.0	-2.9	-0.0	-1.3
1	192	24.669	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.7
1	193	13.135	1.6	-0.3	-0.1	0.0	1.2	-0.3	2.0
1	194	13.135	1.6	-0.3	-0.1	0.0	1.2	-0.3	2.0
1	195	24.669	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.7
1	196	29.877	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	0.0
1	197	21.369	2.6	-0.0	-0.0	0.0	2.6	-0.0	1.4
1	198	21.369	2.6	-0.0	-0.0	0.0	2.6	-0.0	1.4
1	199	29.877	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	0.0
1	200	27.496	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.5
1	201	27.496	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.5
1	202	28.643	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	203	19.606	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.3
1	204	19.606	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.3
1	205	28.643	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	206	25.833	-1.8	-0.0	-0.0	0.0	-1.9	-0.0	-0.8
1	207	15.209	-3.3	-0.1	-0.0	0.0	-3.4	-0.1	-2.1
1	208	15.209	-3.3	-0.1	-0.0	0.0	-3.4	-0.1	-2.1
1	209	25.833	-1.8	-0.0	-0.0	0.0	-1.9	-0.0	-0.8
1	210	27.072	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.5
1	211	17.229	0.6	-0.0	-0.0	0.0	0.5	-0.1	0.5
1	212	17.229	0.6	-0.0	-0.0	0.0	0.5	-0.1	0.5
1	213	27.072	-1.2	-0.0	-0.0	0.0	-1.2	-0.0	-0.5
1	214	24.103	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.8
1	215	24.103	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.8
1	216	24.196	0.5	-0.0	-0.0	0.0	0.5	-0.0	-0.0
1	217	24.196	0.5	-0.0	-0.0	0.0	0.5	-0.0	-0.0
1	218	29.469	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	219	20.794	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.5
1	220	20.794	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.5
1	221	29.469	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	222	22.314	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	223	22.314	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	224	27.965	0.7	-0.0	-0.0	0.0	0.7	-0.0	0.4
1	225	27.965	0.7	-0.0	-0.0	0.0	0.7	-0.0	0.4
1	226	29.382	0.2	-0.0	-0.0	0.0	0.2	-0.0	-0.1
1	227	29.382	0.2	-0.0	-0.0	0.0	0.2	-0.0	-0.1
1	228	26.651	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.2
1	229	26.651	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.2
1	230	27.853	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.0
1	231	27.853	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.0
1	232	29.848	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	233	29.666	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	234	29.105	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	235	28.919	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	236	29.089	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	237	28.903	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	238	24.163	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.8
1	239	23.938	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	240	23.239	-1.4	-0.0	-0.0	0.0	-1.5	-0.0	-0.7
1	241	23.005	-1.6	-0.0	-0.0	0.0	-1.6	-0.0	-0.8
1	242	26.737	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.1
1	243	26.534	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.4
1	244	24.817	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.4
1	245	24.598	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.5
1	246	28.291	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	247	18.802	-3.6	-0.0	-0.0	0.0	-3.6	-0.1	-1.6
1	248	18.512	-0.3	-0.0	-0.0	0.0	-0.4	-0.1	-0.2
1	249	27.711	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.1
1	250	27.507	0.2	-0.0	-0.0	0.0	0.2	-0.0	-0.0
1	251	17.600	-2.7	-0.0	-0.0	0.0	-2.8	-0.1	-1.4
1	252	17.290	-3.4	-0.0	-0.0	0.0	-3.4	-0.1	-1.7
1	253	26.910	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.3
1	254	22.013	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.3
1	255	21.766	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.7
