



JOURNAL OF
APPLIED
CRYSTALLOGRAPHY

Volume 56 (2023)

Supporting information for article:

**New features of the RootProf program for model-free analysis of
unidimensional profiles**

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S1. Command file for Savitzky–Golay filtering

```
whichanalysis 0  
preprocess 12  
sgfilter 0 2 9  
file A.xy
```

where the commands *whichanalysis* 0 initiates the First Sight analysis, *preprocess* 12 defines the pre-processing, which in this case is the Savitzky–Golay filtering, *sgfilter* 0 2 9 set the parameters for the Savitzky–Golay filtering, defining respectively the order of derivation, polynomial degree and window, and *file* defines the input file containing the profile.

S2. Command file for peak alignment

```
whichanalysis 0  
preprocess 0 0 0 5  
range 2.8 16.0  
shiftfactor 0.3  
peakalign 2  
file 1.epf.extract  
file 2.epf.extract  
file 3.epf.extract  
file 4.epf.extract  
file 5.epf.extract  
file 6.epf.extract  
file 7.epf.extract  
file 8.epf.extract  
file 9.epf.extract  
file 10.epf.extract
```

where the commands *whichanalysis* 0 initiates the First Sight analysis, *preprocess* 0 0 0 5 defines the pre-processing, which in this case is the peak alignment, *range* 2.8 16.0 defines the interval of 29 values considered, *shiftfactor* 0.3 reduces the vertical shift among profiles in the plot, *peakalign* 2 sets the peak alignment procedure as constituted by the Peak Correspondence method followed by Harmonic Time Stretch one, and *file* defines the input file containing the profile.

S3. Command file for qualitative analysis

```
whichanalysis 1  
range 10 70  
preprocess 3 2  
threshold -2  
skipdata 5  
clusterswitch 0  
file AC.xy  
file AD.xy  
file CD.xy  
file ACD.xy  
file A.xy  
purephase  
file C.xy
```

```
purephase  
file D.xy  
purephase
```

where the commands *whichanalysis* 1 initiates the qualitative analysis, *file* defines the input files containing the profiles, *range* 10 70 defines the interval of 2 θ values considered, *preprocess* 3 2 defines the pre-processing, which in this case is a logarithmic conversion of the intensity values followed by a profile normalization based on the area under the profile, *threshold* -2 forces to consider only the first two principal components, *skipdata* 5 reduces the sampling of the input files, taking each point out of five, *clusterswitch* 0 inhibits the hierarchical clustering procedure, and *purephase* tags the profiles that appear immediately above as pure-phase profiles.

S4. Command file for the Optimal Constrained Component Rotation

```
whichanalysis 1  
medanalysis 1  
ignoresigma 1  
skipdata 3  
preprocess 0 0 5  
threshold -3  
clusterswitch 0  
writescores 1  
writeloadings 1  
file OCCR_00.dat  
file OCCR_01.dat  
file OCCR_02.dat  
file OCCR_03.dat  
file OCCR_04.dat  
file OCCR_05.dat  
file OCCR_06.dat  
file OCCR_07.dat  
file OCCR_08.dat  
file OCCR_09.dat  
file OCCR_10.dat  
file OCCR_11.dat  
file OCCR_12.dat  
file OCCR_13.dat  
file OCCR_14.dat  
file OCCR_15.dat  
file OCCR_16.dat  
file OCCR_17.dat  
file OCCR_18.dat  
file OCCR_19.dat  
file OCCR_20.dat  
file OCCR_21.dat  
file OCCR_22.dat  
file OCCR_23.dat  
file OCCR_24.dat
```

where the commands *whichanalysis* 1 initiates the qualitative analysis, *file* defines the input files containing the profiles, *preprocess* 0 0 5 defines the pre-processing, which in this case is a background

subtraction carried out with a 5 points window, *threshold* -3 forces to consider the three principal components, *skipdata* 3 reduces the sampling of the input files, taking each point out of three, *ignoresigma* 1 does not read the third column present in the input files, *clusterswitch* 0 inhibits the hierarchical clustering procedure, *medanalysis* 1 activates the OCCR analysis, *writescores* 1 and *writeloadings* 1 writes respectively the score and loading values of each considered component on external files. Please note that both the original values and those rotated are written.

S5. Command files for kinetic analysis

Two different runs of RootProf are needed.

S5.1. Run 1: Extraction of the reaction coordinate

```
whichanalysis 1
preprocess 0 0 50
threshold -1
writescores 1
file file_77.txt
file temp_79.txt
file temp_81.txt
file temp_83.txt
file temp_85.txt
file temp_87.txt
file temp_89.txt
file temp_91.txt
file temp_93.txt
file temp_95.txt
file temp_100.txt
file temp_105.txt
```

where the commands *whichanalysis* 1 initiates the qualitative analysis, *file* defines the input files containing the profiles, *preprocess* 0 0 50 defines the pre-processing, which in this case is a background subtraction carried out with a 50 points window, corresponding to a de-trend operation, *threshold* -1 forces to consider only the first principal component, and *writescores* 1 writes the score values of the first principal component on an external file.

S5.2. Run 2: Study of the reaction kinetics

```
whichanalysis 13
file ScoresPC1
temp 77 79 81 83 85 87 89 91 93 95 100 105
kelvin 0
beta 0.81
tfitmin 0.0026
tfitmax 0.00285
eneatt 60
```

where the commands *whichanalysis* 13 initiates the kinetic analysis, *file* defines the input file, containing the reaction coordinate values, *temp* sets the temperature values corresponding to each

reaction coordinate value, *kelvin* indicates that temperatures are expressed in Celsius degrees, *beta* sets the rate of temperature changes, expressed in K/s, *eneatt* defines the activation energy expressed in KJ/mol necessary to define the Masterplot, and *tfitmin* and *tfitmax* set the *1/T* range to perform the fitting in the Coats & Redfern plot.

S6. Command file for crystallinity and size analysis

```
ignoresigma 1
preprocess 0 2
!-----
!--crystallinity analysis
whichanalysis 9
range 12.7 14.5
cryst 10 20
!-----
!--size analysis
!whichanalysis 6
!range 7 34
!theta0 14.06
!toltheta0 0.10
!theta0st 15.26
!lambda 0.78006
!file lab6.dat
!nstandard
!-----
file bulk_fill_0001p_00000.dat
file bulk_fill_0001p_00003.dat
file bulk_fill_0001p_00006.dat
file bulk_fill_0001p_00009.dat
file bulk_fill_0001p_00012.dat
file bulk_fill_0001p_00015.dat
file bulk_fill_0001p_00018.dat
file bulk_fill_0001p_00021.dat
file bulk_fill_0001p_00024.dat
file bulk_fill_0001p_00027.dat
file bulk_fill_0001p_00030.dat
file bulk_fill_0001p_00033.dat
file bulk_fill_0001p_00036.dat
file bulk_fill_0001p_00039.dat
file bulk_fill_0001p_00042.dat
file bulk_fill_0001p_00045.dat
file bulk_fill_0001p_00048.dat
file bulk_fill_0001p_00051.dat
file bulk_fill_0001p_00054.dat
file bulk_fill_0001p_00057.dat
file bulk_fill_0001p_00060.dat
file bulk_fill_0001p_00063.dat
file bulk_fill_0001p_00066.dat
file bulk_fill_0001p_00069.dat
file bulk_fill_0001p_00072.dat
file bulk_fill_0001p_00075.dat
file bulk_fill_0001p_00078.dat
file bulk_fill_0001p_00081.dat
```

```
file bulk_fill_0001p_00084.dat
file bulk_fill_0001p_00087.dat
file bulk_fill_0001p_00090.dat
file bulk_fill_0001p_00093.dat
file bulk_fill_0001p_00096.dat
file bulk_fill_0001p_00099.dat
file bulk_fill_0001p_00102.dat
```

where the commands *preprocess* 0 2 defines the pre-processing, which in this case consists in a normalization to the area subtended by the profile, *ignoresigma* 1 prevents reading the third column contained in the input files, *file* defines the input profile, *whichanalysis* 9 initiates the crystallinity analysis, *range* 12.7 14.5 defines the interval of 2θ values considered, *cryst* 10 20 sets the sensitivity of the peak search procedure (10) and the clipping window for the background subtraction (20). The size analysis can be carried out by replacing these last three commands with the commands: *whichanalysis* 6, which activates the size analysis, *range* 7 34, which enlarges the interval of 2θ values considered, *theta0* and *toltheta0*, which define respectively the central value and tolerance of the peak considered for fitting, *theta0st*, which defines the central value of the peak of the standard compound considered for fitting, *lambda*, which sets the wavelength used for measurements, *nstandard*, which follows the file representing the measured profile for the standard compound.

S7. Command file for the standard addition method

```
whichanalysis 3
preprocess 0 3 30
file agg0_1.ASC
sam 0
file agg0_2.ASC
sam 0
file agg0_4.ASC
sam 0
file agg1_1.ASC
sam 0.15
file agg1_2.ASC
sam 0.15
file agg1_3.ASC
sam 0.15
file agg2_1.ASC
sam 0.25
file agg2_2.ASC
sam 0.25
file agg2_3.ASC
sam 0.25
file agg3_1.ASC
sam 0.35
file agg3_2.ASC
sam 0.35
file agg3_3.ASC
sam 0.35
file paracetamol.ASC
```

purephase

where the commands *whichanalysis* 3 initiates the quantitative analysis, *preprocess* 0 3 30 defines the pre-processing, which in this case consists in a rescaling based on the standard normal variate followed by a background subtraction carried out with a 30 points window, *file* defines the input file, containing Tachifludec[®] with different amount of paracetamol added, *sam* sets the known weight fraction of paracetamol added, *purephase* tags the paracetamol, i.e. the pure-phase profile.

S8. Command file for combined quantitative analysis

```
whichanalysis 3
combine 1
skipdata 8
file AM1.iq
purephase
referw 1 0
file AM2.iq
referw 0.9 0.1
file AM3.iq
referw 0.8 0.2
fileAM4.iq
referw 0.7 0.3
file AM5.iq
referw 0.6 0.4
file AM6.iq
referw 0.5 0.5
file AM7.iq
referw 0.4 0.6
file AM8.iq
referw 0.3 0.7
file AM9.iq
referw 0.2 0.8
file AM10.iq
referw 0.1 0.9
file AM11.iq
purephase
referw 0.0 1.0
file2 AM1.gr
file2 AM2.gr
file2 AM3.gr
file2 AM4.gr
file2 AM5.gr
file2 AM6.gr
file2 AM7.gr
file2 AM8.gr
file2 AM9.gr
file2 AM10.gr
file2 AM11.gr
```

where the commands *whichanalysis* 3 initiates the quantitative analysis, *file* and *file2* define the input profiles for the datasets in reciprocal space (.iq extension) and direct space (.gr extension), *skipdata* 8

reduces the number of data points for the profiles of the first dataset, where only 1 point out of 8 is read, *referw* defines the known weight fraction in the mixture file (it is only used for testing purposes), *purephase* tags the reference profiles, i.e. the pure-phase profiles, and *combine* 1 enables the combination of the weight fraction estimates in reciprocal and direct space.

S9. Crystal cell parameters extraction from PDF profiles

```
whichanalysis 12
preprocess 0 7 10
range 2 40
lattice 0
file Cubic.cif.gr
```

where the commands *whichanalysis* 13 initiates the PDF analysis, *preprocess* 0 7 10 defines the pre-processing, which in this case consists in a rescaling in the range [0,1] followed by a background subtraction carried out with a 10 points window, *range* defines the interval of interatomic distances considered for the PDF analysis, *lattice* defines the lattice type, which in this case is Cubic, and *file* define the input PDF profile to be used for crystal cell parameters extraction.

S9.1. Output for the cubic langbeinite

Reading input files:

```
-----
Sample 0 -> file now.gr
          Found 3800 points
```

PDF analysis

```
34 peaks found by the first search
42 peaks found by the second search
Cluster threshold put by the user: 0.500000
41 peaks selected
Solution n.0 (13.31) -> (13.37) FOM=18.910
Solution n.1 (12.78) -> (12.78) FOM=18.972
Solution n.2 (16.63) -> (16.58) FOM=17.575
Solution n.3 (17.19) -> (17.15) FOM=19.033
Solution n.4 (15.43) -> (15.66) FOM=18.710
Solution n.5 (16.01) -> (15.97) FOM=18.823
Solution n.6 (5.01) -> (5.72) FOM=15.848
Solution n.7 (5.56) -> (5.64) FOM=17.309
Solution n.8 (6.14) -> (6.64) FOM=17.430
Solution n.9 (6.72) -> (7.28) FOM=17.575
Solution n.10 (20.67) -> (20.64) FOM=19.495
Solution n.11 (21.35) -> (21.39) FOM=19.445
Solution n.12 (13.96) -> (14.86) FOM=19.132
Solution n.13 (14.78) -> (14.69) FOM=18.196
Solution n.14 (9.85) -> (9.90) FOM=10.500
Solution n.15 (10.73) -> (10.87) FOM=18.825
Solution n.16 (7.78) -> (7.75) FOM=17.791
Solution n.17 (8.80) -> (8.75) FOM=17.695
Solution n.18 (22.12) -> (22.15) FOM=17.879
```


Solution n.19 (18.05) -> (18.08) FOM=19.279
 Solution n.20 (19.55) -> (19.43) FOM=19.517
 Solution n.21 (11.88) -> (12.12) FOM=19.050
 Normalized Cluster threshold put by the user: 0.100000
 Cluster Threshold 0.976

Cluster analysis

Cluster 1 2) 4 5
 Cluster 2 2) 12 13
 Cluster 3 2) 10 11
 Cluster 4 1) 18
 Cluster 5 2) 2 3
 Cluster 6 1) 19
 Cluster 7 3) 8 9 16
 Cluster 8 1) 17
 Cluster 9 2) 6 7
 Cluster 10 1) 20
 Cluster 11 3) 0 21 1
 Cluster 12 2) 14 15
 Cluster 1: representative profile=4 with FOM 18.710
 Cluster 2: representative profile=12 with FOM 19.132
 Cluster 3: representative profile=10 with FOM 19.495
 Cluster 4: representative profile=18 with FOM 17.879
 Cluster 5: representative profile=2 with FOM 17.575
 Cluster 6: representative profile=19 with FOM 19.279
 Cluster 7: representative profile=9 with FOM 17.575
 Cluster 8: representative profile=17 with FOM 17.695
 Cluster 9: representative profile=6 with FOM 15.848
 Cluster 10: representative profile=20 with FOM 19.517
 Cluster 11: representative profile=1 with FOM 18.972
 Cluster 12: representative profile=14 with FOM 10.500

List of best solutions for crystal system Cubic:

Order	Cluster	FOM	a	b	c	alpha	beta	gamma
1	12	10.500	9.90	9.90	9.90	90.0	90.0	90.0
2	9	15.848	5.72	5.72	5.72	90.0	90.0	90.0
3	7	17.575	7.28	7.28	7.28	90.0	90.0	90.0
4	5	17.575	16.58	16.58	16.58	90.0	90.0	90.0
5	8	17.695	8.75	8.75	8.75	90.0	90.0	90.0
6	4	17.879	22.15	22.15	22.15	90.0	90.0	90.0
7	1	18.710	15.66	15.66	15.66	90.0	90.0	90.0
8	11	18.972	12.78	12.78	12.78	90.0	90.0	90.0
9	2	19.132	14.86	14.86	14.86	90.0	90.0	90.0
10	6	19.279	18.08	18.08	18.08	90.0	90.0	90.0
11	3	19.495	20.64	20.64	20.64	90.0	90.0	90.0
12	10	19.517	19.43	19.43	19.43	90.0	90.0	90.0

S9.2. Output for the hexagonal anhydrous rare-earth perchlorate

Reading input files:

Sample 0 -> file Hexagonal.cif.gr

Found 3800 points

Read 4856 monoatomic cell files

PDF analysis

Found 37 peaks in observed PDF profile

Peak 0: 11.050
Peak 1: 34.020
Peak 2: 28.500
Peak 3: 27.320
Peak 4: 9.270
Peak 5: 39.800
Peak 6: 38.730
Peak 7: 6.120
Peak 8: 36.390
Peak 9: 32.880
Peak 10: 16.750
Peak 11: 20.430
Peak 12: 37.830
Peak 13: 35.180
Peak 14: 10.280
Peak 15: 21.990
Peak 16: 21.270
Peak 17: 16.190
Peak 18: 13.910
Peak 19: 30.220
Peak 20: 31.260
Peak 21: 15.600
Peak 22: 32.050
Peak 23: 3.790
Peak 24: 19.780
Peak 25: 2.480
Peak 26: 23.760
Peak 27: 12.820
Peak 28: 25.270
Peak 29: 23.200
Peak 30: 18.650
Peak 31: 24.220
Peak 32: 26.020
Peak 33: 14.690
Peak 34: 18.170
Peak 35: 6.990
Peak 36: 4.600

