MODEL 2

Leonard Dwight Soledad

2022-12-16

```
# Helper packages
library(rsample)   # for creating our train-test splits
library(recipes)   # for minor feature engineering tasks

## Loading required package: dplyr

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

##
## Attaching package: 'recipes'

## The following object is masked from 'package:stats':
##
##     step

library(tidyverse)

## ── Attaching packages
## ───────────────────────────────────────
## tidyverse 1.3.2 ──

## ✓ ggplot2 3.3.6     ✓ purrr   0.3.4
## ✓ tibble  3.1.8     ✓ stringr 1.4.1
## ✓ tidyr   1.2.1     ✓ forcats 0.5.2
## ✓ readr   2.1.2
## ── Conflicts ────────────────────────────────────────── tidyverse_conflicts() ──
## ✗ dplyr::filter()  masks stats::filter()
## ✗ stringr::fixed() masks recipes::fixed()
## ✗ dplyr::lag()     masks stats::lag()

library(readr)
library(dplyr)    # for general data wrangling needs
library(ggplot2)  # for awesome graphics
library(bestNormalize)



# Modeling packages
library(h2o)       # for fitting stacked models

##
## ----------------------------------------------------------------------
##
```

```
## Your next step is to start H2O:
##     > h2o.init()
##
## For H2O package documentation, ask for help:
##     > ??h2o
##
## After starting H2O, you can use the Web UI at http://localhost:54321
## For more information visit https://docs.h2o.ai
##
## ----------------------------------------------------------------------
##
##
## Attaching package: 'h2o'
##
## The following objects are masked from 'package:stats':
##
##     cor, sd, var
##
## The following objects are masked from 'package:base':
##
##     %*%, %in%, &&, ||, apply, as.factor, as.numeric, colnames,
##     colnames<-, ifelse, is.character, is.factor, is.numeric, log,
##     log10, log1p, log2, round, signif, trunc
```

```
library(ROCR)
library(pROC)
```

```
## Type 'citation("pROC")' for a citation.
##
## Attaching package: 'pROC'
##
## The following object is masked from 'package:h2o':
##
##     var
##
## The following objects are masked from 'package:stats':
##
##     cov, smooth, var
```

```
library(gbm)      # for original implementation of regular and stochastic GBMs
```

```
## Loaded gbm 2.1.8.1
```

```
library(xgboost)  # for fitting extreme gradient boosting
```

```
##
## Attaching package: 'xgboost'
##
## The following object is masked from 'package:dplyr':
##
##     slice
```

```
library(caret)    # for classification and regression training
```

```
## Loading required package: lattice
##
## Attaching package: 'caret'
```

```
##
## The following object is masked from 'package:purrr':
##
##     lift
```

```
library(kernlab)  # for fitting SVMs
```

```
##
## Attaching package: 'kernlab'
##
## The following object is masked from 'package:purrr':
##
##     cross
##
## The following object is masked from 'package:ggplot2':
##
##     alpha
```

```
library(modeldata) #for Failure.binary data
library(forcats)
# Model interpretability packages
library(pdp)      # for partial dependence plots, etc.
```

```
##
## Attaching package: 'pdp'
##
## The following object is masked from 'package:purrr':
##
##     partial
```

```
library(vip)      # for variable importance plots
```

```
##
## Attaching package: 'vip'
##
## The following object is masked from 'package:utils':
##
##     vi
```

```
h2o.init()
```

```
##  Connection successful!
##
## R is connected to the H2O cluster:
##     H2O cluster uptime:         6 hours 53 minutes
##     H2O cluster timezone:       Asia/Manila
##     H2O data parsing timezone:  UTC
##     H2O cluster version:        3.38.0.1
##     H2O cluster version age:    3 months and 2 days
##     H2O cluster name:           H2O_started_from_R_LeonardDwightSoledad_pcx363
##     H2O cluster total nodes:    1
##     H2O cluster total memory:   0.65 GB
##     H2O cluster total cores:    4
##     H2O cluster allowed cores:  4
##     H2O cluster healthy:        TRUE
##     H2O Connection ip:          localhost
##     H2O Connection port:        54321
```

```
##     H2O Connection proxy:       NA
##     H2O Internal Security:      FALSE
##     R Version:                  R version 4.2.2 (2022-10-31 ucrt)
```

Data Reprocessing

```
Model1rawdataf <- read_csv("radiomics_completedata.csv")

## Rows: 197 Columns: 431
## ── Column specification ────────────────────────────────────────────────────────
## Delimiter: ","
## chr   (1): Institution
## dbl (430): Failure.binary, Failure, Entropy_cooc.W.ADC, GLNU_align.H.PET, Mi...
##
## ℹ Use `spec()` to retrieve the full column specification for this data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet this message.

Model1rawdataf

## # A tibble: 197 × 431
##    Institution Failure…¹ Failure Entro…² GLNU_…³ Min_h…⁴ Max_h…⁵ Mean_…⁶ Varia…⁷
##    <chr>           <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>
##  1 A                   0   49.3     12.9    46.3    6.25   17.8     9.78   6.81
##  2 A                   1   12.6     12.2    27.5   11.0    26.5    15.4   12.9
##  3 A                   0   79.8     12.8    90.2    2.78    6.88    4.30   0.923
##  4 A                   1   17.9     13.5   326.     6.30   22.0    10.3    6.65
##  5 A                   0   39.6     12.6    89.6    3.58    7.92    4.45   0.572
##  6 A                   1    4.77    13.2   102.     2.60    6.21    3.77   0.615
##  7 A                   0   25       12.2    36.8    8.65   28.2    14.9   17.7
##  8 A                   0   35.8     12.3    51.0    5.71   13.0     7.73   2.60
##  9 A                   1   35.3     13.4    27.2    5.88   14.8     9.12   4.40
## 10 A                   1   17.8     12.6    20.2    5.70   17.1     8.55   6.12
## # … with 187 more rows, 422 more variables: Standard_Deviation_hist.PET <dbl>,
## #   Skewness_hist.PET <dbl>, Kurtosis_hist.PET <dbl>, Energy_hist.PET <dbl>,
## #   Entropy_hist.PET <dbl>, AUC_hist.PET <dbl>, H_suv.PET <dbl>,
## #   Volume.PET <dbl>, X3D_surface.PET <dbl>, ratio_3ds_vol.PET <dbl>,
## #   ratio_3ds_vol_norm.PET <dbl>, irregularity.PET <dbl>,
## #   tumor_length.PET <dbl>, Compactness_v1.PET <dbl>, Compactness_v2.PET <dbl>,
## #   Spherical_disproportion.PET <dbl>, Sphericity.PET <dbl>, …
```

Checking for null and missing values

We are using *anyNA()* function to determine if there is any missing value in the data.

```
anyNA(Model1rawdataf)

## [1] FALSE

#The output will show either *True* or *False*. There are missing values If True, thus
you have to omit the missing values using *na.omit()*. Otherwise, False.

#[1] FALSE
```

```
# The result is False, hence, the data has no missing values.
```

Checking the Normality of the Data We are using *Shapiro-Wilk's Test* to check the normality of the data.

```
Model1numrawdataf <- Model1rawdataf%>%select_if(is.numeric)

Model1numrawdataf <- Model1numrawdataf[ , -1]

Model1SWtestf <- apply(Model1numrawdataf, 2, function(x){shapiro.test(x)})
```

Next we need to list only the p-value of the respective variables to proceed with the test. We are using the *unlist()* and *lapply()* functions to achieve this goal.

```
Model1DRpvaluef <- unlist(lapply(Model1SWtestf, function(x) x$p.value))

sum(Model1DRpvaluef<0.05)  # not normally distributed

## [1] 428

sum(Model1DRpvaluef>0.05)  # normally distributed

## [1] 1

Model1SWtestf$Entropy_cooc.W.ADC

##
##  Shapiro-Wilk normality test
##
## data:  x
## W = 0.98903, p-value = 0.135

# [1] 428
# [1] 1

#  Currently, there are 428 variables that are not normally distributed and only the
Entropy_cooc.W.ADC is normally distributed.
```

The goal is that all variables should be normally distributed. Next, we are using *orderNorm()* function. And we need to exclude the *Entropy_cooc.W.ADC* since it is already normally distributed.

```
Model1DRtransrawdataf <- Model1rawdataf[,c(3,5:length(names(Model1rawdataf)))]

Model1DRtransrawdataf <- apply(Model1DRtransrawdataf,2,orderNorm)

Model1DRtransrawdataf <- lapply(Model1DRtransrawdataf, function(x) x$x.t)

Model1DRtransrawdataf <- Model1DRtransrawdataf%>%as.data.frame()

Model1SWtestf <- apply(Model1DRtransrawdataf,2,shapiro.test)

Model1SWtestf <- unlist(lapply(Model1SWtestf, function(x) x$p.value))
```

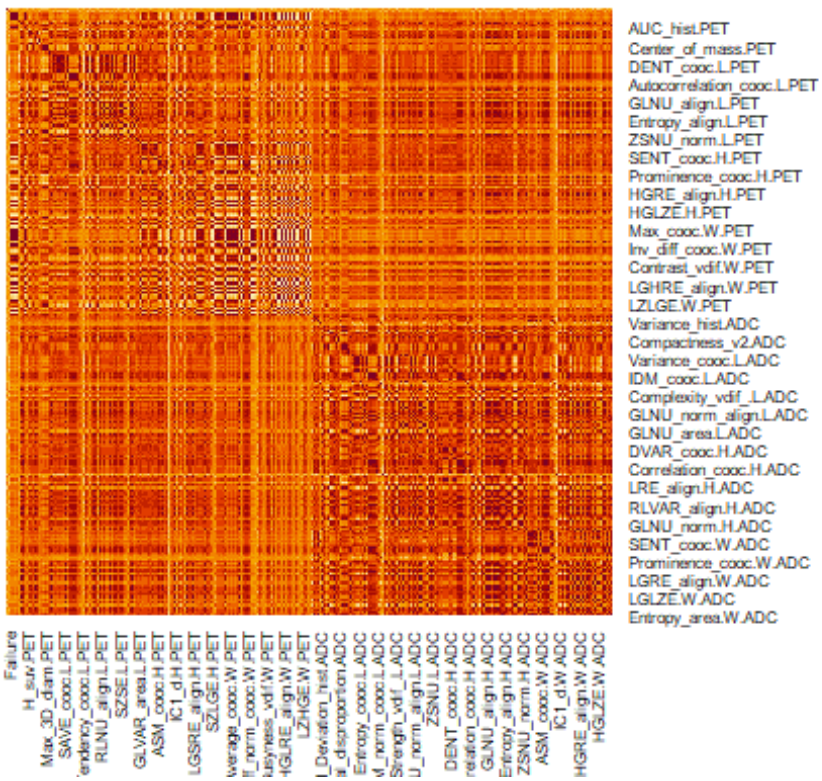
Next, we will be testing the data to check the normality or the transformed data.

```
sum(Model1SWtestf <0.05)  # for not normally distributed

## [1] 0
```

```
sum(Model1SWtestf >0.05)  # for normally distributed

## [1] 428

#[1] 0
#[1] 428

# Now, the 428 variables that were initially not normally distributed are now normally
distributed.

Model1rawdataf[,c(3,5:length(names(Model1rawdataf)))]=Model1DRtransrawdataf
```

We are getting the correlation of the whole data except the categorical variables

```
Model1CorrMatf = cor(Model1rawdataf[,-c(1,2)])
heatmap(Model1CorrMatf,Rowv=NA,Colv=NA,scale="none",revC = T)
```



Finally, we will convert the data frame output of data reprocessing into “csv” file, which will we use for the entire Final Project.

```
library(data.table)

##
## Attaching package: 'data.table'

## The following objects are masked from 'package:h2o':
##
##     hour, month, week, year

## The following object is masked from 'package:purrr':
##
##     transpose
```

```
## The following objects are masked from 'package:dplyr':
##
##     between, first, last
```

```
fwrite(Model1rawdataf, "Model1_Final_Project_Data.csv")
```

Lastly, let's check if the dataframe we have exported to CSV is really the normal data.

```
Model1rawdata1f <- read_csv("Model1_Final_Project_Data.csv")
```

```
## Rows: 197 Columns: 431
## ── Column specification ────────────────────────────────────────────────────────
## Delimiter: ","
## chr   (1): Institution
## dbl (430): Failure.binary, Failure, Entropy_cooc.W.ADC, GLNU_align.H.PET, Mi...
##
## ℹ Use `spec()` to retrieve the full column specification for this data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
Model1rawdata1f
```

```
## # A tibble: 197 × 431
##    Institution Failure…¹ Failure Entro…² GLNU_…³ Min_h…⁴ Max_h…⁵ Mean_…⁶ Varia…⁷
##    <chr>           <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>
##  1 A                   0   1.15     12.9  -0.433  -0.270 -0.257   -0.192  0.0509
##  2 A                   1  -0.533    12.2  -1.02    0.671  0.405    0.490  0.687
##  3 A                   0   2.24     12.8   0.179  -1.41  -1.57    -1.53  -1.57
##  4 A                   1  -0.140    13.5   2.00   -0.218  0.0764  -0.153  0.0127
##  5 A                   0   0.787    12.6   0.153  -1.06  -1.15    -1.45  -1.91
##  6 A                   1  -2.80     13.2   0.391  -1.57  -1.91    -1.72  -1.84
##  7 A                   0   0.218    12.2  -0.687   0.284  0.519    0.405  0.915
##  8 A                   0   0.623    12.3  -0.405  -0.461 -0.719   -0.639 -0.623
##  9 A                   1   0.578    13.4  -1.04   -0.391 -0.593   -0.378 -0.244
## 10 A                   1  -0.160    12.6  -1.38   -0.475 -0.310   -0.475 -0.0127
## # … with 187 more rows, 422 more variables: Standard_Deviation_hist.PET <dbl>,
## #   Skewness_hist.PET <dbl>, Kurtosis_hist.PET <dbl>, Energy_hist.PET <dbl>,
## #   Entropy_hist.PET <dbl>, AUC_hist.PET <dbl>, H_suv.PET <dbl>,
## #   Volume.PET <dbl>, X3D_surface.PET <dbl>, ratio_3ds_vol.PET <dbl>,
## #   ratio_3ds_vol_norm.PET <dbl>, irregularity.PET <dbl>,
## #   tumor_length.PET <dbl>, Compactness_v1.PET <dbl>, Compactness_v2.PET <dbl>,
## #   Spherical_disproportion.PET <dbl>, Sphericity.PET <dbl>, …
```

```
Model1numrawdata1f <- Model1rawdata1f%>%select_if(is.numeric)

Model1numrawdata1f <- Model1numrawdata1f[ , -1]

Model1SWtest1f <- apply(Model1numrawdata1f, 2, function(y){shapiro.test(y)})

Model1DRpvalue1f <- unlist(lapply(Model1SWtest1f, function(y) y$p.value))

sum(Model1DRpvalue1f<0.05)  # not normally distributed
```

```
## [1] 0
```

```
sum(Model1DRpvalue1f>0.05)  # normally distributed
```

```
## [1] 429
```

```
#Yes! We were able to produce the correct CSV file and we are now ready to use it for the
entire project.
```