1	256	29.983	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	257	29.631	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.4
1	258	29.448	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.1
1	259	21.502	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.4
1	260	21.249	2.9	-0.0	-0.0	0.0	2.9	-0.0	1.5
1	261	29.610	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.6
1	262	25.433	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	263	14.142	-8.4	-0.1	-0.0	0.0	-8.5	-0.2	-3.5
1	264	13.754	4.6	-0.2	-0.1	0.0	4.3	-0.3	1.9

1	265	24.787	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	266	24.558	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.2
1	267	12.499	-4.1	-0.4	-0.1	0.0	-4.6	-0.4	-2.8
1	268	12.059	-8.0	-0.2	-0.1	0.0	-8.3	-0.5	-4.4
1	269	23.888	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.4
1	270	27.891	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.7
1	271	18.195	3.5	-0.1	-0.0	0.0	3.5	-0.1	1.9
1	272	17.895	-2.6	-0.0	-0.0	0.0	-2.7	-0.1	-0.9
1	273	27.303	-0.8	-0.0	-0.0	0.0	-0.9	-0.0	-0.5
1	274	26.916	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.7
1	275	26.714	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.0
1	276	29.437	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.1
1	277	29.252	1.3	-0.0	-0.0	0.0	1.3	-0.0	0.7
1	278	28.852	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.5
1	279	19.636	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.4
1	280	19.359	5.6	-0.0	-0.0	0.0	5.5	-0.1	2.8
1	281	28.284	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.8
1	282	23.876	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.6
1	283	11.101	-17.3	-0.3	-0.2	0.0	-17.8	-0.7	-6.4
1	284	10.602	40.9	-2.6	-0.6	0.0	37.7	-1.9	19.3
1	285	23.187	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.7
1	286	22.942	2.0	-0.0	-0.0	0.0	2.0	-0.0	0.5
1	287	8.914	42.1	-22.9	-12.4	5.4	12.2	-9.7	11.6
1	288	8.285	-16.0	-1.7	-9.6	3.9	-23.4	-8.0	-10.4
1	289	22.223	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.4
1	290	26.479	2.8	-0.0	-0.0	0.0	2.8	-0.0	1.1
1	291	15.946	10.0	-0.2	-0.0	0.0	9.8	-0.1	5.1
1	292	15.603	-3.5	-0.0	-0.0	0.0	-3.6	-0.1	-1.0
1	293	25.859	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	294	25.450	1.8	-0.0	-0.0	0.0	1.7	-0.0	1.0
1	295	25.236	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	0.0
1	296	29.437	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.1
1	297	29.252	1.3	-0.0	-0.0	0.0	1.3	-0.0	0.7
1	298	28.852	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.5
1	299	19.636	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.4
1	300	19.359	5.6	-0.0	-0.0	0.0	5.5	-0.1	2.8
1	301	28.284	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.8
1	302	11.101	-17.3	-0.3	-0.2	0.0	-17.8	-0.7	-6.4
1	303	10.602	40.9	-2.6	-0.6	0.0	37.7	-1.9	19.3
1	304	23.187	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.7
1	305	22.942	2.0	-0.0	-0.0	0.0	2.0	-0.0	0.5
1	306	8.914	42.1	-22.9	-12.4	5.4	12.2	-9.7	11.6
1	307	8.285	-16.0	-1.7	-9.6	3.9	-23.4	-8.0	-10.4
1	308	22.223	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.4
1	309	26.479	2.8	-0.0	-0.0	0.0	2.8	-0.0	1.1
1	310	15.946	10.0	-0.2	-0.0	0.0	9.8	-0.1	5.1
1	311	15.603	-3.5	-0.0	-0.0	0.0	-3.6	-0.1	-1.0
1	312	25.859	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	313	25.450	1.8	-0.0	-0.0	0.0	1.7	-0.0	1.0
1	314	25.236	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	0.0
1	315	21.502	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.4
1	316	21.249	2.9	-0.0	-0.0	0.0	2.9	-0.0	1.5
1	317	29.610	1.4	-0.0	-0.0	0.0	1.4	-0.0	0.6
1	318	25.433	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.5
1	319	14.142	-8.4	-0.1	-0.0	0.0	-8.5	-0.2	-3.5
1	320	13.754	4.6	-0.2	-0.1	0.0	4.3	-0.3	1.9
1	321	24.787	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.4
1	322	24.558	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.2
1	323	12.499	-4.1	-0.4	-0.1	0.0	-4.6	-0.4	-2.8