Peak search 2D: 128

Solution n.0 (9.17 9.13) -> (10.21 9.11) FOM=12.085
Solution n.1 (2.70 3.50) -> (3.01 3.48) FOM=12.887
Solution n.2 (10.29 3.83) -> (10.66 4.47) FOM=12.769
Solution n.3 (7.48 3.83) -> (5.90 4.24) FOM=12.076
Solution n.4 (8.33 13.77) -> (8.37 13.64) FOM=11.812
Solution n.5 (10.57 13.11) -> (10.72 13.20) FOM=12.004
Solution n.6 (28.57 18.41) -> (28.49 18.62) FOM=11.842
Solution n.7 (11.14 14.76) -> (11.04 15.04) FOM=12.439
Solution n.8 (2.42 6.81) -> (2.68 6.91) FOM=12.997
Solution n.9 (9.17 20.40) -> (9.97 21.24) FOM=12.854
Solution n.10 (19.85 30.67) -> (18.54 31.31) FOM=13.022
Solution n.11 (14.79 13.11) -> (14.62 9.77) FOM=12.693

Solution n.12 (10.57 10.46) -> (11.86 9.10) FOM=12.309
Solution n.13 (14.79 23.05) -> (15.71 22.41) FOM=12.515
Solution n.14 (19.29 3.50) -> (19.46 4.29) FOM=12.215
Solution n.15 (11.14 31.00) -> (11.02 30.94) FOM=11.599
Solution n.16 (2.70 5.49) -> (2.54 5.40) FOM=12.677
Solution n.17 (7.48 8.14) -> (7.29 8.25) FOM=11.667
Solution n.18 (14.79 33.32) -> (15.02 33.14) FOM=12.467
Solution n.19 (6.08 15.76) -> (6.13 15.58) FOM=12.114
Solution n.20 (27.72 19.73) -> (27.29 20.37) FOM=12.049
Solution n.21 (17.04 21.06) -> (17.03 21.35) FOM=12.126
Solution n.22 (21.82 18.41) -> (21.90 18.21) FOM=11.999
Solution n.23 (10.57 28.68) -> (11.01 28.21) FOM=11.527
Solution n.24 (19.85 23.05) -> (20.34 21.91) FOM=12.855
Solution n.25 (3.55 35.31) -> (4.19 15.03) FOM=12.006
Solution n.26 (21.82 9.13) -> (21.77 9.21) FOM=12.211
Solution n.27 (14.79 16.09) -> (15.02 15.92) FOM=11.952
Solution n.28 (6.08 12.77) -> (6.34 13.17) FOM=11.477
Solution n.29 (25.48 12.77) -> (25.35 13.05) FOM=12.006
Solution n.30 (20.98 10.79) -> (20.95 10.97) FOM=12.542
Solution n.31 (20.13 15.09) -> (19.85 16.05) FOM=12.709
Solution n.32 (27.72 6.15) -> (27.82 6.05) FOM=12.312
Solution n.33 (6.08 29.01) -> (6.86 28.95) FOM=12.842
Solution n.34 (14.23 9.46) -> (14.30 11.64) FOM=12.408
Solution n.35 (3.55 28.68) -> (3.52 30.05) FOM=12.904
Solution n.36 (14.79 7.80) -> (15.06 8.03) FOM=11.833
Solution n.37 (20.13 32.99) -> (20.35 32.94) FOM=12.520
Solution n.38 (19.85 15.76) -> (19.85 16.05) FOM=12.709
Solution n.39 (3.55 18.41) -> (3.51 20.12) FOM=12.558
Solution n.40 (9.17 11.45) -> (9.31 11.73) FOM=9.765
Solution n.41 (21.82 26.03) -> (21.88 26.06) FOM=12.204
Solution n.42 (7.48 20.73) -> (7.43 20.62) FOM=12.246
Solution n.43 (6.08 18.08) -> (6.35 18.60) FOM=12.126
Solution n.44 (12.82 10.79) -> (13.12 10.90) FOM=12.167
Solution n.45 (17.04 34.64) -> (17.03 35.99) FOM=12.771
Solution n.46 (23.79 30.67) -> (23.77 30.58) FOM=12.940
Solution n.47 (8.61 18.41) -> (8.64 18.45) FOM=12.012
Solution n.48 (25.48 16.42) -> (25.43 16.45) FOM=12.930
Solution n.49 (3.55 31.00) -> (3.88 34.38) FOM=13.212
Solution n.50 (3.55 33.32) -> (4.01 33.20) FOM=12.841
Solution n.51 (3.55 23.38) -> (3.89 25.18) FOM=13.024
Solution n.52 (9.17 33.32) -> (9.32 33.97) FOM=12.042
Solution n.53 (3.55 26.03) -> (4.18 26.30) FOM=12.502
Solution n.54 (9.45 5.82) -> (9.34 5.85) FOM=9.383
Solution n.55 (8.04 15.76) -> (8.06 14.94) FOM=11.888
Solution n.56 (17.04 31.99) -> (17.23 33.69) FOM=12.819
Solution n.57 (21.82 20.73) -> (21.88 20.98) FOM=12.797
Solution n.58 (23.79 8.14) -> (23.86 7.80) FOM=12.591
Solution n.59 (14.79 18.41) -> (14.99 18.45) FOM=12.511
Solution n.60 (14.79 28.68) -> (16.03 28.62) FOM=12.623
Solution n.61 (16.20 5.82) -> (16.14 5.81) FOM=11.631
Solution n.62 (21.82 28.68) -> (21.87 28.38) FOM=13.191
Solution n.63 (24.63 6.15) -> (24.37 6.17) FOM=12.771
Solution n.64 (25.76 10.79) -> (25.96 8.65) FOM=12.829
Solution n.65 (25.48 28.68) -> (25.07 28.38) FOM=12.911
Solution n.66 (23.79 24.04) -> (23.78 24.33) FOM=12.577

Solution n.67 (12.82 15.76) -> (12.95 15.75) FOM=11.445
Solution n.68 (27.44 28.35) -> (26.01 30.16) FOM=13.040
Solution n.69 (23.79 27.35) -> (24.29 31.53) FOM=13.069
Solution n.70 (23.51 19.40) -> (23.25 19.41) FOM=12.997
Solution n.71 (20.13 26.36) -> (20.35 26.52) FOM=13.230
Solution n.72 (22.10 16.42) -> (21.81 16.64) FOM=12.494
Solution n.73 (19.85 8.47) -> (20.95 10.97) FOM=12.542
Solution n.74 (28.85 16.09) -> (28.55 16.24) FOM=12.407
Solution n.75 (19.01 5.82) -> (19.30 14.68) FOM=12.816
Solution n.76 (17.32 28.35) -> (17.24 28.59) FOM=13.085
Solution n.77 (29.69 5.82) -> (29.71 6.07) FOM=12.889
Solution n.78 (8.61 26.36) -> (8.63 26.30) FOM=12.826
Solution n.79 (16.76 18.74) -> (17.23 18.59) FOM=12.907
Solution n.80 (19.29 28.68) -> (19.62 27.83) FOM=12.429
Solution n.81 (19.01 10.46) -> (20.34 10.98) FOM=12.843
Solution n.82 (3.27 21.06) -> (4.66 24.33) FOM=13.037
Solution n.83 (21.54 5.82) -> (22.99 6.13) FOM=13.155
Solution n.84 (8.61 31.00) -> (8.64 31.83) FOM=12.445
Solution n.85 (2.98 13.44) -> (5.52 15.39) FOM=12.162
Solution n.86 (3.55 8.80) -> (3.53 8.56) FOM=11.643
Solution n.87 (3.83 16.09) -> (4.66 16.32) FOM=12.339
Solution n.88 (5.23 9.79) -> (5.47 9.56) FOM=11.115
Solution n.89 (5.80 27.02) -> (6.35 27.75) FOM=11.624
Solution n.90 (5.80 31.00) -> (6.35 30.91) FOM=11.980
Solution n.91 (5.80 33.32) -> (6.35 33.40) FOM=11.496
Solution n.92 (6.08 22.38) -> (6.12 21.96) FOM=12.820
Solution n.93 (6.08 34.98) -> (7.48 34.03) FOM=12.972
Solution n.94 (6.36 6.48) -> (5.50 7.56) FOM=12.628
Solution n.95 (8.61 23.71) -> (8.65 24.31) FOM=12.247
Solution n.96 (9.17 34.98) -> (10.29 34.92) FOM=12.811
Solution n.97 (10.86 17.08) -> (11.06 17.36) FOM=12.018
Solution n.98 (10.86 21.06) -> (9.84 22.99) FOM=12.436
Solution n.99 (10.86 23.05) -> (20.34 23.06) FOM=13.264
Solution n.100 (10.86 33.32) -> (11.48 33.24) FOM=12.357
Solution n.101 (11.14 25.70) -> (10.95 26.16) FOM=11.940
Solution n.102 (12.82 20.06) -> (13.05 19.92) FOM=12.777
Solution n.103 (13.39 5.82) -> (13.47 9.37) FOM=12.357
Solution n.104 (14.51 26.69) -> (15.02 26.81) FOM=13.185
Solution n.105 (14.51 31.00) -> (15.02 33.14) FOM=12.467
Solution n.106 (14.79 34.98) -> (16.07 35.23) FOM=12.846
Solution n.107 (16.48 11.12) -> (16.44 24.94) FOM=12.143
Solution n.108 (16.48 19.73) -> (16.45 20.47) FOM=12.332
Solution n.109 (16.76 25.70) -> (16.71 25.75) FOM=12.956
Solution n.110 (17.04 22.38) -> (17.55 22.48) FOM=12.056
Solution n.111 (17.60 8.80) -> (26.02 23.67) FOM=13.137
Solution n.112 (19.57 20.40) -> (19.66 20.62) FOM=11.331
Solution n.113 (20.70 3.50) -> (20.95 3.44) FOM=12.807
Solution n.114 (21.54 13.44) -> (22.06 13.69) FOM=13.006
Solution n.115 (21.54 32.66) -> (21.03 32.53) FOM=12.797
Solution n.116 (23.23 5.82) -> (23.00 5.51) FOM=13.062
Solution n.117 (23.79 15.43) -> (24.20 15.11) FOM=11.906
Solution n.118 (25.48 22.38) -> (26.02 23.67) FOM=13.137
Solution n.119 (25.48 25.70) -> (25.35 26.11) FOM=12.918
Solution n.120 (27.16 13.77) -> (26.91 13.93) FOM=12.664
Solution n.121 (27.44 8.80) -> (27.29 8.38) FOM=12.134

Solution n.122 (28.29 10.79) -> (28.29 10.98) FOM=12.791

Solution n.123 (28.29 13.11) -> (28.47 13.12) FOM=12.476

Solution n.124 (28.29 22.72) -> (25.37 24.34) FOM=13.029

Solution n.125 (28.29 26.36) -> (29.87 27.32) FOM=13.003

Solution n.126 (28.85 8.80) -> (28.45 9.32) FOM=11.684

Order	Cluster	FOM	a	b	c	alpha	beta	gamma
1	54	9.383	9.34	9.34	5.85	90.0	90.0	120.0
2	40	9.765	9.31	9.31	11.73	90.0	90.0	120.0
3	88	11.115	5.47	5.47	9.56	90.0	90.0	120.0
4	112	11.331	19.66	19.66	20.62	90.0	90.0	120.0
5	67	11.445	12.95	12.95	15.75	90.0	90.0	120.0
6	28	11.477	6.34	6.34	13.17	90.0	90.0	120.0
7	91	11.496	6.35	6.35	33.40	90.0	90.0	120.0
8	23	11.527	11.01	11.01	28.21	90.0	90.0	120.0
9	15	11.599	11.02	11.02	30.94	90.0	90.0	120.0
10	89	11.624	6.35	6.35	27.75	90.0	90.0	120.0
11	61	11.631	16.14	16.14	5.81	90.0	90.0	120.0
12	86	11.643	3.53	3.53	8.56	90.0	90.0	120.0
13	17	11.667	7.29	7.29	8.25	90.0	90.0	120.0
14	126	11.684	28.45	28.45	9.32	90.0	90.0	120.0
15	4	11.812	8.37	8.37	13.64	90.0	90.0	120.0
16	36	11.833	15.06	15.06	8.03	90.0	90.0	120.0
17	6	11.842	28.49	28.49	18.62	90.0	90.0	120.0
18	55	11.888	8.06	8.06	14.94	90.0	90.0	120.0
19	117	11.906	24.20	24.20	15.11	90.0	90.0	120.0
20	101	11.940	10.95	10.95	26.16	90.0	90.0	120.0
21	27	11.952	15.02	15.02	15.92	90.0	90.0	120.0
22	90	11.980	6.35	6.35	30.91	90.0	90.0	120.0
23	22	11.999	21.90	21.90	18.21	90.0	90.0	120.0
24	5	12.004	10.72	10.72	13.20	90.0	90.0	120.0
25	29	12.006	25.35	25.35	13.05	90.0	90.0	120.0
26	25	12.006	4.19	4.19	15.03	90.0	90.0	120.0
27	47	12.012	8.64	8.64	18.45	90.0	90.0	120.0
28	97	12.018	11.06	11.06	17.36	90.0	90.0	120.0
29	52	12.042	9.32	9.32	33.97	90.0	90.0	120.0
30	20	12.049	27.29	27.29	20.37	90.0	90.0	120.0
31	110	12.056	17.55	17.55	22.48	90.0	90.0	120.0
32	3	12.076	5.90	5.90	4.24	90.0	90.0	120.0
33	0	12.085	10.21	10.21	9.11	90.0	90.0	120.0
34	19	12.114	6.13	6.13	15.58	90.0	90.0	120.0
35	43	12.126	6.35	6.35	18.60	90.0	90.0	120.0
36	21	12.126	17.03	17.03	21.35	90.0	90.0	120.0
37	121	12.134	27.29	27.29	8.38	90.0	90.0	120.0
38	107	12.143	16.44	16.44	24.94	90.0	90.0	120.0
39	85	12.162	5.52	5.52	15.39	90.0	90.0	120.0
40	44	12.167	13.12	13.12	10.90	90.0	90.0	120.0
41	41	12.204	21.88	21.88	26.06	90.0	90.0	120.0
42	26	12.211	21.77	21.77	9.21	90.0	90.0	120.0
43	14	12.215	19.46	19.46	4.29	90.0	90.0	120.0
44	42	12.246	7.43	7.43	20.62	90.0	90.0	120.0
45	95	12.247	8.65	8.65	24.31	90.0	90.0	120.0
46	12	12.309	11.86	11.86	9.10	90.0	90.0	120.0
47	32	12.312	27.82	27.82	6.05	90.0	90.0	120.0
48	108	12.332	16.45	16.45	20.47	90.0	90.0	120.0