———*Stacking*———

1. Stacking Ensemble

Stacking is a ensemble learning method that consolidate multiple machine learning algorithms via meta learning, In which base level algorithms are trained based on a complete training data-set, them meta model is trained on the final outcomes of the all base level model as feature. We have deal with bagging and boosting method for handling bias and variance. Now we can learn stacking which is improve the your model prediction accuracy.

```
h2o.init()

##  Connection successful!
##
## R is connected to the H2O cluster:
##     H2O cluster uptime:         6 hours 53 minutes
##     H2O cluster timezone:       Asia/Manila
##     H2O data parsing timezone:  UTC
##     H2O cluster version:        3.38.0.1
##     H2O cluster version age:    3 months and 2 days
##     H2O cluster name:           H2O_started_from_R_LeonardDwightSoledad_pcx363
##     H2O cluster total nodes:    1
##     H2O cluster total memory:   0.65 GB
##     H2O cluster total cores:    4
##     H2O cluster allowed cores:  4
##     H2O cluster healthy:        TRUE
##     H2O Connection ip:          localhost
##     H2O Connection port:        54321
##     H2O Connection proxy:       NA
##     H2O Internal Security:      FALSE
##     R Version:                  R version 4.2.2 (2022-10-31 ucrt)

set.seed(123)  # for reproducibility
Stackrdata<- read_csv("Model1_Final_Project_Data.csv")

## Rows: 197 Columns: 431
## ── Column specification ────────────────────────────────────────────────────────
## Delimiter: ","
## chr   (1): Institution
## dbl (430): Failure.binary, Failure, Entropy_cooc.W.ADC, GLNU_align.H.PET, Mi...
##
## ℹ Use `spec()` to retrieve the full column specification for this data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet this message.

Stackrdata$Failure.binary=as.factor(Stackrdata$Failure.binary)
Stackrdata

## # A tibble: 197 × 431
##    Institution Failure…¹ Failure Entro…² GLNU_…³ Min_h…⁴ Max_h…⁵ Mean_…⁶ Varia…⁷
##    <chr>       <fct>       <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>
##  1 A           0           1.15     12.9  -0.433  -0.270 -0.257   -0.192  0.0509
##  2 A           1          -0.533    12.2  -1.02    0.671  0.405    0.490  0.687
##  3 A           0           2.24     12.8   0.179  -1.41  -1.57    -1.53  -1.57
##  4 A           1          -0.140    13.5   2.00   -0.218  0.0764  -0.153  0.0127
```

```
##  5 A           0           0.787    12.6   0.153  -1.06  -1.15    -1.45  -1.91
##  6 A           1          -2.80     13.2   0.391  -1.57  -1.91    -1.72  -1.84
##  7 A           0           0.218    12.2  -0.687   0.284  0.519    0.405  0.915
##  8 A           0           0.623    12.3  -0.405  -0.461 -0.719   -0.639 -0.623
##  9 A           1           0.578    13.4  -1.04   -0.391 -0.593   -0.378 -0.244
## 10 A           1          -0.160    12.6  -1.38   -0.475 -0.310   -0.475 -0.0127
## # … with 187 more rows, 422 more variables: Standard_Deviation_hist.PET <dbl>,
## #   Skewness_hist.PET <dbl>, Kurtosis_hist.PET <dbl>, Energy_hist.PET <dbl>,
## #   Entropy_hist.PET <dbl>, AUC_hist.PET <dbl>, H_suv.PET <dbl>,
## #   Volume.PET <dbl>, X3D_surface.PET <dbl>, ratio_3ds_vol.PET <dbl>,
## #   ratio_3ds_vol_norm.PET <dbl>, irregularity.PET <dbl>,
## #   tumor_length.PET <dbl>, Compactness_v1.PET <dbl>, Compactness_v2.PET <dbl>,
## #   Spherical_disproportion.PET <dbl>, Sphericity.PET <dbl>, …
```

```
Stackrdatasplit <- initial_split(Stackrdata, strata = "Failure.binary")
Stackrdatatrain <- training(Stackrdatasplit)
Stackrdatatest <- testing(Stackrdatasplit)

# Make sure we have consistent categorical levels
Stackrdatablueprints <- recipe(Failure.binary ~ ., data = Stackrdatatrain) %>%
  step_other(all_nominal(), threshold = 0.005)

# Create training & test sets for h2o
h2o.init()
```

```
##  Connection successful!
##
## R is connected to the H2O cluster:
##     H2O cluster uptime:         6 hours 53 minutes
##     H2O cluster timezone:       Asia/Manila
##     H2O data parsing timezone:  UTC
##     H2O cluster version:        3.38.0.1
##     H2O cluster version age:    3 months and 2 days
##     H2O cluster name:           H2O_started_from_R_LeonardDwightSoledad_pcx363
##     H2O cluster total nodes:    1
##     H2O cluster total memory:   0.65 GB
##     H2O cluster total cores:    4
##     H2O cluster allowed cores:  4
##     H2O cluster healthy:        TRUE
##     H2O Connection ip:          localhost
##     H2O Connection port:        54321
##     H2O Connection proxy:       NA
##     H2O Internal Security:      FALSE
##     R Version:                  R version 4.2.2 (2022-10-31 ucrt)
```

```
Stackrdatah2otrain <- prep(Stackrdatablueprints, training = Stackrdatatrain, retain =
TRUE) %>%
  juice() %>%
  as.h2o()
```

```
##   |                                                                      |
|   0%  |
|======================================================================| 100%
```

```
Stackrdatah2otest <- prep(Stackrdatablueprints, training = Stackrdatatrain) %>%
  bake(new_data = Stackrdatatest) %>%
  as.h2o()
```

```
##   |                                                                      |
|   0%  |
|======================================================================| 100%

# Get response and feature names
StackrdatafY <- "Failure.binary"

StackrdatafX <- setdiff(names(Stackrdatatrain), StackrdatafY)

# Train & cross-validate a GLM model
Stackrdatafbestglm <- h2o.glm(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, alpha = 0.1,
  remove_collinear_columns = TRUE, nfolds = 10, fold_assignment = "Modulo",
  keep_cross_validation_predictions = TRUE, seed = 123
)

##   |                                                                      |
|   0%  |
|=================================================================     |  95%  |
|======================================================================| 100%

# Train & cross-validate a RF model
Stackrdatafbestrf <- h2o.randomForest(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, ntrees = 1000,
mtries = 20,
  max_depth = 30, min_rows = 1, sample_rate = 0.8, nfolds = 10,
  fold_assignment = "Modulo", keep_cross_validation_predictions = TRUE,
  seed = 123, stopping_rounds = 50, stopping_metric = "logloss",
  stopping_tolerance = 0
)

## Warning in .h2o.processResponseWarnings(res): early stopping is enabled but neither
score_tree_interval or score_each_iteration are defined. Early stopping will not be
reproducible!.

##   |                                                                      |
|   0%  |
|===                                                                   |   4%  |
|=======                                                               |   9%  |
|=========                                                             |  13%  |
|=============                                                         |  19%  |
|================                                                      |  22%  |
|==================                                                    |  25%  |
|=====================                                                 |  29%  |
|=========================                                             |  34%  |
|==========================                                            |  36%  |
|============================                                          |  38%  |
|=============================                                         |  41%  |
|================================                                      |  46%  |
|==================================                                    |  49%  |
|======================================                                |  53%  |
|=======================================                               |  56%  |
|==========================================                            |  59%  |
|=============================================                         |  62%  |
|================================================                      |  65%  |
|====================================================                  |  69%  |
|=====================================================                 |  72%  |
```

```
|=================================================                     |  73%  |
|===================================================                   |  75%  |
|=====================================================                 |  77%  |
|=======================================================               |  79%  |
|=========================================================             |  81%  |
|===========================================================           |  83%  |
|=============================================================         |  85%  |
|===============================================================       |  88%  |
|=================================================================     |  89%  |
|===================================================================   |  91%  |
|=====================================================================  |  92%  |
|=======================================================================|  92%  |
|=======================================================================|  94%  |
|=========================================================================|  95%  |
|===========================================================================|  96%  |
|=============================================================================|  97%  |
|===============================================================================|  98%  |
|================================================================================|  99%  |
|==================================================================================| 100%

# Train & cross-validate a GBM model
Stackrdatafbestgbms <- h2o.gbm(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, ntrees = 1000,
learn_rate = 0.01,
  max_depth = 7, min_rows = 5, sample_rate = 0.8, nfolds = 10,
  fold_assignment = "Modulo", keep_cross_validation_predictions = TRUE,
  seed = 123, stopping_rounds = 50, stopping_metric = "logloss",
  stopping_tolerance = 0
)

## Warning in .h2o.processResponseWarnings(res): early stopping is enabled but neither
score_tree_interval or score_each_iteration are defined. Early stopping will not be
reproducible!.

##   |                                                                      |
|   0%  |                                                                      |=
|   1%  |                                                                      |=
|   2%  |
|==                                                                    |   2%  |
|==                                                                    |   3%  |
|===                                                                   |   4%  |
|===                                                                   |   5%  |
|====                                                                  |   6%  |
|=====                                                                 |   7%  |
|=====                                                                 |   8%  |
|======                                                                |   8%  |
|======                                                                |   9%  |
|=======                                                               |  10%  |
|========                                                              |  11%  |
|========                                                              |  12%  |
|=========                                                             |  13%  |
|==========                                                            |  14%  |
|==========                                                            |  15%  |
|===========                                                           |  15%  |
|=====================                                                 |  30%  |
|======================                                                |  31%  |
```

```
|=====================                                                  |  32%  |
|======================                                                 |  32%  |
|=======================                                                |  33%  |
|========================                                               |  34%  |
|========================                                               |  35%  |
|=========================                                              |  35%  |
|=========================                                              |  36%  |
|==========================                                             |  37%  |
|==========================                                             |  38%  |
|===========================                                            |  38%  |
|===========================                                            |  39%  |
|============================                                           |  40%  |
|=============================                                          |  41%  |
|=============================                                          |  42%  |
|==============================                                         |  43%  |
|==============================                                         |  44%  |
|===============================                                        |  45%  |
|================================                                       |  45%  |
|================================                                       |  46%  |
|=================================                                      |  47%  |
|==================================                                     |  48%  |
|==================================                                     |  49%  |
|===================================                                    |  50%  |
|===================================                                    |  51%  |
|====================================                                   |  51%  |
|====================================                                   |  52%  |
|=====================================                                  |  52%  |
|=====================================                                  |  53%  |
|======================================                                 |  54%  |
|======================================                                 |  55%  |
|=======================================                                |  55%  |
|=======================================                                |  56%  |
|========================================                               |  57%  |
|========================================                               |  58%  |
|=========================================                              |  58%  |
|=========================================                              |  59%  |
|==========================================                             |  60%  |
|==========================================                             |  61%  |
|===========================================                            |  61%  |
|===========================================                            |  62%  |
|============================================                           |  62%  |
|============================================                           |  63%  |
|=============================================                          |  64%  |
|=============================================                          |  64%  |
|==============================================                         |  65%  |
|==============================================                         |  65%  |
|===============================================                        |  66%  |
|===============================================                        |  67%  |
|================================================                       |  68%  |
|================================================                       |  68%  |
|=================================================                      |  69%  |
|=================================================                      |  70%  |
|==================================================                     |  71%  |
|==================================================                     |  72%  |
|===================================================                    |  72%  |
```

```
|=================================================                     |  73%  |
|==================================================                    |  74%  |
|===================================================                   |  75%  |
|====================================================                  |  75%  |
|=====================================================                 |  76%  |
|======================================================                |  76%  |
|=======================================================               |  77%  |
|========================================================              |  78%  |
|=========================================================             |  78%  |
|==========================================================            |  79%  |
|===========================================================           |  79%  |
|============================================================          |  80%  |
|=============================================================         |  81%  |
|==============================================================        |  82%  |
|===============================================================       |  83%  |
|================================================================      |  84%  |
|=================================================================     |  85%  |
|==================================================================    |  85%  |
|===================================================================   |  86%  |
|====================================================================  |  86%  |
|===================================================================== |  87%  |
|======================================================================|  88%  |
|======================================================================|  88%  |
|======================================================================|  89%  |
|======================================================================|  89%  |
|======================================================================|  90%  |
|======================================================================|  91%  |
|======================================================================|  92%  |
|======================================================================|  92%  |
|======================================================================|  93%  |
|======================================================================|  94%  |
|======================================================================|  94%  |
|======================================================================|  95%  |
|======================================================================|  95%  |
|======================================================================|  96%  |
|======================================================================|  97%  |
|======================================================================|  98%  |
|======================================================================|  98%  |
|======================================================================|  99%  |
|======================================================================| 100%
```

```r
# Get results from base learners
Stackrdatafrmseget <- function(model) {
  results <- h2o.performance(model, newdata = Stackrdatah2otest)
  results@metrics$RMSE
}
list(Stackrdatafbestglm, Stackrdatafbestrf, Stackrdatafbestgbms) %>%
  purrr::map_dbl(Stackrdatafrmseget)
```

```
## [1] 0.4737088 0.3882762 0.3060996
```

```
## [1] 30024.67 23075.24 20859.92 21391.20
```

```r
# Define GBM hyperparameter grid
StackrdatafHyperGrid <- list(
  max_depth = c(1, 3, 5),
```

```
  min_rows = c(1, 5, 10),
  learn_rate = c(0.01, 0.05, 0.1),
  learn_rate_annealing = c(0.99, 1),
  sample_rate = c(0.5, 0.75, 1),
  col_sample_rate = c(0.8, 0.9, 1)
)

# Define random grid search criteria
StackrdatafSearchCrit <- list(
  strategy = "RandomDiscrete",
  max_models = 25
)

# Build random grid search
Stackrdatafrangrid <- h2o.grid(
  algorithm = "gbm", grid_id = "gbm_grid", x = StackrdatafX, y = StackrdatafY,
  training_frame = Stackrdatah2otrain, hyper_params = StackrdatafHyperGrid,
  search_criteria = StackrdatafSearchCrit, ntrees = 20, stopping_metric = "logloss",
  stopping_rounds = 10, stopping_tolerance = 0, nfolds = 10,
  fold_assignment = "Modulo", keep_cross_validation_predictions = TRUE,
  seed = 123
)

##   |                                                                      |
|   0%  |
|======================================================================| 100%

Stackrdatafensemblegrid <- h2o.stackedEnsemble(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, model_id =
"ensemble_gbm_grid",
  base_models = Stackrdatafrangrid@model_ids, metalearner_algorithm = "gbm",
)

##   |                                                                      |
|   0%  |
|======================================================================| 100%

# Stacked results
h2o.performance(Stackrdatafensemblegrid, newdata = Stackrdatah2otest)@metrics$RMSE

## [1] 0.3644693

## [1] 20664.56

data.frame(
  GLM_pred =
as.vector(h2o.getFrame(Stackrdatafbestglm@model$cross_validation_holdout_predictions_fram
e_id$name))%>%as.numeric(),
  RF_pred =
as.vector(h2o.getFrame(Stackrdatafbestrf@model$cross_validation_holdout_predictions_frame
_id$name))%>%as.numeric(),
  GBM_pred =
as.vector(h2o.getFrame(Stackrdatafbestgbms@model$cross_validation_holdout_predictions_fra
me_id$name))%>%as.numeric()
) %>% cor()
```

```
##               GLM_pred    RF_pred      GBM_pred
## GLM_pred  1.0000000000 0.06243532 -0.0004822025
## RF_pred   0.0624353224 1.00000000  0.6992239916
## GBM_pred -0.0004822025 0.69922399  1.0000000000
```

```
# Sort results by RMSE
h2o.getGrid(
  grid_id = "gbm_grid",
  sort_by = "logloss"
)
```