1	324	12.059	-8.0	-0.2	-0.1	0.0	-8.3	-0.5	-4.4
1	325	23.888	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.4
1	326	27.891	1.9	-0.0	-0.0	0.0	1.9	-0.0	0.7
1	327	18.195	3.5	-0.1	-0.0	0.0	3.5	-0.1	1.9
1	328	17.895	-2.6	-0.0	-0.0	0.0	-2.7	-0.1	-0.9
1	329	27.303	-0.8	-0.0	-0.0	0.0	-0.9	-0.0	-0.5
1	330	26.916	1.2	-0.0	-0.0	0.0	1.2	-0.0	0.7
1	331	26.714	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.0
1	332	24.817	-1.1	-0.0	-0.0	0.0	-1.1	-0.0	-0.4
1	333	24.598	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.5
1	334	28.291	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	335	18.802	-3.6	-0.0	-0.0	0.0	-3.6	-0.1	-1.6
1	336	18.512	-0.3	-0.0	-0.0	0.0	-0.4	-0.1	-0.2
1	337	27.711	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.1
1	338	27.507	0.2	-0.0	-0.0	0.0	0.2	-0.0	-0.0
1	339	17.600	-2.7	-0.0	-0.0	0.0	-2.8	-0.1	-1.4
1	340	17.290	-3.4	-0.0	-0.0	0.0	-3.4	-0.1	-1.7
1	341	26.910	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.3
1	342	22.013	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.3
1	343	21.766	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.7

1	344	29.983	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	345	29.631	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.4
1	346	29.448	-0.4	-0.0	-0.0	0.0	-0.4	-0.0	-0.1
1	347	29.089	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	348	28.903	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.1
1	349	24.163	-1.7	-0.0	-0.0	0.0	-1.7	-0.0	-0.8
1	350	23.938	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.3
1	351	23.239	-1.4	-0.0	-0.0	0.0	-1.5	-0.0	-0.7
1	352	23.005	-1.6	-0.0	-0.0	0.0	-1.6	-0.0	-0.8
1	353	26.737	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.1
1	354	26.534	-1.0	-0.0	-0.0	0.0	-1.0	-0.0	-0.4
1	355	29.848	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	356	29.666	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	357	29.105	-0.8	-0.0	-0.0	0.0	-0.8	-0.0	-0.4
1	358	28.919	-0.9	-0.0	-0.0	0.0	-0.9	-0.0	-0.4
1	359	27.640	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.2
1	360	27.640	0.1	-0.0	-0.0	0.0	0.1	-0.0	0.2
1	361	26.166	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.1
1	362	29.864	0.0	-0.0	-0.0	0.0	0.0	-0.0	0.1
1	363	26.361	0.4	-0.0	-0.0	0.0	0.4	-0.0	0.2
1	364	21.589	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.3
1	365	25.948	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.4
1	366	26.361	0.4	-0.0	-0.0	0.0	0.4	-0.0	0.2
1	367	21.589	0.2	-0.0	-0.0	0.0	0.2	-0.0	0.3
1	368	25.948	0.5	-0.0	-0.0	0.0	0.5	-0.0	0.4
1	369	26.166	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.1
1	370	29.864	0.0	-0.0	-0.0	0.0	0.0	-0.0	0.1
1	371	26.313	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.1
1	372	21.530	-1.3	-0.0	-0.0	0.0	-1.3	-0.0	-0.5
1	373	25.899	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	0.0
1	374	21.767	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.4
1	375	15.651	0.3	-0.0	-0.0	0.0	0.3	-0.1	0.7
1	376	21.264	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.7
1	377	21.767	0.9	-0.0	-0.0	0.0	0.9	-0.0	0.4
1	378	15.651	0.3	-0.0	-0.0	0.0	0.3	-0.1	0.7
1	379	21.264	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.7
1	380	26.313	-0.2	-0.0	-0.0	0.0	-0.2	-0.0	-0.1
1	381	21.530	-1.3	-0.0	-0.0	0.0	-1.3	-0.0	-0.5
1	382	25.899	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	0.0
1	383	27.502	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.7
1	384	23.410	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	385	17.866	-3.8	-0.0	-0.0	0.0	-3.8	-0.1	-1.7
1	386	22.943	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.1
1	387	18.150	2.5	-0.0	-0.0	0.0	2.4	-0.1	0.7
1	388	10.030	-0.4	-0.4	-0.4	0.0	-1.3	-1.3	1.3
1	389	17.544	2.6	-0.0	-0.0	0.0	2.5	-0.1	1.4
1	390	10.030	-0.4	-0.4	-0.4	0.0	-1.3	-1.3	1.3
1	391	17.544	2.6	-0.0	-0.0	0.0	2.5	-0.1	1.4
1	392	23.410	-0.5	-0.0	-0.0	0.0	-0.5	-0.0	-0.3