49	87	12.339	4.66	4.66	16.32	90.0	90.0	120.0
50	103	12.357	13.47	13.47	9.37	90.0	90.0	120.0
51	100	12.357	11.48	11.48	33.24	90.0	90.0	120.0
52	74	12.407	28.55	28.55	16.24	90.0	90.0	120.0
53	34	12.408	14.30	14.30	11.64	90.0	90.0	120.0
54	80	12.429	19.62	19.62	27.83	90.0	90.0	120.0
55	98	12.436	9.84	9.84	22.99	90.0	90.0	120.0
56	7	12.439	11.04	11.04	15.04	90.0	90.0	120.0
57	84	12.445	8.64	8.64	31.83	90.0	90.0	120.0
58	105	12.467	15.02	15.02	33.14	90.0	90.0	120.0
59	18	12.467	15.02	15.02	33.14	90.0	90.0	120.0
60	123	12.476	28.47	28.47	13.12	90.0	90.0	120.0
61	72	12.494	21.81	21.81	16.64	90.0	90.0	120.0
62	53	12.502	4.18	4.18	26.30	90.0	90.0	120.0
63	59	12.511	14.99	14.99	18.45	90.0	90.0	120.0
64	13	12.515	15.71	15.71	22.41	90.0	90.0	120.0
65	37	12.520	20.35	20.35	32.94	90.0	90.0	120.0
66	73	12.542	20.95	20.95	10.97	90.0	90.0	120.0
67	30	12.542	20.95	20.95	10.97	90.0	90.0	120.0
68	39	12.558	3.51	3.51	20.12	90.0	90.0	120.0
69	66	12.577	23.78	23.78	24.33	90.0	90.0	120.0
70	58	12.591	23.86	23.86	7.80	90.0	90.0	120.0
71	60	12.623	16.03	16.03	28.62	90.0	90.0	120.0
72	94	12.628	5.50	5.50	7.56	90.0	90.0	120.0
73	120	12.664	26.91	26.91	13.93	90.0	90.0	120.0
74	16	12.677	2.54	2.54	5.40	90.0	90.0	120.0
75	11	12.693	14.62	14.62	9.77	90.0	90.0	120.0
76	31	12.709	19.85	19.85	16.05	90.0	90.0	120.0
77	38	12.709	19.85	19.85	16.05	90.0	90.0	120.0
78	2	12.769	10.66	10.66	4.47	90.0	90.0	120.0
79	63	12.771	24.37	24.37	6.17	90.0	90.0	120.0
80	45	12.771	17.03	17.03	35.99	90.0	90.0	120.0
81	102	12.777	13.05	13.05	19.92	90.0	90.0	120.0
82	122	12.791	28.29	28.29	10.98	90.0	90.0	120.0
83	57	12.797	21.88	21.88	20.98	90.0	90.0	120.0
84	115	12.797	21.03	21.03	32.53	90.0	90.0	120.0
85	113	12.807	20.95	20.95	3.44	90.0	90.0	120.0
86	96	12.811	10.29	10.29	34.92	90.0	90.0	120.0
87	75	12.816	19.30	19.30	14.68	90.0	90.0	120.0
88	56	12.819	17.23	17.23	33.69	90.0	90.0	120.0
89	92	12.820	6.12	6.12	21.96	90.0	90.0	120.0
90	78	12.826	8.63	8.63	26.30	90.0	90.0	120.0
91	64	12.829	25.96	25.96	8.65	90.0	90.0	120.0
92	50	12.841	4.01	4.01	33.20	90.0	90.0	120.0
93	33	12.842	6.86	6.86	28.95	90.0	90.0	120.0
94	81	12.843	20.34	20.34	10.98	90.0	90.0	120.0
95	106	12.846	16.07	16.07	35.23	90.0	90.0	120.0
96	9	12.854	9.97	9.97	21.24	90.0	90.0	120.0
97	24	12.855	20.34	20.34	21.91	90.0	90.0	120.0
98	1	12.887	3.01	3.01	3.48	90.0	90.0	120.0
99	77	12.889	29.71	29.71	6.07	90.0	90.0	120.0
100	35	12.904	3.52	3.52	30.05	90.0	90.0	120.0
101	79	12.907	17.23	17.23	18.59	90.0	90.0	120.0
102	65	12.911	25.07	25.07	28.38	90.0	90.0	120.0
103	119	12.918	25.35	25.35	26.11	90.0	90.0	120.0

104	48	12.930	25.43	25.43	16.45	90.0	90.0	120.0
105	46	12.940	23.77	23.77	30.58	90.0	90.0	120.0
106	109	12.956	16.71	16.71	25.75	90.0	90.0	120.0
107	93	12.972	7.48	7.48	34.03	90.0	90.0	120.0
108	8	12.997	2.68	2.68	6.91	90.0	90.0	120.0
109	70	12.997	23.25	23.25	19.41	90.0	90.0	120.0
110	125	13.003	29.87	29.87	27.32	90.0	90.0	120.0
111	114	13.006	22.06	22.06	13.69	90.0	90.0	120.0
112	10	13.022	18.54	18.54	31.31	90.0	90.0	120.0
113	51	13.024	3.89	3.89	25.18	90.0	90.0	120.0
114	124	13.029	25.37	25.37	24.34	90.0	90.0	120.0
115	82	13.037	4.66	4.66	24.33	90.0	90.0	120.0
116	68	13.040	26.01	26.01	30.16	90.0	90.0	120.0
117	116	13.062	23.00	23.00	5.51	90.0	90.0	120.0
118	69	13.069	24.29	24.29	31.53	90.0	90.0	120.0
119	76	13.085	17.24	17.24	28.59	90.0	90.0	120.0
120	118	13.137	26.02	26.02	23.67	90.0	90.0	120.0
121	111	13.137	26.02	26.02	23.67	90.0	90.0	120.0
122	83	13.155	22.99	22.99	6.13	90.0	90.0	120.0
123	104	13.185	15.02	15.02	26.81	90.0	90.0	120.0
124	62	13.191	21.87	21.87	28.38	90.0	90.0	120.0
125	49	13.212	3.88	3.88	34.38	90.0	90.0	120.0
126	71	13.230	20.35	20.35	26.52	90.0	90.0	120.0
127	99	13.264	20.34	20.34	23.06	90.0	90.0	120.0

S9.3. Output for the orthorhombic maoecrystal V carbon skeleton

Reading input files:

Sample 0 -> file now.gr

Found 3800 points

Read 5175 monoclinic cell files

PDF analysis

Found 32 peaks in observed PDF profile

Peak 0: 2.600

Peak 1: 29.190

Peak 2: 13.050

Peak 3: 18.590

Peak 4: 14.440

Peak 5: 39.090

Peak 6: 31.140

Peak 7: 26.920

Peak 8: 36.830

Peak 9: 10.510

Peak 10: 23.700

Peak 11: 35.270

Peak 12: 6.310

Peak 13: 19.760

Peak 14: 16.790

Peak 15: 8.440

Peak 16: 33.910

Peak 17: 7.210

Peak 18: 3.930

Peak 19: 22.500
Peak 20: 31.860
Peak 21: 32.860
Peak 22: 20.680
Peak 23: 12.050
Peak 24: 17.570
Peak 25: 25.340
Peak 26: 28.300
Peak 27: 15.370
Peak 28: 21.580
Peak 29: 24.500
Peak 30: 4.970
Peak 31: 9.640

Peak search 3D 500

Solution n.0 (4.64 5.55 11.33) -> (4.34 5.70 11.63) FOM=8.183
Solution n.1 (4.64 7.27 6.37) -> (4.32 7.28 6.18) FOM=8.486
Solution n.2 (4.64 7.27 16.65) -> (5.31 7.23 16.79) FOM=8.093
Solution n.3 (4.64 7.27 21.61) -> (5.36 7.23 30.35) FOM=5.611
Solution n.4 (4.64 7.27 23.38) -> (8.04 7.22 24.32) FOM=7.659
Solution n.5 (4.64 7.27 24.80) -> (6.54 7.24 26.07) FOM=7.149
Solution n.6 (4.64 7.27 26.57) -> (6.52 7.25 27.51) FOM=8.678
Solution n.7 (4.64 7.27 31.53) -> (6.54 7.26 21.63) FOM=9.661
Solution n.8 (4.64 7.27 33.30) -> (6.05 7.20 33.23) FOM=6.915
Solution n.9 (4.64 8.99 8.14) -> (5.89 8.72 8.35) FOM=10.760
Solution n.10 (4.64 8.99 14.87) -> (4.77 9.26 17.00) FOM=9.140
Solution n.11 (4.64 8.99 16.65) -> (4.77 9.26 17.00) FOM=9.148
Solution n.12 (4.64 8.99 18.06) -> (5.03 8.41 18.39) FOM=7.934
Solution n.13 (4.64 8.99 21.61) -> (5.04 8.42 21.58) FOM=7.237
Solution n.14 (4.64 8.99 23.38) -> (5.01 8.42 23.64) FOM=6.914
Solution n.15 (4.64 8.99 24.80) -> (6.09 7.77 31.15) FOM=7.435
Solution n.16 (4.64 8.99 26.57) -> (6.08 8.38 26.36) FOM=8.775
Solution n.17 (4.64 8.99 30.11) -> (4.77 8.99 31.27) FOM=4.754
Solution n.18 (4.64 8.99 31.53) -> (4.77 8.99 31.27) FOM=4.776
Solution n.19 (4.64 8.99 36.85) -> (4.77 8.99 36.78) FOM=3.660
Solution n.20 (4.64 10.71 6.37) -> (5.11 10.53 6.56) FOM=10.878
Solution n.21 (4.64 10.71 8.14) -> (4.52 11.19 8.13) FOM=7.529
Solution n.22 (4.64 10.71 13.10) -> (6.08 11.79 13.06) FOM=15.245
Solution n.23 (4.64 10.71 14.87) -> (36.88 11.83 13.05) FOM=8.218
Solution n.24 (4.64 10.71 18.06) -> (3.62 12.53 18.43) FOM=13.113
Solution n.25 (4.64 10.71 23.38) -> (4.05 10.33 23.32) FOM=5.766
Solution n.26 (4.64 10.71 26.57) -> (4.49 11.29 26.82) FOM=6.134
Solution n.27 (4.64 10.71 30.11) -> (4.72 10.96 29.16) FOM=6.797
Solution n.28 (4.64 12.09 6.37) -> (34.55 20.68 6.51) FOM=5.861
Solution n.29 (4.64 12.09 8.14) -> (3.14 13.00 8.61) FOM=9.910
Solution n.30 (4.64 12.09 9.91) -> (4.78 12.23 10.15) FOM=7.334
Solution n.31 (4.64 12.09 13.10) -> (5.28 11.85 13.16) FOM=14.484
Solution n.32 (4.64 12.09 14.87) -> (5.28 13.16 14.59) FOM=11.238
Solution n.33 (4.64 12.09 16.65) -> (5.26 11.94 16.77) FOM=10.213
Solution n.34 (4.64 12.09 18.06) -> (7.22 12.66 18.51) FOM=10.709
Solution n.35 (4.64 12.09 19.84) -> (5.25 11.97 19.85) FOM=7.820
Solution n.36 (4.64 12.09 21.61) -> (4.80 12.11 21.87) FOM=7.076
Solution n.37 (4.64 12.09 23.38) -> (4.76 12.17 23.60) FOM=8.091
Solution n.38 (4.64 12.09 24.80) -> (5.26 11.87 24.65) FOM=5.822
Solution n.39 (4.64 12.09 26.57) -> (4.93 11.90 26.48) FOM=7.317

Solution n.40 (4.64 12.09 28.34) -> (5.27 11.90 29.14) FOM=7.679
Solution n.41 (4.64 12.09 30.11) -> (8.43 11.89 31.88) FOM=9.713
Solution n.42 (4.64 12.09 31.53) -> (6.04 14.30 34.76) FOM=7.552
Solution n.43 (4.64 12.09 33.30) -> (5.26 11.90 33.29) FOM=5.216
Solution n.44 (4.64 12.09 35.08) -> (4.20 11.74 34.96) FOM=5.279
Solution n.45 (4.64 12.09 36.85) -> (5.26 11.92 36.88) FOM=5.704
Solution n.46 (4.64 13.81 14.87) -> (39.00 13.43 14.54) FOM=6.109
Solution n.47 (4.64 13.81 21.61) -> (4.79 13.78 21.69) FOM=5.287
Solution n.48 (4.64 15.53 4.59) -> (5.04 15.55 3.28) FOM=9.764
Solution n.49 (4.64 17.26 13.10) -> (6.60 18.44 13.01) FOM=14.502
Solution n.50 (4.64 17.26 14.87) -> (4.26 17.65 14.51) FOM=9.569
Solution n.51 (4.64 17.26 23.38) -> (5.27 17.68 23.16) FOM=8.250
Solution n.52 (4.64 17.26 26.57) -> (5.25 16.80 26.33) FOM=8.153
Solution n.53 (4.64 18.63 4.59) -> (9.90 14.56 4.23) FOM=10.942
Solution n.54 (4.64 20.35 23.38) -> (5.24 19.99 23.18) FOM=4.034
Solution n.55 (4.64 22.08 6.37) -> (4.13 22.23 6.50) FOM=7.036
Solution n.56 (4.64 22.08 16.65) -> (6.52 24.52 16.93) FOM=5.257
Solution n.57 (4.64 25.17 11.33) -> (4.66 25.36 11.00) FOM=5.151
Solution n.58 (4.64 26.90 6.37) -> (5.27 26.27 6.52) FOM=11.163
Solution n.59 (4.64 28.62 6.37) -> (5.25 28.51 6.53) FOM=10.067
Solution n.60 (4.64 28.62 18.06) -> (5.26 28.70 17.68) FOM=6.584
Solution n.61 (4.64 30.34 6.37) -> (5.36 30.35 7.23) FOM=5.612
Solution n.62 (4.64 31.72 6.37) -> (3.00 32.71 6.50) FOM=7.979
Solution n.63 (4.64 33.44 6.37) -> (5.24 33.99 6.56) FOM=7.817
Solution n.64 (4.64 35.16 6.37) -> (9.29 35.19 6.50) FOM=5.515
Solution n.65 (6.46 5.55 6.37) -> (6.62 5.64 6.42) FOM=9.995
Solution n.66 (6.46 5.55 9.91) -> (7.32 5.33 9.90) FOM=9.444
Solution n.67 (6.46 5.55 11.33) -> (7.22 5.47 11.42) FOM=8.105
Solution n.68 (6.46 5.55 13.10) -> (6.08 5.76 13.13) FOM=15.603
Solution n.69 (6.46 5.55 14.87) -> (7.24 5.37 15.14) FOM=9.757
Solution n.70 (6.46 5.55 16.65) -> (6.57 5.27 11.89) FOM=14.152
Solution n.71 (6.46 5.55 19.84) -> (6.54 5.27 19.88) FOM=9.072
Solution n.72 (6.46 5.55 21.61) -> (7.23 4.83 22.42) FOM=7.993
Solution n.73 (6.46 5.55 23.38) -> (7.23 5.36 23.68) FOM=6.306
Solution n.74 (6.46 5.55 26.57) -> (7.23 5.40 26.17) FOM=6.407
Solution n.75 (6.46 5.55 28.34) -> (7.21 6.12 28.48) FOM=9.449
Solution n.76 (6.46 5.55 30.11) -> (7.23 5.40 32.10) FOM=5.891
Solution n.77 (6.46 5.55 31.53) -> (6.55 5.24 31.17) FOM=8.615
Solution n.78 (6.46 5.55 33.30) -> (6.57 5.62 33.36) FOM=5.086
Solution n.79 (6.46 5.55 35.08) -> (6.58 5.60 35.09) FOM=5.673
Solution n.80 (6.46 5.55 36.85) -> (8.73 6.07 6.51) FOM=9.789
Solution n.81 (6.46 7.27 11.33) -> (6.47 7.19 11.79) FOM=11.532
Solution n.82 (6.46 7.27 16.65) -> (6.52 7.22 16.03) FOM=8.935
Solution n.83 (6.46 7.27 18.06) -> (6.51 7.24 18.48) FOM=10.935
Solution n.84 (6.46 7.27 19.84) -> (6.52 7.23 19.73) FOM=7.114
Solution n.85 (6.46 7.27 21.61) -> (6.54 7.26 21.63) FOM=9.640
Solution n.86 (6.46 7.27 24.80) -> (6.51 7.24 25.21) FOM=9.434
Solution n.87 (6.46 7.27 26.57) -> (6.51 7.22 26.84) FOM=5.858
Solution n.88 (6.46 7.27 28.34) -> (6.51 7.24 28.33) FOM=9.647
Solution n.89 (6.46 7.27 30.11) -> (6.53 7.24 30.38) FOM=8.014
Solution n.90 (6.46 7.27 31.53) -> (6.54 7.25 31.20) FOM=8.420
Solution n.91 (6.46 7.27 33.30) -> (6.53 7.25 33.15) FOM=7.182
Solution n.92 (6.46 7.27 35.08) -> (6.53 7.25 35.63) FOM=6.840
Solution n.93 (6.46 7.27 36.85) -> (6.52 7.24 36.22) FOM=7.675
Solution n.94 (6.46 8.99 9.91) -> (6.51 8.65 9.82) FOM=14.488