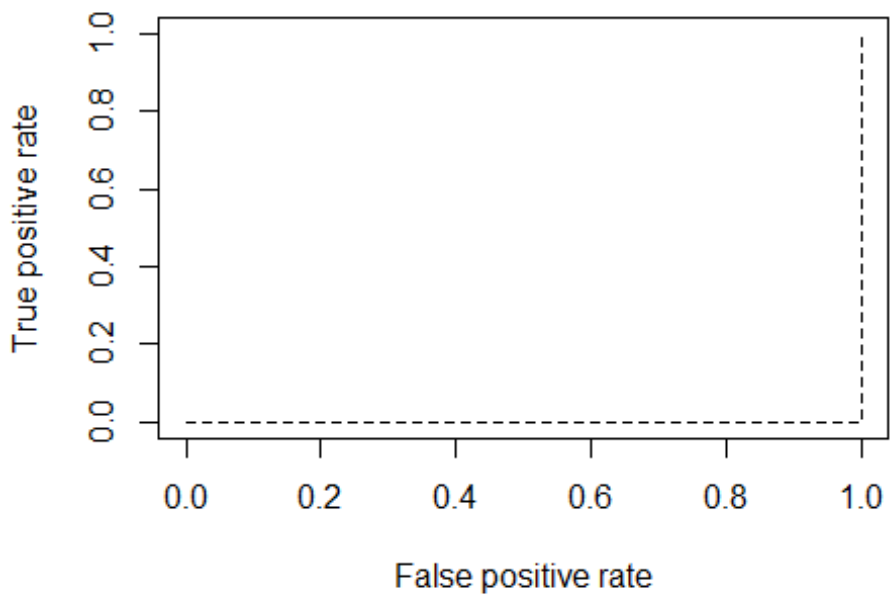
```
## H2O Grid Details
## ================
##
## Grid ID: gbm_grid
## Used hyper parameters:
##   -  col_sample_rate
##   -  learn_rate
##   -  learn_rate_annealing
##   -  max_depth
##   -  min_rows
##   -  sample_rate
## Number of models: 25
## Number of failed models: 0
##
## Hyper-Parameter Search Summary: ordered by increasing logloss
##   col_sample_rate learn_rate learn_rate_annealing max_depth min_rows
## 1         1.00000    0.10000              0.99000   3.00000  5.00000
## 2         0.80000    0.10000              0.99000   5.00000 10.00000
## 3         0.90000    0.10000              0.99000   3.00000 10.00000
## 4         1.00000    0.10000              0.99000   5.00000 10.00000
## 5         1.00000    0.10000              0.99000   5.00000 10.00000
##   sample_rate         model_ids logloss
## 1     1.00000  gbm_grid_model_4 0.31627
## 2     0.50000  gbm_grid_model_3 0.33284
## 3     0.75000 gbm_grid_model_17 0.33476
## 4     1.00000  gbm_grid_model_5 0.33772
## 5     0.75000 gbm_grid_model_11 0.33841
##
## ---
##    col_sample_rate learn_rate learn_rate_annealing max_depth min_rows
## 20         0.80000    0.01000              0.99000   5.00000 10.00000
## 21         1.00000    0.01000              1.00000   1.00000  1.00000
## 22         0.80000    0.01000              0.99000   3.00000 10.00000
## 23         0.90000    0.01000              1.00000   1.00000 10.00000
## 24         1.00000    0.01000              0.99000   1.00000  5.00000
## 25         0.80000    0.01000              0.99000   1.00000 10.00000
##    sample_rate         model_ids logloss
## 20     1.00000 gbm_grid_model_19 0.55677
## 21     0.75000 gbm_grid_model_13 0.55806
## 22     0.50000 gbm_grid_model_24 0.55811
## 23     0.75000  gbm_grid_model_1 0.55954
## 24     0.50000 gbm_grid_model_20 0.56408
## 25     1.00000 gbm_grid_model_12 0.56563
```

```r
random_grid_perf <- h2o.getGrid(
  grid_id = "gbm_grid",
  sort_by = "logloss"
)

# Grab the model_id for the top model, chosen by validation error
Stackrdatafbestmodid <- random_grid_perf@model_ids[[1]]
Stackrdatafbestmodf <- h2o.getModel(Stackrdatafbestmodid)
h2o.performance(Stackrdatafbestmodf, newdata = Stackrdatah2otest)

## H2OBinomialMetrics: gbm
##
## MSE:  0.1044133
## RMSE:  0.3231304
## LogLoss:  0.3478243
## Mean Per-Class Error:  0.1203209
## AUC:  0.9144385
## AUCPR:  0.8791753
## Gini:  0.828877
## R^2:  0.5347002
##
## Confusion Matrix (vertical: actual; across: predicted) for F1-optimal threshold:
##         0  1    Error   Rate
## 0      27  6 0.181818  =6/33
## 1       1 16 0.058824  =1/17
## Totals 28 22 0.140000  =7/50
##
## Maximum Metrics: Maximum metrics at their respective thresholds
##                         metric threshold     value idx
## 1                        max f1  0.387123  0.820513  20
## 2                        max f2  0.387123  0.888889  20
## 3                  max f0point5  0.771229  0.846154  10
## 4                  max accuracy  0.771229  0.860000  10
## 5                 max precision  0.904574  1.000000   0
## 6                    max recall  0.065778  1.000000  37
## 7               max specificity  0.904574  1.000000   0
## 8              max absolute_mcc  0.387123  0.724666  20
## 9   max min_per_class_accuracy  0.437791  0.823529  17
## 10 max mean_per_class_accuracy  0.387123  0.879679  20
## 11                      max tns  0.904574 33.000000   0
## 12                      max fns  0.904574 16.000000   0
## 13                      max fps  0.056352 33.000000  41
## 14                      max tps  0.065778 17.000000  37
## 15                      max tnr  0.904574  1.000000   0
## 16                      max fnr  0.904574  0.941176   0
## 17                      max fpr  0.056352  1.000000  41
## 18                      max tpr  0.065778  1.000000  37
##
## Gains/Lift Table: Extract with `h2o.gainsLift(<model>, <data>)` or
`h2o.gainsLift(<model>, valid=<T/F>, xval=<T/F>)`

# Train a stacked ensemble using the GBM grid
Stackrdatafensembles <- h2o.stackedEnsemble(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, model_id =
"ensemble_gbm_grid",
```

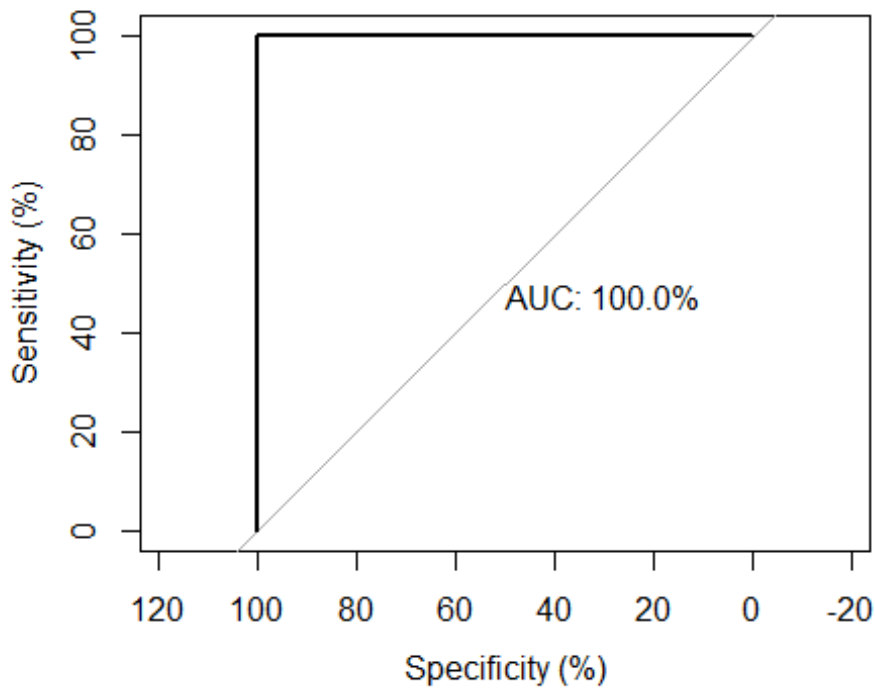
```
  base_models = Stackrdatafrangrid@model_ids, metalearner_algorithm = "gbm"
)

##   |                                                                      |
|   0%  |
|======================================================================| 100%

# Eval ensemble performance on a test set
h2o.performance(Stackrdatafensembles, newdata = Stackrdatah2otest)

## H2OBinomialMetrics: stackedensemble
##
## MSE:  0.1328379
## RMSE:  0.3644693
## LogLoss:  0.5243574
## Mean Per-Class Error:  0.1203209
## AUC:  0.8663102
## AUCPR:  0.7760906
## Gini:  0.7326203
##
## Confusion Matrix (vertical: actual; across: predicted) for F1-optimal threshold:
##         0  1    Error   Rate
## 0      27  6 0.181818  =6/33
## 1       1 16 0.058824  =1/17
## Totals 28 22 0.140000  =7/50
##
## Maximum Metrics: Maximum metrics at their respective thresholds
##                        metric threshold     value idx
## 1                      max f1  0.420923  0.820513  20
## 2                      max f2  0.420923  0.888889  20
## 3                 max f0point5  0.873372  0.764706  15
## 4                 max accuracy  0.420923  0.860000  20
## 5                max precision  0.992628  1.000000   0
## 6                   max recall  0.004979  1.000000  43
## 7              max specificity  0.992628  1.000000   0
## 8             max absolute_mcc  0.420923  0.724666  20
## 9   max min_per_class_accuracy  0.816624  0.818182  18
## 10 max mean_per_class_accuracy  0.420923  0.879679  20
## 11                     max tns  0.992628 33.000000   0
## 12                     max fns  0.992628 16.000000   0
## 13                     max fps  0.003120 33.000000  47
## 14                     max tps  0.004979 17.000000  43
## 15                     max tnr  0.992628  1.000000   0
## 16                     max fnr  0.992628  0.941176   0
## 17                     max fpr  0.003120  1.000000  47
## 18                     max tpr  0.004979  1.000000  43
##
## Gains/Lift Table: Extract with `h2o.gainsLift(<model>, <data>)` or
`h2o.gainsLift(<model>, valid=<T/F>, xval=<T/F>)`

# Use AutoML to find a list of candidate models (i.e., leaderboard)
Stackrdatafautoml <- h2o.automl(
  x = StackrdatafX, y = StackrdatafY, training_frame = Stackrdatah2otrain, nfolds = 5,
  max_runtime_secs = 60 * 120, max_models = 10,#max_models=50
  keep_cross_validation_predictions = TRUE, sort_metric = "logloss", seed = 123,
```

```
  stopping_rounds = 10, stopping_metric = "logloss", stopping_tolerance = 0
)

##   |                                                                      |
|   0%
## 00:08:48.99: Stopping tolerance set by the user is < 70% of the recommended default of
0.05, so models may take a long time to converge or may not converge at all.
## 00:08:48.147: AutoML: XGBoost is not available; skipping it.  |
|==                                                                    |   3%  |
|====                                                                  |   6%
## 00:09:05.393: _min_rows param, The dataset size is too small to split for
min_rows=100.0: must have at least 200.0 (weighted) rows, but have only 147.0.  |
|=====                                                                 |   7%  |
|======                                                                |   8%  |
|======                                                                |   9%  |
|=======                                                               |  10%  |
|========                                                              |  11%  |
|========                                                              |  12%  |
|=========                                                             |  13%  |
|==========                                                            |  14%  |
|==========                                                            |  15%  |
|============                                                          |  17%  |
|============                                                          |  18%  |
|=============                                                         |  19%  |
|==============                                                        |  20%  |
|==============                                                        |  21%  |
|================                                                      |  24%  |
|============================                                          |  41%  |
|====================================                                  |  53%  |
|=========================================                             |  59%  |
|======================================================================| 100%

# Assess the leader board; the following truncates the results to show the top
# and bottom 15 models. You can get the top model with Stackrdatafautoml@leader
Stackrdatafautoml@leaderboard %>%
  as.data.frame() %>%
  dplyr::select(model_id, logloss) %>%
  dplyr::slice(1:25)

##                                                  model_id   logloss
## 1     StackedEnsemble_AllModels_1_AutoML_5_20221222_00848 0.2623744
## 2  StackedEnsemble_BestOfFamily_1_AutoML_5_20221222_00848 0.2746593
## 3                           GBM_4_AutoML_5_20221222_00848 0.3046628
## 4                           GBM_3_AutoML_5_20221222_00848 0.3304561
## 5              GBM_grid_1_AutoML_5_20221222_00848_model_1 0.3308175
## 6                           GLM_1_AutoML_5_20221222_00848 0.3475365
## 7                           GBM_2_AutoML_5_20221222_00848 0.3626937
## 8                           GBM_5_AutoML_5_20221222_00848 0.4063628
## 9                           XRT_1_AutoML_5_20221222_00848 0.4576169
## 10                          DRF_1_AutoML_5_20221222_00848 0.4682705
## 11                 DeepLearning_1_AutoML_5_20221222_00848 0.5058983
## 12    DeepLearning_grid_1_AutoML_5_20221222_00848_model_1 0.7477336

# Compute predicted probabilities on training data
Stackrdatah2otrain=as.h2o(Stackrdatatrain)
```

```
##   |                                                                      |
|   0%  |
|======================================================================| 100%

Stackrdatafmod1prob <- predict(Stackrdatafautoml@leader, Stackrdatah2otrain, type =
"prob")

##   |                                                                      |
|   0%  |
|======================================================================| 100%

Stackrdatafmod1prob=as.data.frame(Stackrdatafmod1prob)[,2]
Stackrdatah2otrain=as.data.frame(Stackrdatah2otrain)
# Compute AUC metrics for cv_model1,2 and 3
Stackrdatafperf1 <- prediction(Stackrdatafmod1prob,Stackrdatah2otrain$Failure.binary) %>%
  performance(measure = "tpr", x.measure = "fpr")


# Plot ROC curves for cv_model1,2 and 3
plot(Stackrdatafperf1, col = "black", lty = 2)
```