1	393	17.866	-3.8	-0.0	-0.0	0.0	-3.8	-0.1	-1.7
1	394	22.943	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.1
1	395	27.502	-1.4	-0.0	-0.0	0.0	-1.4	-0.0	-0.7
1	396	26.244	-1.9	-0.0	-0.0	0.0	-1.9	-0.0	-0.9
1	397	29.933	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.3
1	398	21.919	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.4
1	399	15.862	-8.1	-0.1	-0.0	0.0	-8.2	-0.1	-3.9
1	400	21.420	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.2
1	401	16.182	6.4	-0.1	-0.0	0.0	6.3	-0.1	1.9
1	402	5.746	-119.5	-61.2	-40.4	92.2	-128.9	-24.2	-26.4
1	403	15.499	5.0	-0.1	-0.0	0.0	4.9	-0.2	2.4
1	404	29.723	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.5
1	405	16.182	6.4	-0.1	-0.0	0.0	6.3	-0.1	1.9
1	406	5.746	-119.5	-61.2	-40.4	92.2	-128.9	-24.2	-26.4
1	407	15.499	5.0	-0.1	-0.0	0.0	4.9	-0.2	2.4
1	408	29.723	1.0	-0.0	-0.0	0.0	1.0	-0.0	0.5
1	409	21.919	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.4
1	410	15.862	-8.1	-0.1	-0.0	0.0	-8.2	-0.1	-3.9
1	411	21.420	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	-0.2
1	412	26.244	-1.9	-0.0	-0.0	0.0	-1.9	-0.0	-0.9
1	413	29.933	-0.6	-0.0	-0.0	0.0	-0.6	-0.0	-0.3
1	414	26.419	-2.0	-0.0	-0.0	0.0	-2.0	-0.0	-1.0
1	415	22.127	-0.5	-0.0	-0.0	0.0	-0.6	-0.0	-0.3
1	416	16.149	-8.7	-0.1	-0.0	0.0	-8.8	-0.1	-4.2
1	417	21.633	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.3
1	418	16.463	8.7	-0.1	-0.0	0.0	8.6	-0.1	3.5
1	419	6.495	-183.6	-73.0	-24.0	102.6	-178.0	-9.1	-62.5
1	420	15.792	5.9	-0.1	-0.0	0.0	5.8	-0.1	2.5
1	421	29.877	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.5
1	422	16.463	8.7	-0.1	-0.0	0.0	8.6	-0.1	3.5

1	423	6.495	-183.6	-73.0	-24.0	102.9	-177.7	-9.1	-62.5
1	424	15.792	5.9	-0.1	-0.0	0.0	5.8	-0.1	2.5
1	425	29.877	1.1	-0.0	-0.0	0.0	1.1	-0.0	0.5
1	426	22.127	-0.5	-0.0	-0.0	0.0	-0.6	-0.0	-0.3
1	427	16.149	-8.7	-0.1	-0.0	0.0	-8.8	-0.1	-4.2
1	428	21.633	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.3
1	429	26.419	-2.0	-0.0	-0.0	0.0	-2.0	-0.0	-1.0
1	430	27.998	-1.5	-0.0	-0.0	0.0	-1.5	-0.0	-0.7
1	431	23.991	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.0
1	432	18.620	-4.7	-0.0	-0.0	0.0	-4.7	-0.1	-2.1
1	433	23.535	0.0	-0.0	-0.0	0.0	0.0	-0.0	-0.2
1	434	18.894	4.5	-0.0	-0.0	0.0	4.4	-0.1	2.2
1	435	11.320	-8.8	-0.4	-0.2	0.0	-9.4	-0.5	-3.0
1	436	18.312	3.6	-0.0	-0.0	0.0	3.6	-0.1	1.4
1	437	18.894	4.5	-0.0	-0.0	0.0	4.4	-0.1	2.2
1	438	11.320	-8.8	-0.4	-0.2	0.0	-9.4	-0.5	-3.0
1	439	18.312	3.6	-0.0	-0.0	0.0	3.6	-0.1	1.4
1	440	23.991	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	-0.0
1	441	18.620	-4.7	-0.0	-0.0	0.0	-4.7	-0.1	-2.1
1	442	23.535	0.0	-0.0	-0.0	0.0	0.0	-0.0	-0.2
1	443	27.998	-1.5	-0.0	-0.0	0.0	-1.5	-0.0	-0.7
1	444	27.171	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.0
1	445	22.570	-1.8	-0.0	-0.0	0.0	-1.8	-0.0	-0.8
1	446	26.770	0.0	-0.0	-0.0	0.0	0.0	-0.0	-0.1
1	447	22.796	1.6	-0.0	-0.0	0.0	1.6	-0.0	1.0
1	448	17.054	-1.2	-0.0	-0.0	0.0	-1.2	-0.1	-0.1
1	449	22.317	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.6
1	450	22.796	1.6	-0.0	-0.0	0.0	1.6	-0.0	1.0
1	451	17.054	-1.2	-0.0	-0.0	0.0	-1.2	-0.1	-0.1
1	452	22.317	1.5	-0.0	-0.0	0.0	1.5	-0.0	0.6
1	453	27.171	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.0
1	454	22.570	-1.8	-0.0	-0.0	0.0	-1.8	-0.0	-0.8
1	455	26.770	0.0	-0.0	-0.0	0.0	0.0	-0.0	-0.1
1	456	27.366	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.2
1	457	27.553	0.6	-0.0	-0.0	0.0	0.5	-0.0	0.4
1	458	23.029	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	0.1
1	459	27.157	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.2
1	460	27.553	0.6	-0.0	-0.0	0.0	0.5	-0.0	0.4
1	461	23.029	-0.3	-0.0	-0.0	0.0	-0.3	-0.0	0.1
1	462	27.157	0.6	-0.0	-0.0	0.0	0.6	-0.0	0.2
1	463	27.366	-0.7	-0.0	-0.0	0.0	-0.7	-0.0	-0.2
1	464	29.096	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.1
1	465	29.096	-0.1	-0.0	-0.0	0.0	-0.1	-0.0	0.1