Solution n.95 (6.46 8.99 13.10) -> (5.64 8.88 13.48) FOM=8.321
Solution n.96 (6.46 10.71 8.14) -> (6.49 10.66 8.24) FOM=10.984
Solution n.97 (6.46 10.71 9.91) -> (6.50 13.52 10.74) FOM=10.422
Solution n.98 (6.46 10.71 13.10) -> (6.50 10.74 13.52) FOM=10.414
Solution n.99 (6.46 10.71 28.34) -> (6.51 10.38 28.43) FOM=10.215
Solution n.100 (6.46 12.09 4.59) -> (9.85 13.01 6.60) FOM=13.530
Solution n.101 (6.46 12.09 18.06) -> (6.49 11.83 18.44) FOM=11.290
Solution n.102 (6.46 12.09 23.38) -> (6.50 11.83 23.34) FOM=9.910
Solution n.103 (6.46 12.09 36.85) -> (6.51 12.22 36.85) FOM=6.182
Solution n.104 (6.46 13.81 9.91) -> (3.57 14.57 9.78) FOM=9.535
Solution n.105 (6.46 13.81 11.33) -> (6.13 13.12 11.46) FOM=14.912
Solution n.106 (6.46 13.81 13.10) -> (6.09 14.26 13.14) FOM=11.657
Solution n.107 (6.46 13.81 16.65) -> (6.61 13.00 17.23) FOM=15.751
Solution n.108 (6.46 13.81 18.06) -> (6.49 13.46 18.43) FOM=11.853
Solution n.109 (6.46 13.81 19.84) -> (6.02 14.33 19.59) FOM=9.884
Solution n.110 (6.46 13.81 21.61) -> (6.47 13.13 22.53) FOM=12.499
Solution n.111 (6.46 13.81 24.80) -> (6.48 13.10 25.14) FOM=13.170
Solution n.112 (6.46 13.81 26.57) -> (6.48 13.43 28.32) FOM=10.255
Solution n.113 (6.46 13.81 28.34) -> (6.49 14.17 28.51) FOM=8.540
Solution n.114 (6.46 13.81 30.11) -> (6.49 13.80 30.33) FOM=4.248
Solution n.115 (6.46 13.81 31.53) -> (6.48 13.08 31.97) FOM=11.565
Solution n.116 (6.46 13.81 33.30) -> (6.57 13.02 34.48) FOM=11.837
Solution n.117 (6.46 13.81 35.08) -> (6.53 14.57 35.67) FOM=7.293
Solution n.118 (6.46 13.81 36.85) -> (6.53 14.56 36.86) FOM=7.559
Solution n.119 (6.46 15.53 8.14) -> (6.51 15.91 8.15) FOM=7.706
Solution n.120 (6.46 15.53 13.10) -> (6.44 15.24 13.08) FOM=12.648
Solution n.121 (6.46 15.53 14.87) -> (6.54 15.60 14.57) FOM=11.114
Solution n.122 (6.46 15.53 16.65) -> (6.51 15.59 16.40) FOM=9.611
Solution n.123 (6.46 15.53 18.06) -> (6.48 15.16 18.43) FOM=10.597
Solution n.124 (6.46 15.53 19.84) -> (6.52 15.58 19.74) FOM=9.603
Solution n.125 (6.46 15.53 21.61) -> (18.48 17.23 37.81) FOM=3.727
Solution n.126 (6.46 15.53 23.38) -> (6.52 15.58 22.71) FOM=8.273
Solution n.127 (6.46 15.53 24.80) -> (6.51 15.58 24.60) FOM=7.783
Solution n.128 (6.46 15.53 28.34) -> (7.22 15.55 28.26) FOM=7.523
Solution n.129 (6.46 15.53 30.11) -> (6.51 15.59 30.39) FOM=6.840
Solution n.130 (6.46 15.53 33.30) -> (6.51 15.58 33.39) FOM=7.111
Solution n.131 (6.46 15.53 35.08) -> (6.52 15.58 35.28) FOM=7.086
Solution n.132 (6.46 17.26 6.37) -> (7.21 17.49 4.81) FOM=8.323
Solution n.133 (6.46 17.26 9.91) -> (6.50 17.32 9.81) FOM=12.368
Solution n.134 (6.46 17.26 11.33) -> (6.26 17.35 11.33) FOM=10.484
Solution n.135 (6.46 17.26 13.10) -> (6.07 18.20 13.14) FOM=10.500
Solution n.136 (6.46 17.26 14.87) -> (6.52 17.34 14.56) FOM=10.548
Solution n.137 (6.46 17.26 16.65) -> (6.49 17.32 16.27) FOM=10.972
Solution n.138 (6.46 17.26 19.84) -> (6.53 19.58 19.79) FOM=6.332
Solution n.139 (6.46 17.26 21.61) -> (6.08 17.43 21.59) FOM=5.735
Solution n.140 (6.46 17.26 23.38) -> (6.50 17.31 28.35) FOM=9.790
Solution n.141 (6.46 17.26 24.80) -> (6.50 17.30 25.09) FOM=6.660
Solution n.142 (6.46 17.26 26.57) -> (6.52 17.28 26.06) FOM=11.035
Solution n.143 (6.46 17.26 28.34) -> (6.50 17.31 28.36) FOM=9.785
Solution n.144 (6.46 17.26 30.11) -> (6.51 16.89 30.33) FOM=6.502
Solution n.145 (6.46 17.26 31.53) -> (6.51 17.31 31.18) FOM=8.191
Solution n.146 (6.46 17.26 33.30) -> (6.51 17.34 36.83) FOM=7.261
Solution n.147 (6.46 17.26 35.08) -> (6.50 17.33 35.07) FOM=6.702
Solution n.148 (6.46 18.63 8.14) -> (6.50 18.45 8.14) FOM=9.868
Solution n.149 (6.46 18.63 11.33) -> (6.47 18.44 11.37) FOM=10.800

Solution n.150 (6.46 18.63 13.10) -> (6.60 18.44 13.01) FOM=14.507
Solution n.151 (6.46 18.63 14.87) -> (7.22 18.51 14.60) FOM=9.307
Solution n.152 (6.46 18.63 18.06) -> (6.51 18.44 19.75) FOM=9.795
Solution n.153 (6.46 18.63 19.84) -> (6.08 17.60 20.25) FOM=6.031
Solution n.154 (6.46 18.63 21.61) -> (6.52 19.62 26.16) FOM=10.770
Solution n.155 (6.46 18.63 23.38) -> (6.50 18.47 23.67) FOM=9.711
Solution n.156 (6.46 18.63 24.80) -> (6.51 18.45 25.18) FOM=10.261
Solution n.157 (6.46 18.63 26.57) -> (6.50 18.46 26.13) FOM=11.852
Solution n.158 (6.46 18.63 28.34) -> (6.50 18.46 28.37) FOM=12.334
Solution n.159 (6.46 18.63 30.11) -> (6.50 18.46 30.39) FOM=9.136
Solution n.160 (6.46 18.63 31.53) -> (13.03 18.44 31.19) FOM=9.534
Solution n.161 (6.46 18.63 33.30) -> (6.51 18.47 33.83) FOM=9.613
Solution n.162 (6.46 20.35 6.37) -> (9.29 19.57 35.58) FOM=5.292
Solution n.163 (6.46 20.35 8.14) -> (6.50 19.87 8.44) FOM=11.716
Solution n.164 (6.46 20.35 11.33) -> (6.12 20.17 11.46) FOM=5.401
Solution n.165 (6.46 20.35 13.10) -> (6.57 20.67 13.02) FOM=11.348
Solution n.166 (6.46 20.35 16.65) -> (6.50 20.48 16.35) FOM=9.485
Solution n.167 (6.46 20.35 19.84) -> (6.52 20.49 19.63) FOM=9.669
Solution n.168 (6.46 20.35 21.61) -> (6.53 19.60 21.59) FOM=9.790
Solution n.169 (6.46 20.35 26.57) -> (6.51 20.66 26.92) FOM=6.188
Solution n.170 (6.46 20.35 28.34) -> (6.50 20.71 28.39) FOM=7.675
Solution n.171 (6.46 20.35 30.11) -> (6.51 20.71 30.45) FOM=7.298
Solution n.172 (6.46 22.08 4.59) -> (6.55 22.10 5.25) FOM=6.944
Solution n.173 (6.46 22.08 6.37) -> (10.49 20.33 17.68) FOM=5.967
Solution n.174 (6.46 22.08 8.14) -> (6.49 24.65 8.72) FOM=9.025
Solution n.175 (6.46 22.08 9.91) -> (6.53 22.54 9.88) FOM=6.643
Solution n.176 (6.46 22.08 11.33) -> (5.28 13.16 13.00) FOM=12.398
Solution n.177 (6.46 22.08 13.10) -> (6.47 22.53 13.13) FOM=12.528
Solution n.178 (6.46 22.08 14.87) -> (6.52 26.06 17.28) FOM=10.995
Solution n.179 (6.46 22.08 16.65) -> (6.50 22.54 17.30) FOM=10.020
Solution n.180 (6.46 22.08 18.06) -> (6.52 21.51 18.47) FOM=11.293
Solution n.181 (6.46 22.08 19.84) -> (6.53 21.60 19.60) FOM=9.809
Solution n.182 (6.46 22.08 21.61) -> (6.52 22.45 21.66) FOM=6.943
Solution n.183 (6.46 22.08 23.38) -> (6.51 21.60 23.62) FOM=7.901
Solution n.184 (6.46 22.08 24.80) -> (6.50 22.61 23.71) FOM=7.517
Solution n.185 (6.46 22.08 26.57) -> (6.49 22.55 26.19) FOM=8.237
Solution n.186 (6.46 22.08 28.34) -> (6.51 25.42 28.35) FOM=6.537
Solution n.187 (6.46 22.08 30.11) -> (6.52 21.58 29.92) FOM=5.716
Solution n.188 (6.46 22.08 31.53) -> (6.51 25.31 31.19) FOM=6.365
Solution n.189 (6.46 23.80 6.37) -> (9.30 23.72 7.20) FOM=8.051
Solution n.190 (6.46 23.80 8.14) -> (6.48 23.73 8.43) FOM=10.133
Solution n.191 (6.46 23.80 9.91) -> (6.52 24.20 9.86) FOM=9.668
Solution n.192 (6.46 23.80 11.33) -> (6.27 23.76 11.36) FOM=9.113
Solution n.193 (6.46 23.80 13.10) -> (6.48 25.07 13.46) FOM=8.703
Solution n.194 (6.46 23.80 14.87) -> (6.48 23.75 15.26) FOM=10.970
Solution n.195 (6.46 23.80 16.65) -> (6.50 22.54 17.30) FOM=10.023
Solution n.196 (6.46 23.80 18.06) -> (6.50 23.67 18.47) FOM=9.726
Solution n.197 (6.46 23.80 19.84) -> (6.53 24.34 19.59) FOM=9.043
Solution n.198 (6.46 23.80 21.61) -> (6.51 23.62 21.60) FOM=7.902
Solution n.199 (6.46 23.80 23.38) -> (6.51 23.71 23.48) FOM=6.796
Solution n.200 (6.46 23.80 24.80) -> (6.50 23.63 25.27) FOM=7.853
Solution n.201 (6.46 23.80 26.57) -> (6.51 23.68 26.89) FOM=5.547
Solution n.202 (6.46 23.80 28.34) -> (6.50 23.62 28.35) FOM=11.125
Solution n.203 (6.46 23.80 30.11) -> (6.50 23.65 30.43) FOM=8.419
Solution n.204 (6.46 25.17 6.37) -> (7.20 25.43 4.31) FOM=7.135

Solution n.205 (6.46 25.17 8.14) -> (6.50 24.74 8.41) FOM=7.876
Solution n.206 (6.46 25.17 11.33) -> (6.13 25.40 11.44) FOM=4.889
Solution n.207 (6.46 25.17 13.10) -> (6.56 23.66 13.01) FOM=10.850
Solution n.208 (6.46 25.17 14.87) -> (6.52 25.37 14.52) FOM=8.907
Solution n.209 (6.46 25.17 16.65) -> (6.52 26.06 17.28) FOM=10.998
Solution n.210 (6.46 25.17 18.06) -> (6.51 25.37 20.71) FOM=6.179
Solution n.211 (6.46 25.17 19.84) -> (6.51 26.15 19.75) FOM=9.639
Solution n.212 (6.46 25.17 21.61) -> (7.23 25.32 21.33) FOM=6.885
Solution n.213 (6.46 25.17 23.38) -> (6.50 25.27 23.64) FOM=7.870
Solution n.214 (6.46 25.17 26.57) -> (6.50 25.25 26.91) FOM=6.363
Solution n.215 (6.46 25.17 28.34) -> (7.22 25.32 28.37) FOM=7.623
Solution n.216 (6.46 26.90 6.37) -> (8.81 26.98 5.71) FOM=7.327
Solution n.217 (6.46 26.90 8.14) -> (6.50 27.06 8.41) FOM=10.191
Solution n.218 (6.46 26.90 9.91) -> (6.52 24.20 9.86) FOM=9.672
Solution n.219 (6.46 26.90 11.33) -> (6.09 26.80 11.49) FOM=7.270
Solution n.220 (6.46 26.90 13.10) -> (6.57 26.18 12.96) FOM=13.132
Solution n.221 (6.46 26.90 14.87) -> (10.42 29.38 14.56) FOM=7.948
Solution n.222 (6.46 26.90 16.65) -> (6.51 26.77 16.10) FOM=6.156
Solution n.223 (6.46 26.90 18.06) -> (6.50 26.88 17.33) FOM=7.251
Solution n.224 (6.46 26.90 19.84) -> (6.52 26.90 19.60) FOM=7.386
Solution n.225 (6.46 26.90 21.61) -> (6.51 26.94 21.62) FOM=7.092
Solution n.226 (6.46 26.90 24.80) -> (6.50 26.91 25.25) FOM=6.360
Solution n.227 (6.46 26.90 28.34) -> (6.51 26.93 28.37) FOM=8.595
Solution n.228 (6.46 28.62 6.37) -> (7.24 29.11 4.86) FOM=7.296
Solution n.229 (6.46 28.62 8.14) -> (6.50 28.32 8.37) FOM=9.215
Solution n.230 (6.46 28.62 9.91) -> (6.51 28.38 9.87) FOM=9.609
Solution n.231 (6.46 28.62 11.33) -> (6.07 28.65 11.81) FOM=8.809
Solution n.232 (6.46 28.62 13.10) -> (6.48 28.33 13.10) FOM=15.807
Solution n.233 (6.46 28.62 14.87) -> (6.50 28.38 15.21) FOM=7.893
Solution n.234 (6.46 28.62 16.65) -> (6.50 28.35 17.31) FOM=9.791
Solution n.235 (6.46 28.62 18.06) -> (6.49 29.15 18.48) FOM=10.506
Solution n.236 (6.46 28.62 19.84) -> (6.52 28.38 19.62) FOM=11.519
Solution n.237 (6.46 28.62 21.61) -> (6.51 28.35 21.60) FOM=7.916
Solution n.238 (6.46 28.62 23.38) -> (6.50 28.35 23.62) FOM=11.124
Solution n.239 (6.46 28.62 24.80) -> (13.76 32.54 14.55) FOM=4.103
Solution n.240 (6.46 28.62 26.57) -> (6.51 28.37 26.93) FOM=8.563
Solution n.241 (6.46 30.34 6.37) -> (6.48 34.51 13.08) FOM=12.259
Solution n.242 (6.46 30.34 8.14) -> (6.50 30.10 8.40) FOM=9.209
Solution n.243 (6.46 30.34 11.33) -> (6.11 31.15 11.47) FOM=7.882
Solution n.244 (6.46 30.34 13.10) -> (6.11 30.50 13.15) FOM=10.015
Solution n.245 (6.46 30.34 14.87) -> (6.49 30.49 15.14) FOM=5.832
Solution n.246 (6.46 30.34 16.65) -> (6.49 30.35 16.62) FOM=5.643
Solution n.247 (6.46 30.34 18.06) -> (6.50 30.39 18.46) FOM=9.141
Solution n.248 (6.46 30.34 19.84) -> (6.52 30.45 19.62) FOM=8.888
Solution n.249 (6.46 30.34 21.61) -> (6.52 31.19 21.62) FOM=7.159
Solution n.250 (6.46 31.72 6.37) -> (10.55 34.43 3.87) FOM=4.552
Solution n.251 (6.46 31.72 8.14) -> (6.49 32.02 8.41) FOM=8.399
Solution n.252 (6.46 31.72 9.91) -> (6.52 37.87 9.87) FOM=6.354
Solution n.253 (6.46 31.72 11.33) -> (6.11 31.79 11.47) FOM=6.488
Solution n.254 (6.46 31.72 13.10) -> (6.48 31.97 13.08) FOM=11.568
Solution n.255 (6.46 31.72 14.87) -> (6.49 31.18 15.18) FOM=8.098
Solution n.256 (6.46 31.72 18.06) -> (6.50 31.83 18.51) FOM=9.396
Solution n.257 (6.46 31.72 19.84) -> (6.52 31.17 19.64) FOM=10.323
Solution n.258 (6.46 31.72 21.61) -> (6.52 31.93 21.62) FOM=7.114
Solution n.259 (6.46 33.44 6.37) -> (7.24 33.85 6.52) FOM=7.922