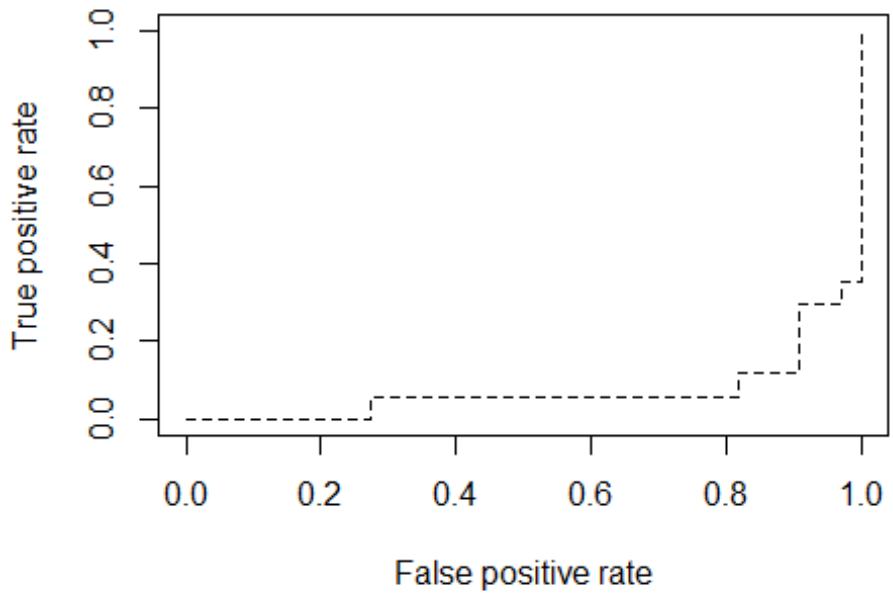



```
# ROC plot for training data
roc( Stackrdatah2otrain$Failure.binary ~ Stackrdatafmod1prob, plot=TRUE,
legacy.axes=FALSE,
    percent=TRUE, col="black", lwd=2, print.auc=TRUE)

## Setting levels: control = 0, case = 1

## Setting direction: controls > cases
```

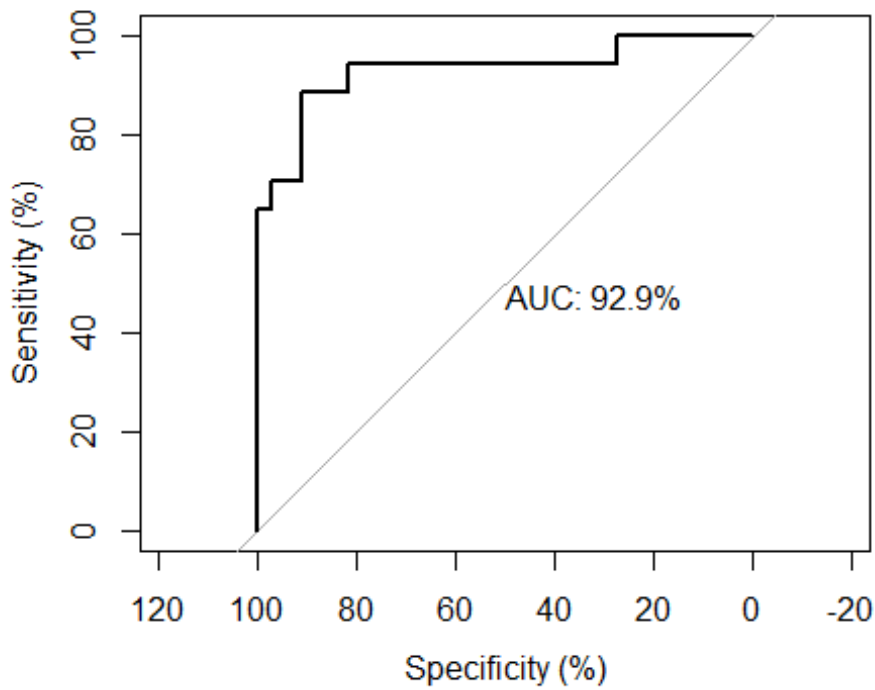



```
##
## Call:
## roc.formula(formula = Stackrdatah2otrain$Failure.binary ~ Stackrdatafmod1prob,
plot = TRUE, legacy.axes = FALSE, percent = TRUE, col = "black",     lwd = 2, print.auc =
TRUE)
##
## Data: Stackrdatafmod1prob in 97 controls (Stackrdatah2otrain$Failure.binary 0) > 50
cases (Stackrdatah2otrain$Failure.binary 1).
## Area under the curve: 100%

#
# #Feature Interpretation
# vip(cv_model3, num_features = 20)

# Compute predicted probabilities on training data
Stackrdatah2otest=as.h2o(Stackrdatatest)

##   |                                                                      |
|   0%  |
|======================================================================| 100%

Stackrdatafmod2prob <- predict(Stackrdatafautoml@leader, Stackrdatah2otest, type =
"prob")

##   |                                                                      |
|   0%  |
|======================================================================| 100%

Stackrdatafmod2prob=as.data.frame(Stackrdatafmod2prob)[,2]

Stackrdatah2otest=as.data.frame(Stackrdatah2otest)

# Compute AUC metrics for cv_model1,2 and 3
```

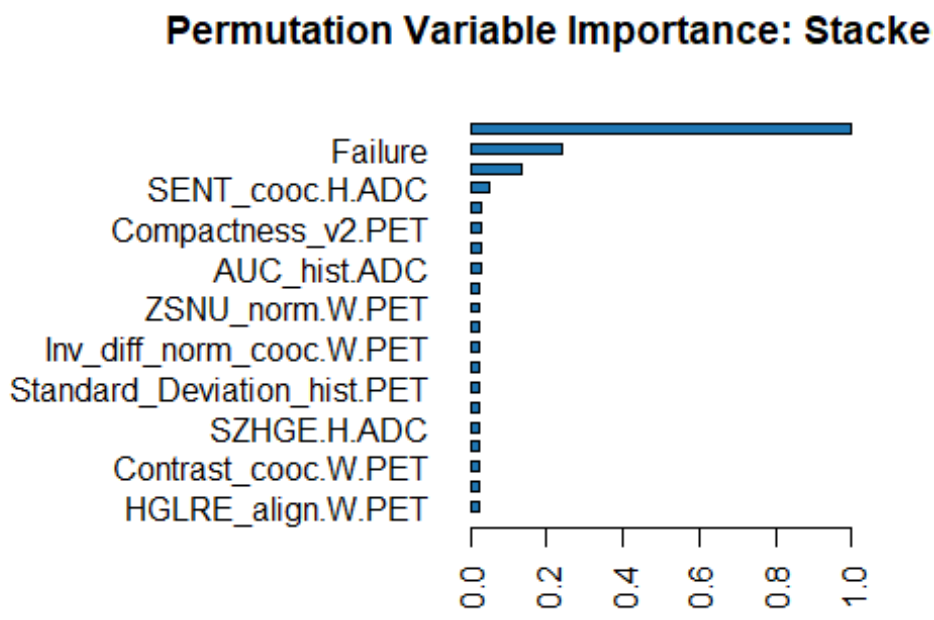
```r
Stackrdatafperf2 <- prediction(Stackrdatafmod2prob,Stackrdatah2otest$Failure.binary) %>%
  performance(measure = "tpr", x.measure = "fpr")


# Plot ROC curves for cv_model1,2 and 3
plot(Stackrdatafperf2, col = "black", lty = 2)
```




```r
# ROC plot for training data
roc( Stackrdatah2otest$Failure.binary ~ Stackrdatafmod2prob, plot=TRUE,
legacy.axes=FALSE,
    percent=TRUE, col="black", lwd=2, print.auc=TRUE)

## Setting levels: control = 0, case = 1
## Setting direction: controls > cases
```




```
##
## Call:
## roc.formula(formula = Stackrdatah2otest$Failure.binary ~ Stackrdatafmod2prob,     plot
= TRUE, legacy.axes = FALSE, percent = TRUE, col = "black",     lwd = 2, print.auc =
TRUE)
##
## Data: Stackrdatafmod2prob in 33 controls (Stackrdatah2otest$Failure.binary 0) > 17
cases (Stackrdatah2otest$Failure.binary 1).
## Area under the curve: 92.87%

Stackrdatah2otest=as.h2o(Stackrdatah2otest)

##   |                                                                              |
|   0%  |
|======================================================================| 100%

h2o.permutation_importance_plot(Stackrdatafautoml@leader,Stackrdatah2otest,num_of_feature
s = 20)
```