Solution n.260 (6.46 33.44 8.14) -> (6.50 32.82 8.39) FOM=9.101
Solution n.261 (6.46 33.44 9.91) -> (6.51 33.09 9.88) FOM=9.246
Solution n.262 (6.46 33.44 11.33) -> (6.11 32.89 11.48) FOM=6.286
Solution n.263 (6.46 33.44 13.10) -> (6.49 34.42 13.41) FOM=7.741
Solution n.264 (6.46 33.44 14.87) -> (6.49 33.62 15.22) FOM=7.050
Solution n.265 (6.46 33.44 16.65) -> (6.50 34.83 11.83) FOM=8.042
Solution n.266 (6.46 33.44 18.06) -> (6.50 33.05 18.46) FOM=8.929
Solution n.267 (6.46 33.44 19.84) -> (6.51 33.06 19.75) FOM=7.938
Solution n.268 (6.46 35.16 6.37) -> (8.32 35.18 4.25) FOM=6.083
Solution n.269 (6.46 35.16 8.14) -> (6.50 35.31 8.39) FOM=7.893
Solution n.270 (6.46 35.16 9.91) -> (7.23 34.88 9.85) FOM=6.312
Solution n.271 (6.46 35.16 11.33) -> (6.12 35.20 11.48) FOM=5.549
Solution n.272 (6.46 35.16 13.10) -> (6.48 36.87 13.08) FOM=11.852
Solution n.273 (6.46 35.16 14.87) -> (6.52 35.28 15.58) FOM=7.090
Solution n.274 (6.46 35.16 16.65) -> (6.50 35.34 16.55) FOM=5.043
Solution n.275 (6.46 36.88 6.37) -> (7.23 36.88 5.39) FOM=4.275
Solution n.276 (6.46 36.88 8.14) -> (6.50 35.31 8.39) FOM=7.879
Solution n.277 (6.46 36.88 9.91) -> (6.52 36.88 9.87) FOM=6.909
Solution n.278 (6.46 36.88 11.33) -> (6.12 36.95 11.48) FOM=6.622
Solution n.279 (6.46 36.88 13.10) -> (6.48 36.87 13.08) FOM=11.792
Solution n.280 (8.29 5.55 6.37) -> (8.28 5.79 3.09) FOM=10.469
Solution n.281 (8.29 7.27 6.37) -> (8.44 7.66 6.45) FOM=10.635
Solution n.282 (8.29 7.27 8.14) -> (8.47 10.00 8.29) FOM=9.329
Solution n.283 (8.29 7.27 9.91) -> (7.19 7.73 10.05) FOM=8.778
Solution n.284 (8.29 7.27 19.84) -> (4.11 9.00 20.20) FOM=5.534
Solution n.285 (8.29 7.27 26.57) -> (7.18 12.70 26.01) FOM=7.813
Solution n.286 (8.29 8.99 4.59) -> (8.08 7.29 5.29) FOM=9.855
Solution n.287 (8.29 8.99 6.37) -> (8.12 9.18 6.49) FOM=9.380
Solution n.288 (8.29 8.99 8.14) -> (8.39 8.57 8.25) FOM=10.293
Solution n.289 (8.29 8.99 11.33) -> (8.71 9.30 11.21) FOM=9.225
Solution n.290 (8.29 8.99 16.65) -> (8.42 8.26 17.14) FOM=10.831
Solution n.291 (8.29 8.99 19.84) -> (5.74 8.69 13.41) FOM=9.571
Solution n.292 (8.29 8.99 21.61) -> (8.35 8.74 22.17) FOM=9.026
Solution n.293 (8.29 8.99 23.38) -> (8.32 8.95 23.94) FOM=7.325
Solution n.294 (8.29 8.99 26.57) -> (8.28 8.45 26.97) FOM=9.672
Solution n.295 (8.29 8.99 28.34) -> (7.23 8.58 26.98) FOM=10.297
Solution n.296 (8.29 8.99 30.11) -> (7.24 9.28 29.16) FOM=7.061
Solution n.297 (8.29 10.71 4.59) -> (8.41 10.74 5.04) FOM=10.821
Solution n.298 (8.29 10.71 6.37) -> (8.24 10.66 6.49) FOM=10.987
Solution n.299 (8.29 10.71 9.91) -> (8.49 10.70 9.93) FOM=10.481
Solution n.300 (8.29 10.71 11.33) -> (8.38 10.51 10.71) FOM=9.791
Solution n.301 (8.29 10.71 13.10) -> (8.48 9.99 13.02) FOM=14.930
Solution n.302 (8.29 10.71 14.87) -> (8.42 10.47 15.55) FOM=11.775
Solution n.303 (8.29 10.71 16.65) -> (7.71 10.54 16.83) FOM=11.223
Solution n.304 (8.29 10.71 18.06) -> (6.08 10.69 18.82) FOM=7.572
Solution n.305 (8.29 10.71 19.84) -> (8.06 10.77 19.61) FOM=5.639
Solution n.306 (8.29 10.71 21.61) -> (8.40 10.47 23.04) FOM=7.763
Solution n.307 (8.29 10.71 23.38) -> (8.41 10.48 23.90) FOM=10.180
Solution n.308 (8.29 10.71 24.80) -> (8.43 10.42 26.10) FOM=8.537
Solution n.309 (8.29 10.71 26.57) -> (8.43 10.42 26.10) FOM=8.531
Solution n.310 (8.29 10.71 28.34) -> (8.40 10.51 28.14) FOM=9.997
Solution n.311 (8.29 10.71 30.11) -> (8.44 9.93 29.97) FOM=6.307
Solution n.312 (8.29 10.71 31.53) -> (8.28 8.43 32.86) FOM=9.049
Solution n.313 (8.29 10.71 33.30) -> (8.44 9.94 35.33) FOM=7.602
Solution n.314 (8.29 10.71 35.08) -> (8.41 10.44 35.31) FOM=9.527

Solution n.315 (8.29 10.71 36.85) -> (8.44 9.94 36.86) FOM=6.755
Solution n.316 (8.29 12.09 4.59) -> (8.42 11.82 3.00) FOM=11.626
Solution n.317 (8.29 12.09 9.91) -> (8.44 11.87 9.95) FOM=11.840
Solution n.318 (8.29 12.09 11.33) -> (8.44 11.88 11.33) FOM=13.603
Solution n.319 (8.29 12.09 13.10) -> (8.46 11.84 13.06) FOM=15.134
Solution n.320 (8.29 12.09 14.87) -> (8.56 11.88 14.45) FOM=12.706
Solution n.321 (8.29 12.09 16.65) -> (8.44 11.95 16.57) FOM=13.721
Solution n.322 (8.29 12.09 18.06) -> (8.40 11.93 17.98) FOM=9.612
Solution n.323 (8.29 12.09 21.61) -> (8.42 11.86 20.87) FOM=11.295
Solution n.324 (8.29 12.09 24.80) -> (8.41 11.90 24.16) FOM=11.444
Solution n.325 (8.29 12.09 26.57) -> (8.43 11.88 26.15) FOM=9.526
Solution n.326 (8.29 12.09 28.34) -> (8.41 11.90 28.71) FOM=7.552
Solution n.327 (8.29 12.09 30.11) -> (8.42 11.90 25.58) FOM=10.801
Solution n.328 (8.29 12.09 33.30) -> (9.33 18.43 29.11) FOM=5.301
Solution n.329 (8.29 12.09 35.08) -> (8.43 11.89 35.26) FOM=9.532
Solution n.330 (8.29 12.09 36.85) -> (9.30 11.84 37.25) FOM=2.919
Solution n.331 (8.29 13.81 16.65) -> (8.38 8.63 16.44) FOM=10.557
Solution n.332 (8.29 13.81 26.57) -> (8.42 13.52 26.86) FOM=6.088
Solution n.333 (8.29 15.53 6.37) -> (8.27 15.57 6.49) FOM=10.268
Solution n.334 (8.29 15.53 11.33) -> (8.40 15.52 11.88) FOM=12.070
Solution n.335 (8.29 15.53 14.87) -> (8.21 15.55 14.56) FOM=10.158
Solution n.336 (8.29 15.53 16.65) -> (8.45 15.55 16.46) FOM=10.316
Solution n.337 (8.29 15.53 18.06) -> (8.33 15.48 18.41) FOM=8.116
Solution n.338 (8.29 15.53 19.84) -> (10.61 15.52 19.91) FOM=8.155
Solution n.339 (8.29 15.53 21.61) -> (8.39 15.54 22.13) FOM=7.617
Solution n.340 (8.29 15.53 23.38) -> (10.97 15.54 36.89) FOM=2.834
Solution n.341 (8.29 15.53 24.80) -> (8.40 15.53 24.75) FOM=5.602
Solution n.342 (8.29 15.53 26.57) -> (8.37 15.53 26.39) FOM=5.188
Solution n.343 (8.29 15.53 28.34) -> (6.52 15.58 29.13) FOM=7.869
Solution n.344 (8.29 15.53 30.11) -> (8.38 15.52 30.06) FOM=5.387
Solution n.345 (8.29 15.53 31.53) -> (8.36 15.51 31.80) FOM=6.958
Solution n.346 (8.29 15.53 33.30) -> (8.38 15.53 32.84) FOM=6.128
Solution n.347 (8.29 15.53 35.08) -> (8.40 15.54 35.22) FOM=5.912
Solution n.348 (8.29 17.26 6.37) -> (8.40 17.33 6.49) FOM=7.531
Solution n.349 (8.29 17.26 11.33) -> (8.24 16.81 11.19) FOM=7.436
Solution n.350 (8.29 17.26 13.10) -> (8.30 16.76 13.12) FOM=8.536
Solution n.351 (8.29 17.26 16.65) -> (7.65 17.45 15.89) FOM=4.000
Solution n.352 (8.29 17.26 21.61) -> (8.30 16.87 22.40) FOM=6.664
Solution n.353 (8.29 17.26 24.80) -> (6.51 17.32 24.55) FOM=6.583
Solution n.354 (8.29 17.26 26.57) -> (8.34 16.89 27.01) FOM=6.734
Solution n.355 (8.29 17.26 28.34) -> (8.40 17.66 26.31) FOM=7.112
Solution n.356 (8.29 17.26 30.11) -> (7.23 17.20 30.29) FOM=5.629
Solution n.357 (8.29 17.26 31.53) -> (8.33 16.81 32.86) FOM=6.561
Solution n.358 (8.29 17.26 35.08) -> (8.33 16.89 35.32) FOM=6.987
Solution n.359 (8.29 18.63 6.37) -> (8.44 19.87 6.50) FOM=11.720
Solution n.360 (8.29 18.63 9.91) -> (8.48 13.02 9.99) FOM=14.925
Solution n.361 (8.29 18.63 14.87) -> (8.41 17.99 15.49) FOM=8.703
Solution n.362 (8.29 18.63 16.65) -> (7.86 11.90 16.90) FOM=7.291
Solution n.363 (8.29 18.63 21.61) -> (8.44 18.80 6.02) FOM=8.798
Solution n.364 (8.29 18.63 23.38) -> (8.63 18.49 23.57) FOM=5.367
Solution n.365 (8.29 18.63 24.80) -> (8.40 19.60 26.28) FOM=6.822
Solution n.366 (8.29 18.63 26.57) -> (8.44 18.71 26.97) FOM=8.349
Solution n.367 (8.29 18.63 30.11) -> (8.42 18.48 30.01) FOM=6.332
Solution n.368 (8.29 18.63 33.30) -> (7.24 18.50 33.79) FOM=9.157
Solution n.369 (8.29 20.35 6.37) -> (8.15 20.50 6.50) FOM=8.275

Solution n.370 (8.29 20.35 9.91) -> (8.43 19.98 9.87) FOM=7.305
Solution n.371 (8.29 20.35 13.10) -> (8.46 20.79 13.08) FOM=6.349
Solution n.372 (8.29 20.35 16.65) -> (7.70 21.15 16.81) FOM=5.957
Solution n.373 (8.29 22.08 6.37) -> (8.38 22.08 6.49) FOM=6.882
Solution n.374 (8.29 22.08 9.91) -> (8.46 21.48 9.96) FOM=8.380
Solution n.375 (8.29 22.08 13.10) -> (8.44 22.07 13.07) FOM=7.033
Solution n.376 (8.29 22.08 14.87) -> (8.39 22.13 15.54) FOM=7.603
Solution n.377 (8.29 22.08 16.65) -> (8.30 22.41 16.87) FOM=6.656
Solution n.378 (8.29 22.08 19.84) -> (8.41 23.84 19.86) FOM=7.849
Solution n.379 (8.29 22.08 21.61) -> (8.42 22.43 21.05) FOM=4.848
Solution n.380 (8.29 22.08 28.34) -> (8.39 22.22 28.10) FOM=5.052
Solution n.381 (8.29 23.80 6.37) -> (8.43 23.73 6.48) FOM=10.120
Solution n.382 (8.29 23.80 11.33) -> (9.26 23.65 11.26) FOM=7.051
Solution n.383 (8.29 23.80 13.10) -> (9.26 23.64 13.03) FOM=7.265
Solution n.384 (8.29 23.80 14.87) -> (8.59 23.77 14.54) FOM=9.137
Solution n.385 (8.29 23.80 16.65) -> (7.25 23.73 16.97) FOM=8.822
Solution n.386 (8.29 23.80 18.06) -> (15.58 24.63 17.88) FOM=3.980
Solution n.387 (8.29 23.80 26.57) -> (8.43 23.77 26.15) FOM=8.218
Solution n.388 (8.29 23.80 30.11) -> (39.00 24.51 29.18) FOM=2.948
Solution n.389 (8.29 25.17 6.37) -> (9.26 25.20 6.50) FOM=7.290
Solution n.390 (8.29 25.17 9.91) -> (8.45 25.07 9.92) FOM=7.605
Solution n.391 (8.29 25.17 11.33) -> (8.50 26.89 11.47) FOM=8.379
Solution n.392 (8.29 25.17 13.10) -> (8.45 26.02 13.12) FOM=7.173
Solution n.393 (8.29 25.17 16.65) -> (8.43 23.92 16.47) FOM=10.252
Solution n.394 (8.29 25.17 18.06) -> (9.28 25.11 19.57) FOM=7.723
Solution n.395 (8.29 25.17 21.61) -> (8.41 25.56 22.35) FOM=4.614
Solution n.396 (8.29 25.17 24.80) -> (8.40 25.51 24.38) FOM=5.255
Solution n.397 (8.29 25.17 28.34) -> (8.41 25.63 28.11) FOM=5.217
Solution n.398 (8.29 26.90 4.59) -> (8.45 26.83 3.93) FOM=7.355
Solution n.399 (8.29 26.90 6.37) -> (8.68 26.98 6.50) FOM=9.356
Solution n.400 (8.29 26.90 8.14) -> (8.43 26.98 7.70) FOM=8.534
Solution n.401 (8.29 26.90 11.33) -> (7.26 27.00 11.29) FOM=7.859
Solution n.402 (8.29 26.90 13.10) -> (9.27 26.88 13.00) FOM=6.177
Solution n.403 (8.29 26.90 14.87) -> (8.43 26.28 16.45) FOM=9.274
Solution n.404 (8.29 26.90 16.65) -> (7.65 27.05 16.82) FOM=7.670
Solution n.405 (8.29 26.90 21.61) -> (8.44 27.02 20.83) FOM=7.003
Solution n.406 (8.29 26.90 23.38) -> (9.31 27.01 26.76) FOM=4.866
Solution n.407 (8.29 26.90 26.57) -> (8.43 26.97 25.36) FOM=5.434
Solution n.408 (8.29 26.90 28.34) -> (8.42 27.04 28.03) FOM=7.043
Solution n.409 (8.29 28.62 6.37) -> (8.37 28.32 6.50) FOM=9.207
Solution n.410 (8.29 28.62 9.91) -> (8.44 27.90 9.93) FOM=8.172
Solution n.411 (8.29 28.62 11.33) -> (9.28 29.14 11.25) FOM=7.557
Solution n.412 (8.29 28.62 13.10) -> (8.45 27.95 13.07) FOM=8.954
Solution n.413 (8.29 28.62 16.65) -> (8.44 28.16 16.52) FOM=10.111
Solution n.414 (8.29 28.62 21.61) -> (8.41 28.24 21.02) FOM=7.506
Solution n.415 (8.29 30.34 6.37) -> (8.40 30.10 6.50) FOM=9.218
Solution n.416 (8.29 30.34 9.91) -> (8.44 29.97 9.93) FOM=6.316
Solution n.417 (8.29 30.34 11.33) -> (9.27 30.59 11.25) FOM=6.119
Solution n.418 (8.29 30.34 13.10) -> (9.25 29.11 13.03) FOM=6.856
Solution n.419 (8.29 30.34 16.65) -> (8.44 31.15 16.45) FOM=10.077
Solution n.420 (8.29 30.34 18.06) -> (9.62 33.95 11.83) FOM=4.131
Solution n.421 (8.29 30.34 21.61) -> (8.42 30.02 20.96) FOM=4.828
Solution n.422 (8.29 30.34 23.38) -> (8.42 29.94 23.79) FOM=6.880
Solution n.423 (8.29 31.72 6.37) -> (8.39 32.83 6.50) FOM=9.093
Solution n.424 (8.29 31.72 8.14) -> (9.03 31.82 8.15) FOM=5.574

Solution n.425 (8.29 31.72 13.10) -> (8.42 31.78 13.08) FOM=6.673
Solution n.426 (8.29 31.72 16.65) -> (8.34 30.71 8.75) FOM=6.526
Solution n.427 (8.29 31.72 21.61) -> (8.44 31.89 20.90) FOM=5.800
Solution n.428 (8.29 33.44 6.37) -> (8.67 34.48 6.50) FOM=8.146
Solution n.429 (8.29 33.44 11.33) -> (8.42 33.03 11.90) FOM=10.867
Solution n.430 (8.29 33.44 13.10) -> (8.43 26.99 13.08) FOM=7.723
Solution n.431 (8.29 33.44 16.65) -> (39.00 13.07 23.64) FOM=6.581
Solution n.432 (8.29 35.16 6.37) -> (8.64 35.20 6.50) FOM=7.286
Solution n.433 (8.29 35.16 13.10) -> (8.42 35.30 13.09) FOM=7.285
Solution n.434 (8.29 35.16 14.87) -> (8.40 35.25 14.98) FOM=5.396
Solution n.435 (8.29 35.16 16.65) -> (7.24 36.31 16.94) FOM=8.180
Solution n.436 (8.29 36.88 6.37) -> (8.68 36.88 6.50) FOM=6.652
Solution n.437 (8.29 36.88 13.10) -> (8.42 36.87 13.08) FOM=7.211
Solution n.438 (10.11 5.55 6.37) -> (10.41 5.71 6.25) FOM=9.884
Solution n.439 (10.11 5.55 18.06) -> (9.90 5.27 18.77) FOM=9.084
Solution n.440 (10.11 5.55 24.80) -> (10.46 5.59 24.74) FOM=6.319
Solution n.441 (10.11 7.27 11.33) -> (10.35 7.21 11.60) FOM=9.125
Solution n.442 (10.11 7.27 16.65) -> (9.84 7.21 16.53) FOM=7.949
Solution n.443 (10.11 7.27 19.84) -> (10.28 7.21 19.56) FOM=7.149
Solution n.444 (10.11 7.27 23.38) -> (10.65 7.25 22.74) FOM=9.547
Solution n.445 (10.11 7.27 24.80) -> (10.40 7.20 24.62) FOM=5.544
Solution n.446 (10.11 7.27 26.57) -> (9.83 7.24 26.58) FOM=8.103
Solution n.447 (10.11 7.27 28.34) -> (11.29 7.28 28.27) FOM=11.796
Solution n.448 (10.11 7.27 30.11) -> (16.09 7.22 31.10) FOM=6.601
Solution n.449 (10.11 7.27 31.53) -> (13.73 7.22 31.94) FOM=5.422
Solution n.450 (10.11 7.27 33.30) -> (12.16 7.21 33.08) FOM=6.504
Solution n.451 (10.11 7.27 35.08) -> (11.29 7.27 35.18) FOM=6.735
Solution n.452 (10.11 7.27 36.85) -> (29.22 7.23 36.24) FOM=6.790
Solution n.453 (10.11 8.99 6.37) -> (10.37 9.32 6.52) FOM=7.758
Solution n.454 (10.11 8.99 11.33) -> (9.83 9.23 11.22) FOM=9.858
Solution n.455 (10.11 8.99 13.10) -> (8.58 9.37 13.41) FOM=9.376
Solution n.456 (10.11 8.99 16.65) -> (9.85 9.24 16.94) FOM=7.143
Solution n.457 (10.11 8.99 19.84) -> (6.51 9.31 17.26) FOM=9.530
Solution n.458 (10.11 8.99 21.61) -> (9.84 9.23 21.54) FOM=6.359
Solution n.459 (10.11 8.99 23.38) -> (9.96 8.44 23.76) FOM=9.558
Solution n.460 (10.11 8.99 28.34) -> (9.83 9.24 27.62) FOM=6.888
Solution n.461 (10.11 8.99 30.11) -> (9.79 9.28 29.68) FOM=6.795
Solution n.462 (10.11 8.99 33.30) -> (9.78 9.27 33.95) FOM=6.258
Solution n.463 (10.11 8.99 36.85) -> (9.81 9.24 36.76) FOM=4.390
Solution n.464 (10.11 10.71 8.14) -> (9.93 10.70 8.49) FOM=10.474
Solution n.465 (10.11 10.71 11.33) -> (10.39 10.70 11.26) FOM=7.343
Solution n.466 (10.11 10.71 13.10) -> (10.55 10.71 12.48) FOM=7.434
Solution n.467 (10.11 10.71 14.87) -> (9.26 11.24 14.88) FOM=12.394
Solution n.468 (10.11 10.71 18.06) -> (9.85 10.79 18.45) FOM=10.560
Solution n.469 (10.11 10.71 19.84) -> (9.91 10.76 19.59) FOM=8.414
Solution n.470 (10.11 10.71 21.61) -> (9.90 10.65 21.57) FOM=9.651
Solution n.471 (10.11 10.71 23.38) -> (13.10 10.67 23.65) FOM=10.340
Solution n.472 (10.11 10.71 24.80) -> (9.89 10.73 25.13) FOM=9.728
Solution n.473 (10.11 10.71 26.57) -> (9.87 10.72 26.20) FOM=9.328
Solution n.474 (10.11 10.71 28.34) -> (9.88 10.71 28.29) FOM=7.625
Solution n.475 (10.11 10.71 30.11) -> (9.88 10.72 30.02) FOM=5.782
Solution n.476 (10.11 10.71 31.53) -> (9.87 10.73 31.15) FOM=11.352
Solution n.477 (10.11 10.71 33.30) -> (9.88 10.72 35.33) FOM=8.140
Solution n.478 (10.11 10.71 35.08) -> (9.88 10.72 35.33) FOM=8.105
Solution n.479 (10.11 10.71 36.85) -> (9.87 10.73 36.87) FOM=6.557

Solution n.480 (10.11 12.09 13.10) -> (9.90 12.05 13.23) FOM=9.036
 Solution n.481 (10.11 12.09 21.61) -> (9.82 12.12 21.65) FOM=6.183
 Solution n.482 (10.11 12.09 24.80) -> (10.30 12.06 24.43) FOM=4.989
 Solution n.483 (10.11 13.81 8.14) -> (9.99 13.02 8.48) FOM=14.936
 Solution n.484 (10.11 13.81 9.91) -> (10.41 8.42 9.34) FOM=8.220
 Solution n.485 (10.11 13.81 13.10) -> (10.69 13.52 13.00) FOM=12.225
 Solution n.486 (10.11 13.81 16.65) -> (10.73 13.53 16.31) FOM=7.057
 Solution n.487 (10.11 13.81 19.84) -> (10.31 13.43 19.55) FOM=6.603
 Solution n.488 (10.11 13.81 21.61) -> (10.35 13.47 21.39) FOM=5.812
 Solution n.489 (10.11 13.81 35.08) -> (9.84 13.73 35.32) FOM=5.360
 Solution n.490 (10.11 15.53 9.91) -> (10.73 15.56 9.89) FOM=13.142
 Solution n.491 (10.11 15.53 13.10) -> (9.90 15.58 13.07) FOM=10.905
 Solution n.492 (10.11 15.53 14.87) -> (9.90 15.58 13.07) FOM=10.904
 Solution n.493 (10.11 15.53 18.06) -> (10.00 15.54 18.02) FOM=6.044
 Solution n.494 (10.11 15.53 19.84) -> (10.35 15.56 19.57) FOM=6.741
 Solution n.495 (10.11 15.53 21.61) -> (9.89 15.58 21.50) FOM=10.566
 Solution n.496 (10.11 15.53 23.38) -> (10.54 15.55 23.70) FOM=6.357
 Solution n.497 (10.11 15.53 24.80) -> (8.43 16.46 21.19) FOM=9.310
 Solution n.498 (10.11 15.53 26.57) -> (9.90 15.63 26.89) FOM=6.715
 Solution n.499 (10.11 15.53 30.11) -> (9.90 15.58 30.05) FOM=6.334

Order	Cluster	FOM	a	b	c	alpha	beta	gamma
1	232	15.81	6.48	28.33	13.10	90.0	90.0	90.0
2	107	15.75	6.61	13.00	17.23	90.0	90.0	90.0
3	68	15.60	6.08	5.76	13.13	90.0	90.0	90.0
4	22	15.24	6.08	11.79	13.06	90.0	90.0	90.0
5	319	15.13	8.46	11.84	13.06	90.0	90.0	90.0
6	483	14.94	9.99	13.02	8.48	90.0	90.0	90.0
7	301	14.93	8.48	9.99	13.02	90.0	90.0	90.0
8	360	14.93	8.48	13.02	9.99	90.0	90.0	90.0
9	105	14.91	6.13	13.12	11.46	90.0	90.0	90.0
10	150	14.51	6.60	18.44	13.01	90.0	90.0	90.0
11	49	14.50	6.60	18.44	13.01	90.0	90.0	90.0
12	94	14.49	6.51	8.65	9.82	90.0	90.0	90.0
13	31	14.48	5.28	11.85	13.16	90.0	90.0	90.0
14	70	14.15	6.57	5.27	11.89	90.0	90.0	90.0
15	321	13.72	8.44	11.95	16.57	90.0	90.0	90.0
16	318	13.60	8.44	11.88	11.33	90.0	90.0	90.0
17	100	13.53	9.85	13.01	6.60	90.0	90.0	90.0
18	111	13.17	6.48	13.10	25.15	90.0	90.0	90.0
19	490	13.14	10.73	15.56	9.89	90.0	90.0	90.0
20	220	13.13	6.57	26.18	12.96	90.0	90.0	90.0
21	24	13.11	3.62	12.53	18.43	90.0	90.0	90.0
22	320	12.71	8.56	11.88	14.45	90.0	90.0	90.0
23	120	12.65	6.44	15.24	13.08	90.0	90.0	90.0
24	177	12.53	6.47	22.53	13.13	90.0	90.0	90.0
25	110	12.50	6.47	13.13	22.53	90.0	90.0	90.0
26	176	12.40	5.28	13.16	13.00	90.0	90.0	90.0
27	467	12.39	9.26	11.24	14.88	90.0	90.0	90.0
28	133	12.37	6.50	17.32	9.81	90.0	90.0	90.0
29	158	12.33	6.50	18.46	28.37	90.0	90.0	90.0
30	241	12.26	6.48	34.51	13.08	90.0	90.0	90.0
31	485	12.23	10.69	13.52	13.00	90.0	90.0	90.0
32	334	12.07	8.40	15.52	11.88	90.0	90.0	90.0
33	108	11.85	6.49	13.46	18.43	90.0	90.0	90.0

34	272	11.85	6.48	36.87	13.09	90.0	90.0	90.0
35	157	11.85	6.50	18.46	26.13	90.0	90.0	90.0
36	317	11.84	8.44	11.87	9.95	90.0	90.0	90.0
37	116	11.84	6.57	13.02	34.48	90.0	90.0	90.0
38	447	11.80	11.29	7.28	28.28	90.0	90.0	90.0
39	279	11.79	6.48	36.87	13.08	90.0	90.0	90.0
40	302	11.77	8.42	10.47	15.55	90.0	90.0	90.0
41	359	11.72	8.44	19.87	6.50	90.0	90.0	90.0
42	163	11.72	6.50	19.87	8.45	90.0	90.0	90.0
43	106	11.66	6.09	14.26	13.14	90.0	90.0	90.0
44	316	11.63	8.42	11.82	3.00	90.0	90.0	90.0
45	254	11.57	6.48	31.97	13.08	90.0	90.0	90.0
46	115	11.57	6.48	13.08	31.97	90.0	90.0	90.0
47	81	11.53	6.47	7.19	11.79	90.0	90.0	90.0
48	236	11.52	6.52	28.38	19.62	90.0	90.0	90.0
49	324	11.44	8.41	11.90	24.16	90.0	90.0	90.0
50	476	11.35	9.87	10.73	31.15	90.0	90.0	90.0
51	165	11.35	6.57	20.67	13.02	90.0	90.0	90.0
52	323	11.30	8.42	11.86	20.87	90.0	90.0	90.0
53	180	11.29	6.52	21.51	18.47	90.0	90.0	90.0
54	101	11.29	6.49	11.83	18.44	90.0	90.0	90.0
55	32	11.24	5.28	13.16	14.59	90.0	90.0	90.0
56	303	11.22	7.71	10.54	16.83	90.0	90.0	90.0
57	58	11.16	5.27	26.27	6.52	90.0	90.0	90.0
58	202	11.13	6.50	23.62	28.35	90.0	90.0	90.0
59	238	11.12	6.50	28.35	23.62	90.0	90.0	90.0
60	121	11.11	6.54	15.60	14.57	90.0	90.0	90.0
61	142	11.04	6.52	17.28	26.06	90.0	90.0	90.0
62	209	11.00	6.52	26.06	17.28	90.0	90.0	90.0
63	178	10.99	6.52	26.06	17.28	90.0	90.0	90.0
64	298	10.99	8.24	10.66	6.49	90.0	90.0	90.0
65	96	10.98	6.49	10.66	8.24	90.0	90.0	90.0
66	137	10.97	6.49	17.32	16.27	90.0	90.0	90.0
67	194	10.97	6.48	23.75	15.26	90.0	90.0	90.0
68	53	10.94	9.90	14.56	4.23	90.0	90.0	90.0
69	83	10.94	6.51	7.24	18.48	90.0	90.0	90.0
70	491	10.90	9.90	15.58	13.07	90.0	90.0	90.0
71	492	10.90	9.90	15.58	13.07	90.0	90.0	90.0
72	20	10.88	5.11	10.53	6.56	90.0	90.0	90.0
73	429	10.87	8.42	33.03	11.90	90.0	90.0	90.0
74	207	10.85	6.56	23.66	13.01	90.0	90.0	90.0
75	290	10.83	8.42	8.26	17.14	90.0	90.0	90.0
76	297	10.82	8.41	10.74	5.04	90.0	90.0	90.0
77	327	10.80	8.42	11.90	25.58	90.0	90.0	90.0
78	149	10.80	6.47	18.44	11.37	90.0	90.0	90.0
79	154	10.77	6.52	19.62	26.16	90.0	90.0	90.0
80	9	10.76	5.89	8.72	8.35	90.0	90.0	90.0
81	34	10.71	7.22	12.66	18.51	90.0	90.0	90.0
82	281	10.63	8.44	7.66	6.45	90.0	90.0	90.0
83	123	10.60	6.48	15.16	18.43	90.0	90.0	90.0
84	495	10.57	9.89	15.58	21.50	90.0	90.0	90.0
85	468	10.56	9.85	10.79	18.45	90.0	90.0	90.0
86	331	10.56	8.38	8.63	16.44	90.0	90.0	90.0
87	136	10.55	6.52	17.34	14.56	90.0	90.0	90.0
88	235	10.51	6.49	29.15	18.48	90.0	90.0	90.0