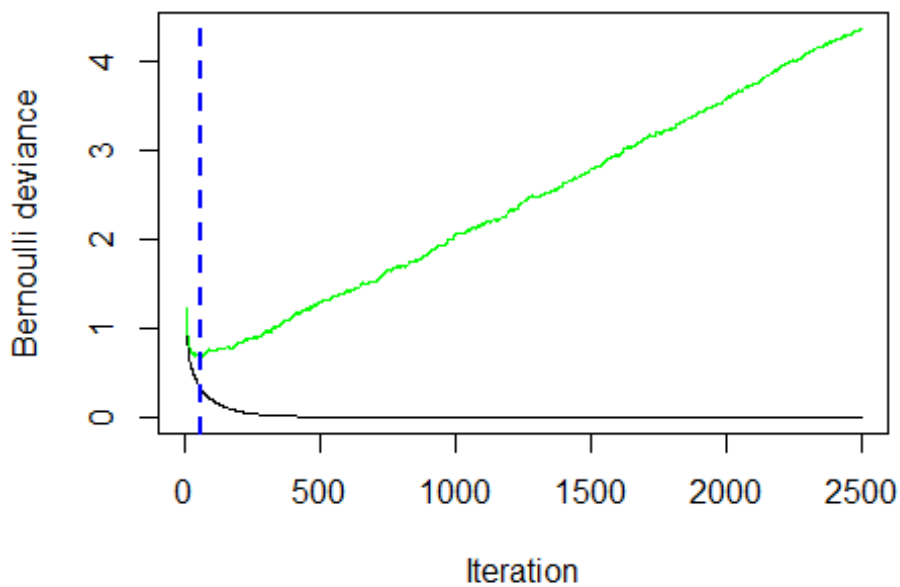
———-*Gradient Boosting*———-

2. Gradient Boosting

Gradient Boosting is a system of machine learning boosting, rendering a decision tree for large and complex data. It banks on the premise that the next potential model will extenuate the gross prediction error if consolidated with the preceding set of models. The decision trees are utilized for the best potential predictions.

```
# run a basic GBM model
set.seed(123)  # for reproducibility
GBrdata<- read_csv("Model1_Final_Project_Data.csv")

## Rows: 197 Columns: 431
## ── Column specification ────────────────────────────────────────────────────────
## Delimiter: ","
## chr   (1): Institution
## dbl (430): Failure.binary, Failure, Entropy_cooc.W.ADC, GLNU_align.H.PET, Mi...
##
## ℹ Use `spec()` to retrieve the full column specification for this data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet this message.

GBrdata$Institution=as.factor(GBrdata$Institution)
GBrsplit <- initial_split(GBrdata, strata = "Failure.binary")
GBrdatatrain <- training(GBrsplit)
GBrdatatest <- testing(GBrsplit)

GBrdatamodelf1 <- gbm(
  formula = Failure.binary ~ .,
  data = GBrdatatrain,
  distribution = "bernoulli",  # SSE loss function
  n.trees = 2500,
  shrinkage = 0.1,
```

```
  n.minobsinnode = 10,
  cv.folds = 10

)

# find index for number trees with minimum CV error
GBrdatabestf <- which.min(GBrdatamodelf1$cv.error)

# get MSE and compute RMSE
sqrt(GBrdatamodelf1$cv.error[GBrdatabestf])

## [1] 0.8234636

# plot error curve
gbm.perf(GBrdatamodelf1, method = "cv")
```




```
## [1] 59

# create grid search
GBrdataHyperGrid <- expand.grid(
  learning_rate = c(0.3, 0.1, 0.05, 0.01, 0.005),
  logloss = NA,
  trees = NA,
  time = NA
)

# execute grid search
for(i in seq_len(nrow(GBrdataHyperGrid))) {

  # fit gbm
  set.seed(123)  # for reproducibility
  GBrdatatimetrain <- system.time({
    GBrdatafm <- gbm(
```

```r
      formula = Failure.binary ~ .,
      data = GBrdatatrain,
      distribution = "bernoulli",
      n.trees = 2500,
      shrinkage = GBrdataHyperGrid$learning_rate[i],
      interaction.depth = 3,
      n.minobsinnode = 10,
      cv.folds = 10
    )
  })

  # add SSE, trees, and training time to results
  GBrdataHyperGrid$logloss[i]  <- sqrt(min(GBrdatafm$cv.error))
  GBrdataHyperGrid$trees[i] <- which.min(GBrdatafm$cv.error)
  GBrdataHyperGrid$Time[i]  <- GBrdatatimetrain[["elapsed"]]

}

# results
arrange(GBrdataHyperGrid, logloss)

##   learning_rate   logloss trees time  Time
## 1         0.100 0.7656695    32   NA 98.88
## 2         0.005 0.7782019   905   NA 98.39
## 3         0.050 0.7850738    82   NA 92.88
## 4         0.010 0.7916756   400   NA 73.87
## 5         0.300 0.8043208    17   NA 77.64

# search grid
GBrdataHyperGrid <- expand.grid(
  n.trees = 2500,
  shrinkage = 0.01,
  interaction.depth = c(3, 5, 7),
  n.minobsinnode = c(5, 10, 15)

)

# create model fit function
GBrdatafitmodel <- function(n.trees, shrinkage, interaction.depth, n.minobsinnode) {
  set.seed(123)
  GBrdatafm <- gbm(
    formula = Failure.binary ~ .,
    data = GBrdatatrain,
    distribution = "bernoulli",
    n.trees = n.trees,
    shrinkage = shrinkage,
    interaction.depth = interaction.depth,
    n.minobsinnode = n.minobsinnode,
    cv.folds = 10
  )
  # compute RMSE
  sqrt(min(GBrdatafm$cv.error))

}
```

```r
# perform search grid with functional programming
GBrdataHyperGrid$logloss <- purrr::pmap_dbl(
  GBrdataHyperGrid,
  ~ GBrdatafitmodel(
    n.trees = ..1,
    shrinkage = ..2,
    interaction.depth = ..3,
    n.minobsinnode = ..4
  )
)

# results
arrange(GBrdataHyperGrid, logloss)
```

```
##   n.trees shrinkage interaction.depth n.minobsinnode   logloss
## 1    2500      0.01                 3             15 0.7628452
## 2    2500      0.01                 5             15 0.7628452
## 3    2500      0.01                 7             15 0.7628452
## 4    2500      0.01                 3             10 0.7916756
## 5    2500      0.01                 5             10 0.7917035
## 6    2500      0.01                 7             10 0.7917035
## 7    2500      0.01                 3              5 0.7958123
## 8    2500      0.01                 5              5 0.7971165
## 9    2500      0.01                 7              5 0.7971459
```

```r
# refined hyperparameter grid
GBrdataHyperGrid <- list(
  sample_rate = c(0.5, 0.75, 1),              # row subsampling
  col_sample_rate = c(0.5, 0.75, 1),          # col subsampling for each split
  col_sample_rate_per_tree = c(0.5, 0.75, 1)  # col subsampling for each tree
)

# random grid search strategy
GBrdatasearchcrit <- list(
  strategy = "RandomDiscrete",
  stopping_metric = "logloss",
  stopping_tolerance = 0.001,
  stopping_rounds = 10,
  max_runtime_secs = 60*60
)

 # perform grid search
h2o.init()
```

```
##  Connection successful!
##
## R is connected to the H2O cluster:
##     H2O cluster uptime:         7 hours 45 minutes
##     H2O cluster timezone:       Asia/Manila
##     H2O data parsing timezone:  UTC
##     H2O cluster version:        3.38.0.1
##     H2O cluster version age:    3 months and 2 days
##     H2O cluster name:           H2O_started_from_R_LeonardDwightSoledad_pcx363
##     H2O cluster total nodes:    1
##     H2O cluster total memory:   0.59 GB
##     H2O cluster total cores:    4
```

```
##     H2O cluster allowed cores:  4
##     H2O cluster healthy:        TRUE
##     H2O Connection ip:          localhost
##     H2O Connection port:        54321
##     H2O Connection proxy:       NA
##     H2O Internal Security:      FALSE
##     R Version:                  R version 4.2.2 (2022-10-31 ucrt)
```

```
h2o.removeAll()
GBrdatatrain$Failure.binary=as.factor(GBrdatatrain$Failure.binary)

h2o.init()
```

```
##  Connection successful!
##
## R is connected to the H2O cluster:
##     H2O cluster uptime:         7 hours 45 minutes
##     H2O cluster timezone:       Asia/Manila
##     H2O data parsing timezone:  UTC
##     H2O cluster version:        3.38.0.1
##     H2O cluster version age:    3 months and 2 days
##     H2O cluster name:           H2O_started_from_R_LeonardDwightSoledad_pcx363
##     H2O cluster total nodes:    1
##     H2O cluster total memory:   0.59 GB
##     H2O cluster total cores:    4
##     H2O cluster allowed cores:  4
##     H2O cluster healthy:        TRUE
##     H2O Connection ip:          localhost
##     H2O Connection port:        54321
##     H2O Connection proxy:       NA
##     H2O Internal Security:      FALSE
##     R Version:                  R version 4.2.2 (2022-10-31 ucrt)
```

```
GBrdatafgrid <- h2o.grid(
  algorithm = "gbm",
  grid_id = "gbm_grid",
  y = "Failure.binary",
  training_frame = as.h2o(GBrdatatrain),
  hyper_params = GBrdataHyperGrid,
  ntrees = 10,#supposedly 6000
  learn_rate = 0.01,
  max_depth = 7,
  min_rows = 5,
  nfolds = 10,
  stopping_rounds = 10,
  stopping_tolerance = 0,
  stopping_metric="logloss",
  search_criteria = GBrdatasearchcrit,
  seed = 123

)
```

```
##   |                                                                      |
|   0%  |
|======================================================================| 100%
##   |                                                                      |
```

```
|   0%  |                                                                      |
|   1%  |                                                                      |=
|   1%  |                                                                      |=
|   2%  |
|==                                                                    |   2%  |
|==                                                                    |   3%  |
|==                                                                    |   4%  |
|===                                                                   |   4%  |
|===                                                                   |   5%  |
|====                                                                  |   5%  |
|======================================================================| 100%
```

```
# collect the results and sort by our model performance metric of choice
GBrdatafgridperformance <- h2o.getGrid(
  grid_id = "gbm_grid",
  sort_by = "logloss",
  decreasing = FALSE
)

GBrdatafgridperformance
```

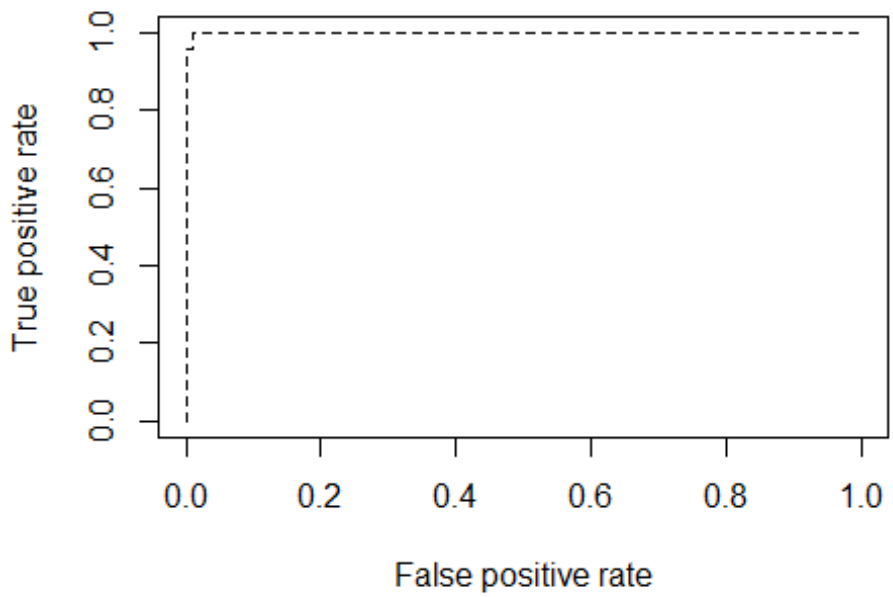
```
## H2O Grid Details
## ================
##
## Grid ID: gbm_grid
## Used hyper parameters:
##   -  col_sample_rate
##   -  col_sample_rate_per_tree
##   -  sample_rate
## Number of models: 27
## Number of failed models: 0
##
## Hyper-Parameter Search Summary: ordered by increasing logloss
##   col_sample_rate col_sample_rate_per_tree sample_rate         model_ids
## 1         1.00000                  1.00000     1.00000 gbm_grid_model_23
## 2         0.75000                  1.00000     1.00000 gbm_grid_model_17
## 3         1.00000                  1.00000     0.75000 gbm_grid_model_13
## 4         0.75000                  1.00000     0.75000 gbm_grid_model_15
## 5         1.00000                  1.00000     0.50000 gbm_grid_model_21
##   logloss
## 1 0.59521
## 2 0.59742
## 3 0.59989
## 4 0.60071
## 5 0.60091
##
## ---
##    col_sample_rate col_sample_rate_per_tree sample_rate         model_ids
## 22         0.50000                  0.50000     1.00000 gbm_grid_model_19
## 23         1.00000                  0.50000     0.50000 gbm_grid_model_12
## 24         0.50000                  1.00000     0.50000  gbm_grid_model_5
## 25         0.75000                  0.50000     0.50000 gbm_grid_model_11
## 26         0.50000                  0.50000     0.75000  gbm_grid_model_8
## 27         0.50000                  0.50000     0.50000  gbm_grid_model_3
##    logloss
## 22 0.60916
```

```
## 23 0.60926
## 24 0.60976
## 25 0.61094
## 26 0.61317
## 27 0.61769

# Grab the model_id for the top model, chosen by cross validation error
GBrdatafbestmodid <- GBrdatafgridperformance@model_ids[[1]]
GBrdatafbestmodf <- h2o.getModel(GBrdatafbestmodid)

# Now let's get performance metrics on the best model
h2o.performance(model = GBrdatafbestmodf, xval = TRUE)

## H2OBinomialMetrics: gbm
## ** Reported on cross-validation data. **
## ** 10-fold cross-validation on training data (Metrics computed for combined holdout
predictions) **
##
## MSE:  0.2035836
## RMSE:  0.4512024
## LogLoss:  0.595207
## Mean Per-Class Error:  0.156701
## AUC:  0.8316495
## AUCPR:  0.6940474
## Gini:  0.663299
## R^2:  0.09294073
##
## Confusion Matrix (vertical: actual; across: predicted) for F1-optimal threshold:
##         0  1    Error     Rate
## 0      86 11 0.113402   =11/97
## 1      10 40 0.200000   =10/50
## Totals 96 51 0.142857  =21/147
##
## Maximum Metrics: Maximum metrics at their respective thresholds
##                        metric threshold     value idx
## 1                       max f1  0.358378  0.792079  42
## 2                       max f2  0.324552  0.820896  56
## 3                 max f0point5  0.358378  0.787402  42
## 4                 max accuracy  0.358378  0.857143  42
## 5                max precision  0.417564  1.000000   0
## 6                   max recall  0.287644  1.000000  98
## 7              max specificity  0.417564  1.000000   0
## 8             max absolute_mcc  0.358378  0.683365  42
## 9   max min_per_class_accuracy  0.342764  0.820000  47
## 10 max mean_per_class_accuracy  0.358378  0.843299  42
## 11                     max tns  0.417564 97.000000   0
## 12                     max fns  0.417564 49.000000   0
## 13                     max fps  0.281445 97.000000 100
## 14                     max tps  0.287644 50.000000  98
## 15                     max tnr  0.417564  1.000000   0
## 16                     max fnr  0.417564  0.980000   0
## 17                     max fpr  0.281445  1.000000 100
## 18                     max tpr  0.287644  1.000000  98
##
## Gains/Lift Table: Extract with `h2o.gainsLift(<model>, <data>)` or
`h2o.gainsLift(<model>, valid=<T/F>, xval=<T/F>)`
```