89	135	10.50	6.07	18.20	13.14	90.0	90.0	90.0
90	134	10.48	6.26	17.35	11.33	90.0	90.0	90.0
91	299	10.48	8.49	10.70	9.93	90.0	90.0	90.0
92	464	10.47	9.93	10.70	8.49	90.0	90.0	90.0
93	280	10.47	8.28	5.79	3.09	90.0	90.0	90.0
94	97	10.42	6.50	13.52	10.74	90.0	90.0	90.0
95	98	10.41	6.50	10.74	13.52	90.0	90.0	90.0
96	471	10.34	13.10	10.67	23.65	90.0	90.0	90.0
97	257	10.32	6.52	31.17	19.64	90.0	90.0	90.0
98	336	10.32	8.45	15.55	16.46	90.0	90.0	90.0
99	295	10.30	7.23	8.58	26.98	90.0	90.0	90.0
100	288	10.29	8.39	8.57	8.25	90.0	90.0	90.0
101	333	10.27	8.27	15.57	6.49	90.0	90.0	90.0
102	156	10.26	6.51	18.45	25.18	90.0	90.0	90.0
103	112	10.25	6.48	13.43	28.32	90.0	90.0	90.0
104	393	10.25	8.43	23.92	16.47	90.0	90.0	90.0
105	99	10.21	6.51	10.38	28.43	90.0	90.0	90.0
106	33	10.21	5.26	11.94	16.77	90.0	90.0	90.0
107	217	10.19	6.50	27.06	8.41	90.0	90.0	90.0
108	307	10.18	8.41	10.48	23.90	90.0	90.0	90.0
109	335	10.16	8.21	15.55	14.56	90.0	90.0	90.0
110	190	10.13	6.48	23.73	8.43	90.0	90.0	90.0
111	381	10.12	8.43	23.73	6.48	90.0	90.0	90.0
112	413	10.11	8.44	28.16	16.52	90.0	90.0	90.0
113	419	10.08	8.44	31.15	16.45	90.0	90.0	90.0
114	59	10.07	5.25	28.51	6.53	90.0	90.0	90.0
115	195	10.02	6.50	22.54	17.30	90.0	90.0	90.0
116	179	10.02	6.50	22.54	17.30	90.0	90.0	90.0
117	244	10.02	6.11	30.50	13.15	90.0	90.0	90.0
118	310	10.00	8.40	10.51	28.14	90.0	90.0	90.0
119	65	10.00	6.62	5.64	6.42	90.0	90.0	90.0
120	29	9.91	3.14	13.00	8.61	90.0	90.0	90.0
121	102	9.91	6.50	11.83	23.34	90.0	90.0	90.0
122	438	9.88	10.41	5.71	6.25	90.0	90.0	90.0
123	109	9.88	6.02	14.33	19.59	90.0	90.0	90.0
124	148	9.87	6.50	18.45	8.14	90.0	90.0	90.0
125	454	9.86	9.83	9.23	11.22	90.0	90.0	90.0
126	286	9.85	8.08	7.29	5.29	90.0	90.0	90.0
127	181	9.81	6.53	21.60	19.60	90.0	90.0	90.0
128	152	9.79	6.51	18.44	19.75	90.0	90.0	90.0
129	300	9.79	8.38	10.51	10.71	90.0	90.0	90.0
130	234	9.79	6.50	28.35	17.31	90.0	90.0	90.0
131	168	9.79	6.53	19.60	21.59	90.0	90.0	90.0
132	140	9.79	6.50	17.31	28.35	90.0	90.0	90.0
133	80	9.79	8.73	6.07	6.51	90.0	90.0	90.0
134	143	9.78	6.50	17.31	28.36	90.0	90.0	90.0
135	48	9.76	5.04	15.55	3.28	90.0	90.0	90.0
136	69	9.76	7.24	5.37	15.14	90.0	90.0	90.0
137	472	9.73	9.89	10.73	25.13	90.0	90.0	90.0
138	196	9.73	6.50	23.67	18.47	90.0	90.0	90.0
139	41	9.71	8.43	11.89	31.88	90.0	90.0	90.0
140	155	9.71	6.50	18.47	23.67	90.0	90.0	90.0
141	294	9.67	8.28	8.45	26.97	90.0	90.0	90.0
142	218	9.67	6.52	24.20	9.86	90.0	90.0	90.0
143	167	9.67	6.52	20.49	19.63	90.0	90.0	90.0

144	191	9.67	6.52 24.20 9.86	90.0 90.0 90.0
145	7	9.66	6.54 7.26 21.63	90.0 90.0 90.0
146	470	9.65	9.90 10.65 21.57	90.0 90.0 90.0
147	88	9.65	6.51 7.24 28.34	90.0 90.0 90.0
148	85	9.64	6.54 7.26 21.63	90.0 90.0 90.0
149	211	9.64	6.51 26.15 19.75	90.0 90.0 90.0
150	161	9.61	6.51 18.47 33.83	90.0 90.0 90.0
151	322	9.61	8.40 11.93 17.98	90.0 90.0 90.0
152	122	9.61	6.51 15.59 16.40	90.0 90.0 90.0
153	230	9.61	6.51 28.38 9.87	90.0 90.0 90.0
154	124	9.60	6.52 15.58 19.74	90.0 90.0 90.0
155	291	9.57	5.74 8.69 13.41	90.0 90.0 90.0
156	50	9.57	4.26 17.65 14.51	90.0 90.0 90.0
157	459	9.56	9.96 8.44 23.76	90.0 90.0 90.0
158	444	9.55	10.65 7.25 22.74	90.0 90.0 90.0
159	104	9.53	3.57 14.57 9.78	90.0 90.0 90.0
160	160	9.53	13.03 18.44 31.19	90.0 90.0 90.0
161	329	9.53	8.43 11.89 35.26	90.0 90.0 90.0
162	457	9.53	6.51 9.31 17.26	90.0 90.0 90.0
163	314	9.53	8.41 10.44 35.31	90.0 90.0 90.0
164	325	9.53	8.43 11.88 26.15	90.0 90.0 90.0
165	166	9.48	6.50 20.48 16.35	90.0 90.0 90.0
166	75	9.45	7.21 6.12 28.48	90.0 90.0 90.0
167	66	9.44	7.32 5.33 9.90	90.0 90.0 90.0
168	86	9.43	6.51 7.24 25.21	90.0 90.0 90.0
169	256	9.40	6.50 31.83 18.51	90.0 90.0 90.0
170	287	9.38	8.12 9.18 6.49	90.0 90.0 90.0
171	455	9.38	8.58 9.37 13.41	90.0 90.0 90.0
172	399	9.36	8.68 26.98 6.50	90.0 90.0 90.0
173	282	9.33	8.47 10.00 8.29	90.0 90.0 90.0
174	473	9.33	9.87 10.72 26.20	90.0 90.0 90.0
175	497	9.31	8.43 16.46 21.20	90.0 90.0 90.0
176	151	9.31	7.22 18.51 14.60	90.0 90.0 90.0
177	403	9.27	8.43 26.28 16.45	90.0 90.0 90.0
178	261	9.25	6.51 33.09 9.88	90.0 90.0 90.0
179	289	9.22	8.71 9.30 11.21	90.0 90.0 90.0
180	415	9.22	8.40 30.10 6.50	90.0 90.0 90.0
181	229	9.21	6.50 28.32 8.37	90.0 90.0 90.0
182	242	9.21	6.50 30.10 8.40	90.0 90.0 90.0
183	409	9.21	8.37 28.32 6.50	90.0 90.0 90.0
184	368	9.16	7.24 18.50 33.79	90.0 90.0 90.0
185	11	9.15	4.77 9.26 17.00	90.0 90.0 90.0
186	247	9.14	6.50 30.39 18.46	90.0 90.0 90.0
187	10	9.14	4.77 9.26 17.00	90.0 90.0 90.0
188	384	9.14	8.59 23.77 14.54	90.0 90.0 90.0
189	159	9.14	6.50 18.46 30.39	90.0 90.0 90.0
190	441	9.13	10.35 7.21 11.60	90.0 90.0 90.0
191	192	9.11	6.27 23.76 11.36	90.0 90.0 90.0
192	260	9.10	6.50 32.82 8.39	90.0 90.0 90.0
193	423	9.09	8.39 32.83 6.50	90.0 90.0 90.0
194	439	9.08	9.90 5.27 18.77	90.0 90.0 90.0
195	71	9.07	6.54 5.27 19.88	90.0 90.0 90.0
196	312	9.05	8.28 8.43 32.87	90.0 90.0 90.0
197	197	9.04	6.53 24.34 19.59	90.0 90.0 90.0
198	480	9.04	9.90 12.05 13.23	90.0 90.0 90.0

199	292	9.03	8.35	8.74	22.17	90.0	90.0	90.0
200	174	9.02	6.49	24.65	8.72	90.0	90.0	90.0
201	412	8.95	8.45	27.95	13.07	90.0	90.0	90.0
202	82	8.93	6.52	7.22	16.03	90.0	90.0	90.0
203	266	8.93	6.50	33.05	18.46	90.0	90.0	90.0
204	208	8.91	6.52	25.37	14.52	90.0	90.0	90.0
205	248	8.89	6.52	30.45	19.62	90.0	90.0	90.0
206	385	8.82	7.25	23.73	16.97	90.0	90.0	90.0
207	231	8.81	6.07	28.65	11.81	90.0	90.0	90.0
208	363	8.80	8.44	18.80	6.02	90.0	90.0	90.0
209	283	8.78	7.19	7.73	10.05	90.0	90.0	90.0
210	16	8.77	6.08	8.38	26.36	90.0	90.0	90.0
211	193	8.70	6.48	25.07	13.46	90.0	90.0	90.0
212	361	8.70	8.41	17.99	15.49	90.0	90.0	90.0
213	6	8.68	6.52	7.25	27.51	90.0	90.0	90.0
214	77	8.62	6.55	5.24	31.17	90.0	90.0	90.0
215	227	8.59	6.51	26.93	28.37	90.0	90.0	90.0
216	240	8.56	6.51	28.37	26.93	90.0	90.0	90.0
217	113	8.54	6.49	14.17	28.51	90.0	90.0	90.0
218	308	8.54	8.43	10.42	26.10	90.0	90.0	90.0
219	350	8.54	8.30	16.76	13.12	90.0	90.0	90.0
220	400	8.53	8.43	26.98	7.70	90.0	90.0	90.0
221	309	8.53	8.43	10.42	26.10	90.0	90.0	90.0
222	1	8.49	4.32	7.28	6.18	90.0	90.0	90.0
223	90	8.42	6.54	7.25	31.20	90.0	90.0	90.0
224	203	8.42	6.50	23.65	30.43	90.0	90.0	90.0
225	469	8.41	9.91	10.76	19.59	90.0	90.0	90.0
226	251	8.40	6.49	32.02	8.41	90.0	90.0	90.0
227	374	8.38	8.46	21.48	9.96	90.0	90.0	90.0
228	391	8.38	8.50	26.89	11.47	90.0	90.0	90.0
229	366	8.35	8.44	18.71	26.97	90.0	90.0	90.0
230	132	8.32	7.21	17.49	4.81	90.0	90.0	90.0
231	95	8.32	5.64	8.88	13.48	90.0	90.0	90.0
232	369	8.27	8.15	20.50	6.50	90.0	90.0	90.0
233	126	8.27	6.52	15.58	22.71	90.0	90.0	90.0
234	51	8.25	5.27	17.68	23.16	90.0	90.0	90.0
235	185	8.24	6.49	22.55	26.19	90.0	90.0	90.0
236	484	8.22	10.41	8.42	9.34	90.0	90.0	90.0
237	387	8.22	8.43	23.77	26.15	90.0	90.0	90.0
238	23	8.22	36.88	11.83	13.05	90.0	90.0	90.0
239	145	8.19	6.51	17.31	31.18	90.0	90.0	90.0
240	0	8.18	4.34	5.70	11.64	90.0	90.0	90.0
241	435	8.18	7.24	36.31	16.94	90.0	90.0	90.0
242	410	8.17	8.44	27.90	9.93	90.0	90.0	90.0
243	338	8.16	10.61	15.52	19.91	90.0	90.0	90.0
244	52	8.15	5.25	16.80	26.33	90.0	90.0	90.0
245	428	8.15	8.67	34.48	6.50	90.0	90.0	90.0
246	477	8.14	9.88	10.72	35.33	90.0	90.0	90.0
247	337	8.12	8.33	15.48	18.41	90.0	90.0	90.0
248	478	8.10	9.88	10.72	35.33	90.0	90.0	90.0
249	67	8.10	7.22	5.47	11.42	90.0	90.0	90.0
250	446	8.10	9.83	7.24	26.58	90.0	90.0	90.0
251	255	8.10	6.49	31.18	15.18	90.0	90.0	90.0
252	2	8.09	5.31	7.23	16.80	90.0	90.0	90.0
253	37	8.09	4.76	12.17	23.60	90.0	90.0	90.0

254	189	8.05	9.30 23.72 7.20	90.0 90.0 90.0
255	265	8.04	6.50 34.83 11.83	90.0 90.0 90.0
256	89	8.01	6.53 7.24 30.38	90.0 90.0 90.0
257	72	7.99	7.23 4.83 22.42	90.0 90.0 90.0
258	62	7.98	3.00 32.71 6.50	90.0 90.0 90.0
259	442	7.95	9.84 7.21 16.53	90.0 90.0 90.0
260	221	7.95	10.42 29.38 14.56	90.0 90.0 90.0
261	267	7.94	6.51 33.06 19.75	90.0 90.0 90.0
262	12	7.93	5.03 8.41 18.39	90.0 90.0 90.0
263	259	7.92	7.24 33.85 6.52	90.0 90.0 90.0
264	237	7.92	6.51 28.35 21.60	90.0 90.0 90.0
265	198	7.90	6.51 23.62 21.60	90.0 90.0 90.0
266	183	7.90	6.51 21.60 23.63	90.0 90.0 90.0
267	233	7.89	6.50 28.38 15.21	90.0 90.0 90.0
268	269	7.89	6.50 35.31 8.39	90.0 90.0 90.0
269	243	7.88	6.11 31.15 11.47	90.0 90.0 90.0
270	276	7.88	6.50 35.31 8.39	90.0 90.0 90.0
271	205	7.88	6.50 24.74 8.41	90.0 90.0 90.0
272	213	7.87	6.50 25.27 23.64	90.0 90.0 90.0
273	343	7.87	6.52 15.58 29.13	90.0 90.0 90.0
274	401	7.86	7.26 27.00 11.29	90.0 90.0 90.0
275	200	7.85	6.50 23.63 25.28	90.0 90.0 90.0
276	378	7.85	8.41 23.84 19.86	90.0 90.0 90.0
277	35	7.82	5.25 11.97 19.85	90.0 90.0 90.0
278	63	7.82	5.24 33.99 6.56	90.0 90.0 90.0
279	285	7.81	7.18 12.70 26.01	90.0 90.0 90.0
280	127	7.78	6.51 15.58 24.60	90.0 90.0 90.0
281	306	7.76	8.40 10.47 23.04	90.0 90.0 90.0
282	453	7.76	10.37 9.32 6.52	90.0 90.0 90.0
283	263	7.74	6.49 34.42 13.41	90.0 90.0 90.0
284	394	7.72	9.28 25.11 19.57	90.0 90.0 90.0
285	430	7.72	8.43 26.99 13.08	90.0 90.0 90.0
286	119	7.71	6.51 15.91 8.15	90.0 90.0 90.0
287	40	7.68	5.27 11.90 29.14	90.0 90.0 90.0
288	93	7.68	6.52 7.24 36.22	90.0 90.0 90.0
289	170	7.67	6.50 20.71 28.39	90.0 90.0 90.0
290	404	7.67	7.65 27.05 16.82	90.0 90.0 90.0
291	4	7.66	8.04 7.22 24.32	90.0 90.0 90.0
292	474	7.62	9.88 10.71 28.29	90.0 90.0 90.0
293	215	7.62	7.22 25.32 28.37	90.0 90.0 90.0
294	339	7.62	8.39 15.54 22.13	90.0 90.0 90.0
295	390	7.61	8.45 25.07 9.92	90.0 90.0 90.0
296	376	7.60	8.39 22.13 15.54	90.0 90.0 90.0
297	313	7.60	8.44 9.94 35.33	90.0 90.0 90.0
298	304	7.57	6.08 10.69 18.82	90.0 90.0 90.0
299	118	7.56	6.53 14.56 36.86	90.0 90.0 90.0
300	411	7.56	9.28 29.14 11.25	90.0 90.0 90.0
301	42	7.55	6.04 14.30 34.76	90.0 90.0 90.0
302	326	7.55	8.41 11.90 28.71	90.0 90.0 90.0
303	348	7.53	8.40 17.33 6.49	90.0 90.0 90.0
304	21	7.53	4.52 11.19 8.14	90.0 90.0 90.0
305	128	7.52	7.22 15.55 28.26	90.0 90.0 90.0
306	184	7.52	6.50 22.61 23.71	90.0 90.0 90.0
307	414	7.51	8.41 28.24 21.02	90.0 90.0 90.0
308	349	7.44	8.24 16.81 11.19	90.0 90.0 90.0