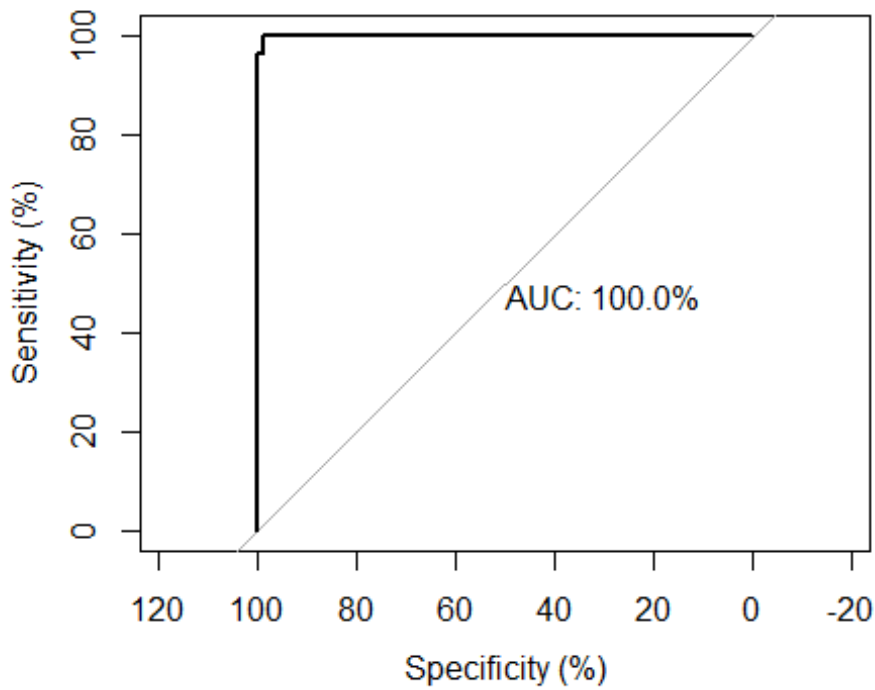
```r
library(recipes)
GBrdatafxgbprep <- recipe(Failure.binary ~ ., data = GBrdatatrain) %>%
  step_integer(all_nominal()) %>%
  prep(training = GBrdatatrain, retain = TRUE) %>%
  juice()

GBrdatafX <- as.matrix(GBrdatafxgbprep[setdiff(names(GBrdatafxgbprep),
"Failure.binary")])
GBrdatafY <- GBrdatafxgbprep$Failure.binary
GBrdatafY=as.numeric(GBrdatafY)-1

set.seed(123)
GBrdatafamesxgb <- xgb.cv(
  data = GBrdatafX,
  label = GBrdatafY,
  nrounds = 2500,
  objective = "binary:logistic",
  early_stopping_rounds = 50,
  nfold = 10,
  params = list(
    eta = 0.1,
    max_depth = 3,
    min_child_weight = 3,
    subsample = 0.8,
    colsample_bytree = 1.0),
  verbose = 0
)

# minimum test CV RMSE
min(GBrdatafamesxgb$evaluation_log$test_logloss_mean)

## [1] 0.3090401

# hyperparameter grid
GBrdataHyperGrid <- expand.grid(
  eta = 0.01,
  max_depth = 3,
  min_child_weight = 3,
  subsample = 0.5,
  colsample_bytree = 0.5,
  gamma = c(0, 1, 10, 100, 1000),
  lambda = c(0, 1e-2, 0.1, 1, 100, 1000, 10000),
  alpha = c(0, 1e-2, 0.1, 1, 100, 1000, 10000),
  logloss = 0,          # a place to dump RMSE results
  trees = 0          # a place to dump required number of trees
)

# grid search
for(i in seq_len(nrow(GBrdataHyperGrid))) {
  set.seed(123)
  GBrdatafm <- xgb.cv(
    data = GBrdatafX,
    label = GBrdatafY,
    nrounds = 100,#supposedly 4000
    objective = "binary:logistic",
    early_stopping_rounds = 50,
```

```r
    nfold = 10,
    verbose = 0,
    params = list(
      eta = GBrdataHyperGrid$eta[i],
      max_depth = GBrdataHyperGrid$max_depth[i],
      min_child_weight = GBrdataHyperGrid$min_child_weight[i],
      subsample = GBrdataHyperGrid$subsample[i],
      colsample_bytree = GBrdataHyperGrid$colsample_bytree[i],
      gamma = GBrdataHyperGrid$gamma[i],
      lambda = GBrdataHyperGrid$lambda[i],
      alpha = GBrdataHyperGrid$alpha[i]
    )
  )
  GBrdataHyperGrid$logloss[i] <- min(GBrdatafm$evaluation_log$test_logloss_mean)
  GBrdataHyperGrid$trees[i] <- GBrdatafm$best_iteration
}

# results
GBrdataHyperGrid %>%
  filter(logloss > 0) %>%
  arrange(logloss) %>%
  glimpse()

## Rows: 245
## Columns: 10
## $ eta              <dbl> 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,…
## $ max_depth        <dbl> 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,…
## $ min_child_weight <dbl> 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,…
## $ subsample        <dbl> 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5…
## $ colsample_bytree <dbl> 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5…
## $ gamma            <dbl> 0, 1, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0,…
## $ lambda           <dbl> 0.00, 0.00, 0.00, 0.01, 0.00, 0.01, 0.01, 0.01, 0.00,…
## $ alpha            <dbl> 0.00, 0.00, 0.01, 0.00, 0.01, 0.00, 0.01, 0.01, 0.10,…
## $ logloss          <dbl> 0.4500955, 0.4503004, 0.4505360, 0.4505707, 0.4506906…
## $ trees            <dbl> 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100…

# optimal parameter list
params <- list(
  eta = 0.01,
  max_depth = 3,
  min_child_weight = 3,
  subsample = 0.5,
  colsample_bytree = 0.5
)

#
# # train final model
# GBrdatatrain$Institution=fct_recode(GBrdatatrain$Institution, "1" = "A", "2"
="B","3"="C","4"="D")
# GBrdatatrain$Institution=as.numeric(GBrdatatrain$Institution)
# GBrdatatrain=as.matrix(GBrdatatrain)

xgb.fit.final <- xgboost(
  params = params,
  data = GBrdatafX,
  label = GBrdatafY,
```

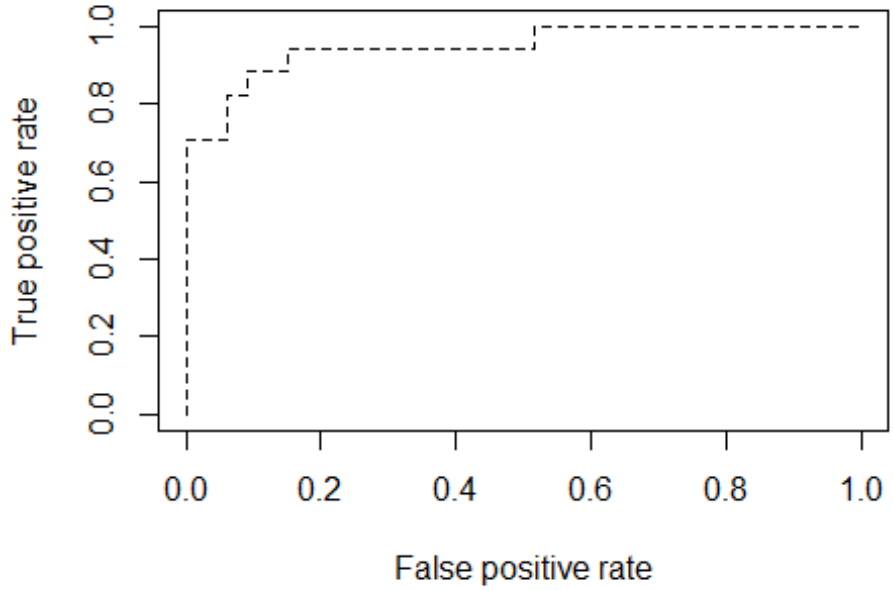
```r
  nrounds = 3944,
  objective = "binary:logistic",
  verbose = 0
)

# Compute predicted probabilities on training data
GBrdatafmod1prob <- predict(xgb.fit.final, GBrdatafX, type = "prob")

# Compute AUC metrics for cv_model1,2 and 3
GBrdatafperf1 <- prediction(GBrdatafmod1prob,GBrdatatrain$Failure.binary) %>%
  performance(measure = "tpr", x.measure = "fpr")


# Plot ROC curves for cv_model1,2 and 3
plot(GBrdatafperf1, col = "black", lty = 2)
```



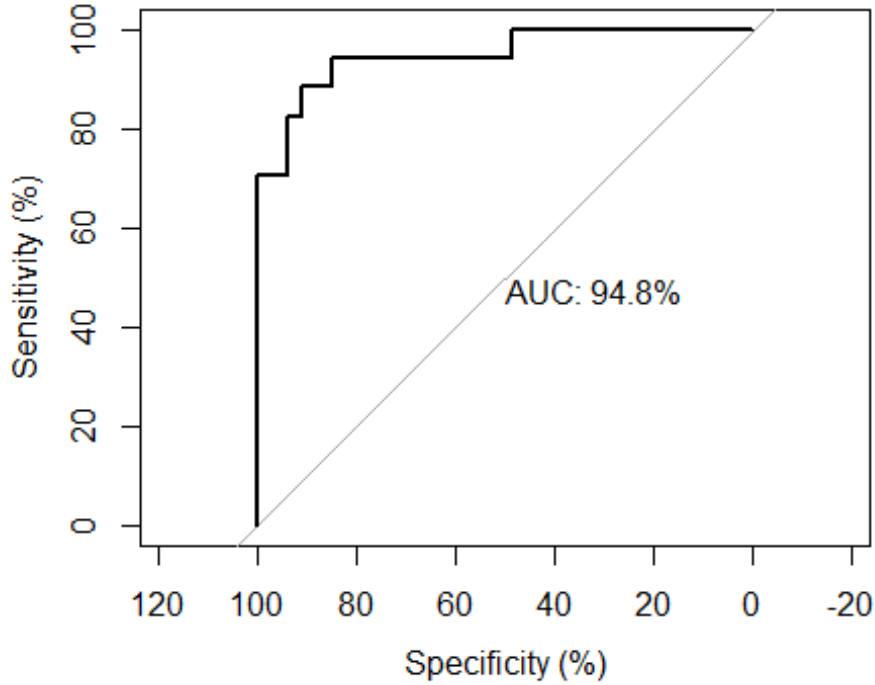

```r
# ROC plot for training data
roc( GBrdatatrain$Failure.binary ~ GBrdatafmod1prob, plot=TRUE, legacy.axes=FALSE,
    percent=TRUE, col="black", lwd=2, print.auc=TRUE)

## Setting levels: control = 0, case = 1

## Setting direction: controls < cases
```




```
##
## Call:
## roc.formula(formula = GBrdatatrain$Failure.binary ~ GBrdatafmod1prob,     plot = TRUE,
legacy.axes = FALSE, percent = TRUE, col = "black",     lwd = 2, print.auc = TRUE)
##
## Data: GBrdatafmod1prob in 97 controls (GBrdatatrain$Failure.binary 0) < 50 cases
(GBrdatatrain$Failure.binary 1).
## Area under the curve: 99.96%

GBrdatafxgbprep <- recipe(Failure.binary ~ ., data = GBrdatatest) %>%
  step_integer(all_nominal()) %>%
  prep(training = GBrdatatest, retain = TRUE) %>%
  juice()

GBrdatafX <- as.matrix(GBrdatafxgbprep[setdiff(names(GBrdatafxgbprep),
"Failure.binary")])

# Compute predicted probabilities on training data
GBrdatafmod2prob <- predict(xgb.fit.final, GBrdatafX, type = "prob")

# Compute AUC metrics for cv_model1,2 and 3
GBrdatafperf2 <- prediction(GBrdatafmod2prob,GBrdatatest$Failure.binary) %>%
  performance(measure = "tpr", x.measure = "fpr")


# Plot ROC curves for cv_model1,2 and 3
plot(GBrdatafperf2, col = "black", lty = 2)
```