309	15	7.43	6.09 7.77 31.15	90.0 90.0 90.0
310	466	7.43	10.55 10.71 12.48	90.0 90.0 90.0
311	224	7.39	6.52 26.90 19.60	90.0 90.0 90.0
312	398	7.35	8.45 26.83 3.93	90.0 90.0 90.0
313	465	7.34	10.39 10.70 11.26	90.0 90.0 90.0
314	30	7.33	4.78 12.23 10.15	90.0 90.0 90.0
315	216	7.33	8.81 26.98 5.71	90.0 90.0 90.0
316	293	7.33	8.32 8.95 23.95	90.0 90.0 90.0
317	39	7.32	4.93 11.90 26.48	90.0 90.0 90.0
318	370	7.31	8.43 19.98 9.87	90.0 90.0 90.0
319	171	7.30	6.51 20.71 30.45	90.0 90.0 90.0
320	228	7.30	7.24 29.11 4.86	90.0 90.0 90.0
321	117	7.29	6.53 14.57 35.67	90.0 90.0 90.0
322	362	7.29	7.86 11.90 16.91	90.0 90.0 90.0
323	389	7.29	9.26 25.20 6.50	90.0 90.0 90.0
324	432	7.29	8.64 35.20 6.50	90.0 90.0 90.0
325	433	7.28	8.42 35.30 13.09	90.0 90.0 90.0
326	219	7.27	6.09 26.80 11.49	90.0 90.0 90.0
327	383	7.27	9.26 23.64 13.03	90.0 90.0 90.0
328	146	7.26	6.51 17.34 36.83	90.0 90.0 90.0
329	223	7.25	6.50 26.88 17.33	90.0 90.0 90.0
330	13	7.24	5.04 8.42 21.58	90.0 90.0 90.0
331	437	7.21	8.42 36.87 13.08	90.0 90.0 90.0
332	91	7.18	6.53 7.25 33.15	90.0 90.0 90.0
333	392	7.17	8.45 26.02 13.12	90.0 90.0 90.0
334	249	7.16	6.52 31.19 21.62	90.0 90.0 90.0
335	5	7.15	6.54 7.24 26.07	90.0 90.0 90.0
336	443	7.15	10.28 7.21 19.56	90.0 90.0 90.0
337	456	7.14	9.85 9.24 16.94	90.0 90.0 90.0
338	204	7.13	7.20 25.43 4.31	90.0 90.0 90.0
339	84	7.11	6.52 7.23 19.73	90.0 90.0 90.0
340	258	7.11	6.52 31.93 21.62	90.0 90.0 90.0
341	355	7.11	8.40 17.66 26.31	90.0 90.0 90.0
342	130	7.11	6.51 15.58 33.39	90.0 90.0 90.0
343	225	7.09	6.51 26.94 21.62	90.0 90.0 90.0
344	273	7.09	6.52 35.28 15.58	90.0 90.0 90.0
345	131	7.09	6.52 15.58 35.28	90.0 90.0 90.0
346	36	7.08	4.80 12.11 21.87	90.0 90.0 90.0
347	296	7.06	7.24 9.28 29.19	90.0 90.0 90.0
348	486	7.06	10.73 13.53 16.31	90.0 90.0 90.0
349	382	7.05	9.26 23.65 11.26	90.0 90.0 90.0
350	264	7.05	6.49 33.62 15.22	90.0 90.0 90.0
351	408	7.04	8.42 27.04 28.03	90.0 90.0 90.0
352	55	7.04	4.13 22.23 6.50	90.0 90.0 90.0
353	375	7.03	8.44 22.07 13.07	90.0 90.0 90.0
354	405	7.00	8.44 27.02 20.83	90.0 90.0 90.0
355	358	6.99	8.33 16.89 35.32	90.0 90.0 90.0
356	345	6.96	8.36 15.51 31.80	90.0 90.0 90.0
357	172	6.94	6.55 22.10 5.25	90.0 90.0 90.0
358	182	6.94	6.52 22.45 21.66	90.0 90.0 90.0
359	8	6.91	6.05 7.20 33.23	90.0 90.0 90.0
360	14	6.91	5.01 8.42 23.64	90.0 90.0 90.0
361	277	6.91	6.52 36.88 9.87	90.0 90.0 90.0
362	460	6.89	9.83 9.24 27.62	90.0 90.0 90.0
363	212	6.88	7.23 25.32 21.33	90.0 90.0 90.0

364	373	6.88	8.38 22.08 6.49	90.0 90.0 90.0
365	422	6.88	8.42 29.94 23.79	90.0 90.0 90.0
366	418	6.86	9.25 29.11 13.03	90.0 90.0 90.0
367	92	6.84	6.53 7.25 35.63	90.0 90.0 90.0
368	129	6.84	6.51 15.59 30.39	90.0 90.0 90.0
369	365	6.82	8.40 19.60 26.28	90.0 90.0 90.0
370	27	6.80	4.72 10.96 29.16	90.0 90.0 90.0
371	199	6.80	6.51 23.71 23.49	90.0 90.0 90.0
372	461	6.79	9.79 9.28 29.68	90.0 90.0 90.0
373	452	6.79	29.22 7.23 36.24	90.0 90.0 90.0
374	315	6.75	8.44 9.94 36.86	90.0 90.0 90.0
375	494	6.74	10.35 15.56 19.57	90.0 90.0 90.0
376	451	6.74	11.29 7.27 35.18	90.0 90.0 90.0
377	354	6.73	8.34 16.89 27.01	90.0 90.0 90.0
378	498	6.72	9.90 15.63 26.89	90.0 90.0 90.0
379	147	6.70	6.50 17.33 35.07	90.0 90.0 90.0
380	425	6.67	8.42 31.78 13.08	90.0 90.0 90.0
381	352	6.66	8.30 16.87 22.41	90.0 90.0 90.0
382	141	6.66	6.50 17.30 25.09	90.0 90.0 90.0
383	377	6.66	8.30 22.41 16.87	90.0 90.0 90.0
384	436	6.65	8.68 36.88 6.50	90.0 90.0 90.0
385	175	6.64	6.53 22.54 9.88	90.0 90.0 90.0
386	278	6.62	6.12 36.95 11.48	90.0 90.0 90.0
387	487	6.60	10.31 13.43 19.55	90.0 90.0 90.0
388	448	6.60	16.09 7.22 31.10	90.0 90.0 90.0
389	60	6.58	5.26 28.70 17.68	90.0 90.0 90.0
390	353	6.58	6.51 17.32 24.55	90.0 90.0 90.0
391	431	6.58	39.00 13.07 23.64	90.0 90.0 90.0
392	357	6.56	8.33 16.81 32.86	90.0 90.0 90.0
393	479	6.56	9.87 10.73 36.87	90.0 90.0 90.0
394	186	6.54	6.51 25.42 28.35	90.0 90.0 90.0
395	426	6.53	8.34 30.71 8.75	90.0 90.0 90.0
396	450	6.50	12.16 7.21 33.08	90.0 90.0 90.0
397	144	6.50	6.51 16.89 30.33	90.0 90.0 90.0
398	253	6.49	6.11 31.79 11.47	90.0 90.0 90.0
399	74	6.41	7.23 5.40 26.17	90.0 90.0 90.0
400	188	6.37	6.51 25.31 31.19	90.0 90.0 90.0
401	214	6.36	6.50 25.25 26.91	90.0 90.0 90.0
402	226	6.36	6.50 26.91 25.25	90.0 90.0 90.0
403	458	6.36	9.84 9.23 21.54	90.0 90.0 90.0
404	496	6.36	10.54 15.55 23.70	90.0 90.0 90.0
405	252	6.35	6.52 37.87 9.87	90.0 90.0 90.0
406	371	6.35	8.46 20.79 13.08	90.0 90.0 90.0
407	499	6.33	9.90 15.58 30.05	90.0 90.0 90.0
408	138	6.33	6.53 19.58 19.79	90.0 90.0 90.0
409	367	6.33	8.42 18.48 30.02	90.0 90.0 90.0
410	440	6.32	10.46 5.59 24.74	90.0 90.0 90.0
411	416	6.32	8.44 29.97 9.93	90.0 90.0 90.0
412	270	6.31	7.23 34.88 9.85	90.0 90.0 90.0
413	311	6.31	8.44 9.93 29.97	90.0 90.0 90.0
414	73	6.31	7.23 5.36 23.68	90.0 90.0 90.0
415	262	6.29	6.11 32.89 11.48	90.0 90.0 90.0
416	462	6.26	9.78 9.27 33.95	90.0 90.0 90.0
417	169	6.19	6.51 20.66 26.92	90.0 90.0 90.0
418	481	6.18	9.82 12.12 21.65	90.0 90.0 90.0

419	103	6.18	6.51 12.22 36.85	90.0 90.0 90.0
420	210	6.18	6.51 25.37 20.71	90.0 90.0 90.0
421	402	6.18	9.27 26.88 13.00	90.0 90.0 90.0
422	222	6.16	6.51 26.77 16.10	90.0 90.0 90.0
423	26	6.13	4.49 11.29 26.82	90.0 90.0 90.0
424	346	6.13	8.38 15.53 32.84	90.0 90.0 90.0
425	417	6.12	9.27 30.59 11.25	90.0 90.0 90.0
426	46	6.11	39.00 13.43 14.54	90.0 90.0 90.0
427	332	6.09	8.42 13.52 26.86	90.0 90.0 90.0
428	268	6.08	8.32 35.18 4.25	90.0 90.0 90.0
429	493	6.04	10.00 15.54 18.02	90.0 90.0 90.0
430	153	6.03	6.08 17.60 20.25	90.0 90.0 90.0
431	173	5.97	10.49 20.33 17.68	90.0 90.0 90.0
432	372	5.96	7.70 21.15 16.81	90.0 90.0 90.0
433	347	5.91	8.40 15.54 35.22	90.0 90.0 90.0
434	76	5.89	7.23 5.40 32.10	90.0 90.0 90.0
435	28	5.86	34.55 20.68 6.51	90.0 90.0 90.0
436	87	5.86	6.51 7.22 26.84	90.0 90.0 90.0
437	245	5.83	6.49 30.49 15.14	90.0 90.0 90.0
438	38	5.82	5.26 11.87 24.65	90.0 90.0 90.0
439	488	5.81	10.35 13.47 21.39	90.0 90.0 90.0
440	427	5.80	8.44 31.89 20.90	90.0 90.0 90.0
441	475	5.78	9.88 10.72 30.02	90.0 90.0 90.0
442	25	5.77	4.05 10.33 23.33	90.0 90.0 90.0
443	139	5.74	6.08 17.43 21.59	90.0 90.0 90.0
444	187	5.72	6.52 21.58 29.92	90.0 90.0 90.0
445	45	5.70	5.26 11.92 36.88	90.0 90.0 90.0
446	79	5.67	6.58 5.60 35.09	90.0 90.0 90.0
447	246	5.64	6.49 30.35 16.62	90.0 90.0 90.0
448	305	5.64	8.06 10.77 19.61	90.0 90.0 90.0
449	356	5.63	7.23 17.20 30.29	90.0 90.0 90.0
450	61	5.61	5.36 30.35 7.23	90.0 90.0 90.0
451	3	5.61	5.36 7.23 30.35	90.0 90.0 90.0
452	341	5.60	8.40 15.53 24.75	90.0 90.0 90.0
453	424	5.57	9.03 31.82 8.15	90.0 90.0 90.0
454	271	5.55	6.12 35.20 11.48	90.0 90.0 90.0
455	201	5.55	6.51 23.68 26.89	90.0 90.0 90.0
456	445	5.54	10.40 7.20 24.62	90.0 90.0 90.0
457	284	5.53	4.11 9.00 20.20	90.0 90.0 90.0
458	64	5.52	9.29 35.19 6.50	90.0 90.0 90.0
459	407	5.43	8.43 26.97 25.36	90.0 90.0 90.0
460	449	5.42	13.73 7.22 31.94	90.0 90.0 90.0
461	164	5.40	6.12 20.17 11.46	90.0 90.0 90.0
462	434	5.40	8.40 35.25 14.98	90.0 90.0 90.0
463	344	5.39	8.38 15.52 30.06	90.0 90.0 90.0
464	364	5.37	8.63 18.49 23.57	90.0 90.0 90.0
465	489	5.36	9.84 13.73 35.32	90.0 90.0 90.0
466	328	5.30	9.33 18.43 29.11	90.0 90.0 90.0
467	162	5.29	9.29 19.57 35.58	90.0 90.0 90.0
468	47	5.29	4.79 13.78 21.69	90.0 90.0 90.0
469	44	5.28	4.20 11.74 34.96	90.0 90.0 90.0
470	56	5.26	6.52 24.52 16.93	90.0 90.0 90.0
471	396	5.26	8.40 25.51 24.39	90.0 90.0 90.0
472	397	5.22	8.41 25.63 28.11	90.0 90.0 90.0
473	43	5.22	5.26 11.90 33.29	90.0 90.0 90.0

474	342	5.19	8.37 15.53 26.40	90.0 90.0 90.0
475	57	5.15	4.66 25.36 11.00	90.0 90.0 90.0
476	78	5.09	6.57 5.62 33.36	90.0 90.0 90.0
477	380	5.05	8.39 22.22 28.10	90.0 90.0 90.0
478	274	5.04	6.50 35.34 16.55	90.0 90.0 90.0
479	482	4.99	10.30 12.06 24.43	90.0 90.0 90.0
480	206	4.89	6.13 25.40 11.44	90.0 90.0 90.0
481	406	4.87	9.31 27.01 26.76	90.0 90.0 90.0
482	379	4.85	8.42 22.43 21.05	90.0 90.0 90.0
483	421	4.83	8.42 30.02 20.96	90.0 90.0 90.0
484	18	4.78	4.77 8.99 31.27	90.0 90.0 90.0
485	17	4.75	4.77 8.99 31.27	90.0 90.0 90.0
486	395	4.61	8.41 25.56 22.35	90.0 90.0 90.0
487	250	4.55	10.55 34.43 3.87	90.0 90.0 90.0
488	463	4.39	9.81 9.24 36.76	90.0 90.0 90.0
489	275	4.27	7.23 36.88 5.39	90.0 90.0 90.0
490	114	4.25	6.49 13.80 30.33	90.0 90.0 90.0
491	420	4.13	9.62 33.95 11.83	90.0 90.0 90.0
492	239	4.10	13.76 32.54 14.55	90.0 90.0 90.0
493	54	4.03	5.24 19.99 23.18	90.0 90.0 90.0
494	351	4.00	7.65 17.45 15.89	90.0 90.0 90.0
495	386	3.98	15.58 24.63 17.89	90.0 90.0 90.0
496	125	3.73	18.48 17.23 37.81	90.0 90.0 90.0
497	19	3.66	4.77 8.99 36.78	90.0 90.0 90.0
498	388	2.95	39.00 24.51 29.18	90.0 90.0 90.0
499	330	2.92	9.30 11.84 37.25	90.0 90.0 90.0
500	340	2.83	10.97 15.54 36.8	90.0 90.0 90.0