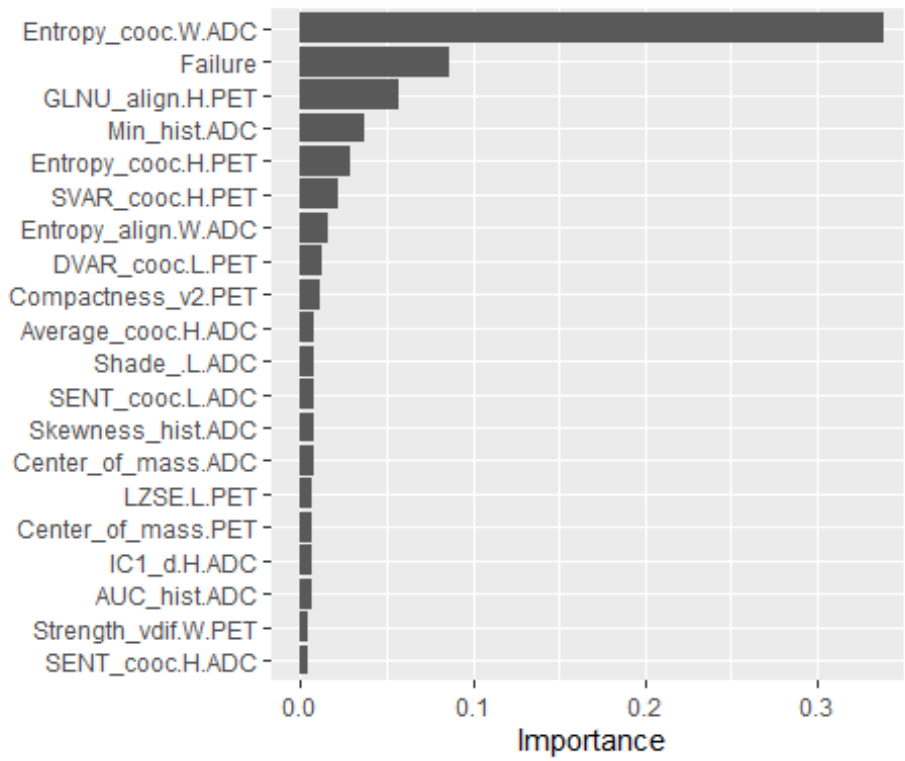



```
# ROC plot for training data
roc( GBrdatatest$Failure.binary ~ GBrdatafmod2prob, plot=TRUE, legacy.axes=FALSE,
    percent=TRUE, col="black", lwd=2, print.auc=TRUE)

## Setting levels: control = 0, case = 1
## Setting direction: controls < cases
```




```
##
## Call:
```

```
## roc.formula(formula = GBrdatatest$Failure.binary ~ GBrdatafmod2prob,     plot = TRUE,
legacy.axes = FALSE, percent = TRUE, col = "black",     lwd = 2, print.auc = TRUE)
##
## Data: GBrdatafmod2prob in 33 controls (GBrdatatest$Failure.binary 0) < 17 cases
(GBrdatatest$Failure.binary 1).
## Area under the curve: 94.83%

# variable importance plot
vip::vip(xgb.fit.final,num_features=20)
```



———*Support Vector Machine*———

3. SMV (Support Vector Machine)

A support vector machine (SVM) is a supervised machine learning model that utilizes classification algorithms for two-group classification problems. After transmitting a SVM model sets of labeled training data for each category, they are capable to classify new text.

```
# DATA
SVMrdata<- read.csv("Model1_Final_Project_Data.csv")
SVMrdata

##     Institution Failure.binary     Failure Entropy_cooc.W.ADC GLNU_align.H.PET
## 1             A              0  1.15343724           12.85352      -0.43305527
## 2             A              1 -0.53318051           12.21115      -1.01596791
## 3             A              0  2.23555842           12.75682       0.17908874
## 4             A              1 -0.14042416           13.46730       1.99828954
## 5             A              0  0.78667510           12.63733       0.15328619
## 6             A              1 -2.80216172           13.16159       0.39149488
## 7             A              0  0.21802303           12.20341      -0.68651916
## 8             A              0  0.62344075           12.27549      -0.40526982
## 9             A              1  0.57772207           13.36502      -1.03752256
## 10            A              1 -0.15972660           12.64322      -1.38024023
```

```
## 11            A              1 -1.77352271          12.68190       0.25729077
## 12            A              1 -0.91459156          13.32059       0.35060018
## 13            A              0  0.87658763          11.78460       0.20501110
## 14            A              1 -0.57772207          12.70872      -2.23555842
## 15            A              1 -2.10223158          12.75189       1.10528634
## 16            A              0  1.12903457          12.59191      -0.56275157
## 17            A              1 -1.68821191          12.82507       1.56855670
## 18            A              1 -1.31706374          13.47781       1.61367018
## 19            A              1 -0.61573253          13.01534      -0.14042416
## 20            A              1 -0.41912210          13.81885      -0.16617364
## 21            A              1 -0.48967276          13.31074       1.25874673
## 22            A              0  1.61367018          10.34164      -1.99828954
## 23            A              0  1.10528634          11.30091      -0.12758531
## 24            A              1 -0.76945312          13.44621       1.17854682
## 25            A              1  0.48967276          12.19805      -1.34797950
## 26            A              1 -0.31028376          13.67553       1.38024023
## 27            A              0  1.83849262          12.39759      -1.44946373
## 28            A              0  0.56275157          12.27779       0.85805346
## 29            A              0  0.83980946          13.46630      -1.05957037
## 30            A              0  1.08214564          11.30577       0.02545075
## 31            A              0  2.42690063           9.90098      -0.65465430
## 32            A              1 -1.38024023          13.21362       0.67050162
## 33            A              1 -0.43305527          14.02244       0.56275157
## 34            A              0  0.29695946          11.87499      -0.29695946
## 35            A              0  0.03818128          12.62939      -0.10196844
## 36            A              0  0.43305527          12.46372      -0.95396468
## 37            A              1 -1.48684468          14.05255       0.73567430
## 38            A              0  1.31706374          11.30907      -1.12903457
## 39            A              0 -1.44946373          11.33656       0.89542793
## 40            A              0  1.20442230          11.71615      -0.36416334
## 41            A              0  0.80413364          10.55277      -0.50406856
## 42            A              0  0.08918610          11.91184      -0.78667510
## 43            A              1 -0.27707061          13.88523       1.77352271
## 44            A              0  0.47537773          10.98247      -0.57772207
## 45            A              0  1.34797950           9.93702      -0.23107198
## 46            A              0  0.35060018          12.82907       0.46117919
## 47            A              0  2.10223158          12.51606       0.47537773
## 48            A              0  1.25874673          12.18425       1.91230127
## 49            A              0  1.23113036           9.96593      -1.25874673
## 50            A              0  0.46117919          10.26507      -0.08918610
## 51            A              0  0.11476746          12.20080      -0.05091800
## 52            A              0  0.50406856          11.55884      -0.85805346
## 53            A              1  0.17908874          14.27918       0.71909690
## 54            A              0  1.28735798          11.64675      -0.87658763
## 55            A              0  1.41400510           9.78064       0.07641832
## 56            A              0  1.91230127          10.72797      -1.10528634
## 57            A              1  0.33710120          12.98987       0.95396468
## 58            A              0  1.00536565          11.28998       0.14042416
## 59            A              0  1.44946373           9.53274       0.62344075
## 60            A              0  0.27046566          12.13676       1.05957037
## 61            A              1  0.75245638          13.87989       1.52642702
## 62            A              0  1.38024023          12.39057       1.08214564
## 63            A              0  0.82184079          12.56302       1.83849262
## 64            A              0  0.02545075          11.24201       2.23555842
## 65            A              0  0.25729077          12.02648      -1.48684468
```

```
## 66            A              0  0.93409710          12.14510       0.93409710
## 67            A              0  0.85805346          12.45992      -0.53318051
## 68            A              1 -1.28735798          14.31721       2.80216172
## 69            A              0  0.51856960          11.70049      -0.32366339
## 70            A              0 -0.08918610          10.80983      -1.52642702
## 71            A              0  0.19203379          11.75504      -0.03818128
## 72            A              1 -1.56855670          14.45447       0.40526982
## 73            A              0  0.24416040          11.87064      -0.33710120
## 74            A              0  0.10196844          11.24849       0.50406856
## 75            A              0 -0.19851827          11.80654       1.66232963
## 76            A              0 -0.12758531          11.23608      -2.42690063
## 77            A              0  0.14042416          10.80604      -0.93409710
## 78            A              0  0.15328619          11.88968      -0.89542793
## 79            A              1 -1.91230127          11.27395       0.36416334
## 80            A              1 -1.08214564          13.28421       1.48684468
## 81            A              1  0.06366298          13.08027      -0.15328619
## 82            A              1 -1.83849262          13.03919       0.80413364
## 83            A              0 -0.05091800          12.23783      -1.28735798
## 84            A              0  0.07641832          11.93174      -0.44707302
## 85            A              0 -0.21802303          11.86602      -0.20501110
## 86            A              1 -0.44707302          12.87111      -1.61367018
## 87            A              0 -0.73567430          11.97232      -0.25729077
## 88            A              0 -0.48967276          11.72074       1.01596791
## 89            A              1 -0.02545075          13.84022       0.78667510
## 90            A              0 -0.10836573          11.83108      -0.70271480
## 91            A              0 -0.80413364          12.63133      -0.21802303
## 92            A              0 -0.32366339          11.91844      -1.66232963
## 93            A              0 -0.57772207          11.70671      -0.73567430
## 94            A              1 -0.57772207          12.72348       0.24416040
## 95            A              0 -0.93409710          11.71233       0.06366298
## 96            A              0 -1.05957037          10.67293      -0.67050162
## 97            A              1 -0.97421613          13.20080      -0.71909690
## 98            A              0 -0.85805346          10.75189      -0.99487522
## 99            A              0 -0.75245638          12.32099      -0.60806071
## 100           A              0 -0.89542793          11.54081      -1.83849262
## 101           A              0 -0.99487522          11.35072      -0.48967276
## 102           A              0 -0.78667510          11.62035      -1.15343724
## 103           A              0 -1.02668561          12.70255      -0.83980946
## 104           A              0 -1.10528634          12.05063       0.31028376
## 105           A              0 -1.19138485          11.95064      -0.63896971
## 106           A              1 -0.25729077          13.71233       0.99487522
## 107           A              1  0.41218607          12.84162      -1.71527720
## 108           A              1 -2.23555842          12.93133       2.10223158
## 109           A              1 -1.34797950          12.46176      -0.51856960
## 110           A              0 -0.27707061          10.11661      -0.54790615
## 111           A              0 -0.40526982          12.63028      -1.17854682
## 112           A              0  0.00000000          12.45514      -0.17908874
## 113           A              0 -0.33710120          12.27903      -0.39149488
## 114           A              0 -0.48967276          11.43811       0.97421613
## 115           A              0 -0.65465430          11.35710      -1.41400510
## 116           A              0 -0.63896971          11.31957      -0.37779383
## 117           A              1 -1.68821191          12.85173       1.71527720
## 118           A              1 -0.70271480          12.69430       0.37779383
## 119           A              0 -1.19138485          12.89547       0.48967276
## 120           B              1  0.16617364          14.46547       0.44707302
```

```
## 121          B              0  0.73567430          12.89604       0.59282318
## 122          B              0 -0.83980946          11.26798       0.91459156
## 123          B              1  0.23107198          13.83785       0.29695946
## 124          B              0  0.59282318          12.84933       0.63896971
## 125          B              1 -0.37779383          13.17259       0.41912210
## 126          B              0 -0.01272434          11.99264      -0.62344075
## 127          B              0  1.56855670          11.27349       0.51856960
## 128          B              0  1.66232963          11.87054      -0.28368767
## 129          B              0  1.71527720          11.24908      -1.23113036
## 130          B              0 -0.39149488          10.83504      -0.91459156
## 131          B              0  1.99828954          11.94884      -0.75245638
## 132          B              1  1.52642702          13.61953       1.41400510
## 133          B              1 -0.67050162          13.03527       0.32366339
## 134          B              1 -1.61367018          13.17359       0.43305527
## 135          B              0  2.80216172          11.92884      -0.80413364
## 136          B              1 -0.95396468          13.83585       0.28368767
## 137          B              1 -1.02668561          13.39274       1.20442230
## 138          B              0  1.48684468          11.31277       0.75245638
## 139          B              1 -0.29695946          12.88880       0.70271480
## 140          B              0  0.31028376          12.27879       0.87658763
## 141          B              1 -1.23113036          13.47673       1.31706374
## 142          B              0 -0.82184079          11.33477       1.03752256
## 143          B              1 -1.15343724          12.27879       0.23107198
## 144          B              0  1.77352271          12.26479       0.82184079
## 145          B              0 -0.61573253          13.47723       1.28735798
## 146          B              1 -1.25874673          12.82295       0.33710120
## 147          B              0 -0.87658763          11.30077       0.00000000
## 148          D              0  0.89542793          12.76604      -0.06366298
## 149          C              0  1.17854682          11.29830       0.12758531
## 150          D              1 -2.42690063          14.33221       2.42690063
## 151          C              0  1.03752256          11.71149      -0.35060018
## 152          D              1 -0.06366298          12.86089       1.12903457
## 153          D              0  0.97421613          11.39207      -1.56855670
## 154          C              0  1.05957037          11.36556       0.11476746
## 155          C              0  0.91459156          12.73015      -1.20442230
## 156          D              0  0.95396468          10.58977      -0.46117919
## 157          C              1 -1.12903457          14.51047       0.54790615
## 158          C              0  1.00536565          11.98984      -0.82184079
## 159          D              1 -0.71909690          13.82385       0.68651916
## 160          D              1 -1.41400510          13.38974       1.23113036
## 161          C              0  0.71909690          12.45759      -1.77352271
## 162          D              0  0.67050162          12.87779      -0.19203379
## 163          D              0  0.70271480          12.98630      -0.41912210
## 164          C              0  0.76945312          11.45577       0.01272434
## 165          C              1 -0.54790615          12.12759       0.05091800
## 166          D              0  0.65465430          12.46779      -0.31028376
## 167          C              1 -1.99828954          13.34637       1.34797950
## 168          C              0  0.60806071          11.45577      -0.01272434
## 169          D              0  0.63896971           9.92064       0.08918610
## 170          D              0  0.68651916          10.89797      -1.08214564
## 171          D              1 -0.46117919          13.55621       1.15343724
## 172          C              0  0.53318051          12.45805      -1.31706374
## 173          D              1 -1.52642702          13.04553       1.44946373
## 174          C              1 -0.19851827          13.03027       0.76945312
## 175          D              0  0.54790615          12.97733       0.16617364
```

```
## 176           D              1 -0.51856960           13.21159       0.83980946
## 177           C              0  0.44707302           11.66846       0.19203379
## 178           D              1  0.39149488           12.89255       0.65465430
## 179           D              0  0.41218607           11.92460       0.21802303
## 180           C              0  0.36416334           12.82325      -2.10223158
## 181           C              1  0.32366339           13.80233       0.10196844
## 182           D              1 -0.68651916           12.92162       0.27046566
## 183           D              0  0.12758531           12.36759      -1.91230127
## 184           C              0  0.37779383           12.25779      -0.07641832
## 185           D              0  0.20501110           13.32637      -0.47537773
## 186           D              0  0.28368767           11.29577      -0.02545075
## 187           C              1  0.01272434           13.95989       0.57772207
## 188           C              0 -0.17908874           11.87064      -0.59282318
## 189           D              0  0.05091800           11.33849       0.53318051
## 190           C              0 -0.03818128           11.71654      -0.27046566
## 191           C              0 -0.23107198           11.19608      -2.80216172
## 192           D              0 -0.07641832           10.78604      -0.97421613
## 193           D              0 -0.10836573           11.95184      -0.76945312
## 194           D              0 -0.24416040            9.88702      -0.24416040
## 195           C              0 -0.36416334           12.84907       0.03818128
## 196           C              0 -0.35060018           12.44606      -0.11476746
## 197           D              0 -0.15972660           12.13425       0.60806071
##     Min_hist.PET Max_hist.PET Mean_hist.PET Variance_hist.PET
## 1    -0.27046566  -0.25729077   -0.19203379        0.05091800
## 2     0.67050162   0.40526982    0.48967276        0.68651916
## 3    -1.41400510  -1.56855670   -1.52642702       -1.56855670
## 4    -0.21802303   0.07641832   -0.15328619        0.01272434
## 5    -1.05957037  -1.15343724   -1.44946373       -1.91230127
## 6    -1.56855670  -1.91230127   -1.71527720       -1.83849262
## 7     0.28368767   0.51856960    0.40526982        0.91459156
## 8    -0.46117919  -0.71909690   -0.63896971       -0.62344075
## 9    -0.39149488  -0.59282318   -0.37779383       -0.24416040
## 10   -0.47537773  -0.31028376   -0.47537773       -0.01272434
## 11   -0.60806071  -0.46117919   -0.40526982       -0.35060018
## 12   -1.48684468  -1.66232963   -1.56855670       -1.61367018
## 13    0.44707302   0.36416334    0.53318051        0.70271480
## 14   -0.87658763  -0.91459156   -0.93409710       -0.46117919
## 15    0.40526982   0.68651916    0.70271480        1.56855670
## 16   -1.10528634  -0.89542793   -0.91459156       -0.85805346
## 17   -0.56275157  -0.47537773   -0.48967276       -0.36416334
## 18    0.39149488   0.41912210    0.35060018        0.33710120
## 19    0.19203379   0.11476746    0.21802303        0.21802303
## 20    0.06366298   0.08918610    0.11476746        0.29695946
## 21    0.10196844  -0.24416040   -0.08918610       -0.25729077
## 22   -0.33710120  -0.80413364   -0.62344075       -0.70271480
## 23    0.29695946  -0.14042416    0.31028376        0.19203379
## 24   -0.48967276  -0.11476746   -0.27046566        0.00000000
## 25   -0.70271480  -0.93409710   -0.71909690       -0.87658763
## 26   -0.51856960  -0.65465430   -0.73567430       -0.91459156
## 27    0.48967276   0.23107198    0.32366339        0.39149488
## 28   -0.19203379  -0.57772207   -0.36416334       -0.51856960
## 29   -1.71527720  -1.83849262   -1.66232963       -1.77352271
## 30    0.27046566   0.27046566    0.37779383        0.59282318
## 31   -0.91459156  -1.20442230   -1.10528634       -1.17854682
## 32    0.21802303  -0.08918610    0.01272434        0.02545075
```

```
## 33   -0.10196844  -0.07641832    0.03818128        0.08918610
## 34    0.33710120   0.20501110    0.24416040        0.31028376
## 35    0.83980946   0.60806071    0.68651916        0.63896971
## 36   -1.15343724  -1.41400510   -1.34797950       -1.41400510
## 37   -1.08214564  -1.10528634   -1.03752256       -0.97421613
## 38    0.24416040  -0.03818128    0.07641832        0.15328619
## 39   -0.12758531  -0.28368767   -0.10196844       -0.19203379
## 40    0.68651916   0.47537773    0.62344075        0.82184079
## 41    1.31706374   0.76945312    0.87658763        1.34797950
## 42    0.05091800   0.03818128    0.17908874        0.43305527
## 43   -1.44946373  -0.85805346   -1.48684468       -0.89542793
## 44   -0.93409710  -1.23113036   -1.12903457       -1.20442230
## 45   -2.10223158  -2.42690063   -2.80216172       -2.80216172
## 46    0.08918610   1.61367018    0.51856960        2.42690063
## 47   -2.80216172  -2.80216172   -2.23555842       -2.23555842
## 48    0.37779383   0.46117919    0.39149488        0.44707302
## 49   -0.01272434  -0.29695946   -0.01272434       -0.02545075
## 50   -0.08918610  -0.51856960   -0.14042416       -0.28368767
## 51    0.00000000  -0.27046566   -0.06366298       -0.03818128
## 52    0.23107198   0.05091800    0.36416334        0.25729077
## 53   -0.99487522  -0.95396468   -1.25874673       -1.38024023
## 54   -0.67050162  -0.01272434   -0.11476746        0.60806071
## 55   -0.80413364  -0.63896971   -0.75245638       -0.44707302
## 56   -1.38024023  -1.61367018   -1.41400510       -1.31706374
## 57   -0.57772207  -0.32366339   -0.53318051       -0.29695946
## 58    0.65465430   0.54790615    0.75245638        0.85805346
## 59   -1.77352271  -1.71527720   -1.91230127       -1.12903457
## 60    0.41912210   0.83980946    0.71909690        1.71527720
## 61   -0.50406856  -0.05091800   -0.39149488       -0.27046566
## 62   -1.23113036  -0.99487522   -1.01596791       -0.95396468
## 63   -0.85805346   0.14042416   -0.89542793       -0.63896971
## 64   -0.05091800   0.57772207    0.00000000        0.46117919
## 65    0.91459156   0.73567430    0.76945312        1.41400510
## 66    0.43305527   0.59282318    0.54790615        0.41912210
## 67   -1.28735798  -0.87658763   -0.97421613       -0.82184079
## 68    0.75245638   0.80413364    0.73567430        0.93409710
## 69   -0.53318051  -0.68651916   -0.67050162       -0.48967276
## 70    0.02545075   0.25729077    0.10196844        0.57772207
## 71    0.20501110  -0.06366298    0.14042416        0.07641832
## 72    0.35060018   0.10196844    0.05091800       -0.21802303
## 73   -0.83980946  -0.75245638   -0.95396468       -0.83980946
## 74   -1.34797950  -1.12903457   -1.28735798       -1.08214564
## 75   -0.24416040   0.15328619   -0.12758531        0.17908874
## 76   -0.06366298  -0.76945312   -0.41912210       -1.01596791
## 77   -1.99828954  -2.23555842   -1.99828954       -2.42690063
## 78    0.56275157   0.35060018    0.47537773        0.51856960
## 79   -0.54790615  -0.70271480   -0.68651916       -0.50406856
## 80   -1.31706374  -0.15328619   -0.85805346       -0.33710120
## 81    0.17908874  -0.12758531    0.20501110        0.10196844
## 82   -0.71909690  -0.10196844   -0.54790615        0.06366298
## 83    0.50406856   0.24416040    0.33710120        0.40526982
## 84   -1.66232963  -1.77352271   -1.61367018       -1.71527720
## 85   -0.89542793  -1.17854682   -1.08214564       -1.15343724
## 86    0.25729077  -0.02545075    0.08918610        0.16617364
## 87   -0.73567430  -0.60806071   -0.80413364       -0.47537773
```

```
## 88   -0.23107198  -0.40526982   -0.21802303       -0.15328619
## 89   -0.37779383  -0.44707302   -0.33710120       -0.20501110
## 90    0.16617364   0.17908874    0.28368767        0.28368767
## 91   -0.15328619   0.01272434   -0.02545075        0.14042416
## 92    1.12903457   1.03752256    1.15343724        1.12903457
## 93    0.54790615   0.33710120    0.46117919        0.50406856
## 94   -0.31028376  -0.36416334   -0.57772207       -0.56275157
## 95   -0.76945312  -0.82184079   -0.78667510       -0.71909690
## 96   -0.41912210  -0.17908874   -0.29695946       -0.08918610
## 97   -0.02545075   0.31028376    0.15328619        0.67050162
## 98   -0.40526982  -0.16617364   -0.28368767       -0.07641832
## 99   -1.20442230  -0.97421613   -0.99487522       -0.93409710
## 100   0.47537773   0.21802303    0.29695946        0.37779383
## 101  -0.97421613  -1.28735798   -1.17854682       -1.25874673
## 102   1.10528634   1.01596791    1.12903457        1.10528634
## 103   1.17854682   1.08214564    1.20442230        1.17854682
## 104  -0.29695946  -0.35060018   -0.56275157       -0.54790615
## 105   1.20442230   1.10528634    1.23113036        1.20442230
## 106  -2.23555842  -1.99828954   -2.10223158       -1.99828954
## 107   0.87658763   0.67050162    0.93409710        1.23113036
## 108  -1.83849262  -1.48684468   -1.77352271       -1.10528634
## 109  -1.52642702  -1.03752256   -0.83980946       -0.67050162
## 110  -1.12903457  -1.38024023   -1.31706374       -1.34797950
## 111   0.70271480   0.48967276    0.63896971        0.83980946
## 112   1.34797950   0.78667510    0.89542793        1.38024023
## 113   1.15343724   1.05957037    1.17854682        1.15343724
## 114  -0.25729077  -0.41912210   -0.23107198       -0.16617364
## 115  -0.07641832  -0.78667510   -0.44707302       -1.05957037
## 116  -0.95396468  -1.25874673   -1.15343724       -1.23113036
## 117  -0.59282318  -0.50406856   -0.50406856       -0.39149488
## 118  -0.62344075  -0.48967276   -0.43305527       -0.37779383
## 119   0.07641832   1.56855670    0.50406856        2.23555842
## 120   0.14042416   0.16617364    0.25729077        0.27046566
## 121  -0.16617364   0.00000000   -0.03818128        0.11476746
## 122   1.01596791   0.93409710    1.03752256        0.99487522
## 123   0.51856960   0.32366339    0.44707302        0.48967276
## 124  -0.35060018  -0.39149488   -0.60806071       -0.59282318
## 125  -0.78667510  -0.83980946   -0.82184079       -0.76945312
## 126  -0.44707302  -0.20501110   -0.32366339       -0.12758531
## 127  -0.03818128   0.29695946    0.12758531        0.65465430
## 128  -0.43305527  -0.19203379   -0.31028376       -0.11476746
## 129  -1.25874673  -1.01596791   -1.05957037       -0.99487522
## 130   0.46117919   0.19203379    0.27046566        0.36416334
## 131  -1.03752256  -1.34797950   -1.23113036       -1.48684468
## 132   0.99487522   0.91459156    1.01596791        0.97421613
## 133   1.05957037   0.97421613    1.08214564        1.03752256
## 134  -0.32366339  -0.37779383   -0.59282318       -0.57772207
## 135   1.08214564   0.99487522    1.10528634        1.05957037
## 136  -2.42690063  -2.10223158   -2.42690063       -2.10223158
## 137   0.85805346   0.65465430    0.91459156        1.08214564
## 138  -1.91230127  -1.52642702   -1.83849262       -1.28735798
## 139  -1.61367018  -1.05957037   -0.87658763       -0.68651916
## 140  -1.17854682  -1.44946373   -1.38024023       -1.52642702
## 141   0.63896971   0.44707302    0.60806071        0.80413364
## 142   1.28735798   0.75245638    0.85805346        1.31706374
```

```
## 143   1.03752256   0.95396468    1.05957037        1.01596791
## 144  -0.28368767  -0.43305527   -0.25729077       -0.17908874
## 145  -1.01596791  -1.31706374   -1.20442230       -1.44946373
## 146  -0.63896971  -0.54790615   -0.51856960       -0.43305527
## 147  -0.65465430  -0.53318051   -0.46117919       -0.41912210
## 148   1.25874673   0.71909690    1.31706374        0.62344075
## 149   0.93409710   0.53318051    0.95396468        0.23107198
## 150   1.38024023   0.82184079    1.25874673        0.56275157
## 151   1.56855670   1.31706374    1.71527720        0.89542793
## 152   0.01272434  -0.21802303   -0.20501110       -0.80413364
## 153   0.53318051   1.25874673    0.99487522        1.66232963
## 154   0.15328619   0.43305527    0.23107198        0.03818128
## 155  -0.36416334  -0.62344075   -0.35060018       -0.78667510
## 156   0.57772207   0.70271480    0.59282318        0.20501110
## 157   2.10223158   1.83849262    2.23555842        1.83849262
## 158  -0.75245638  -0.67050162   -0.70271480       -0.73567430
## 159   1.71527720   2.42690063    1.99828954        2.80216172
## 160   0.62344075   1.20442230    0.67050162        0.24416040
## 161  -0.11476746  -0.23107198   -0.16617364       -0.53318051
## 162   0.11476746   1.38024023    0.02545075       -0.23107198
## 163   0.97421613   1.91230127    1.34797950        1.44946373
## 164   2.42690063   2.10223158    2.42690063        2.10223158
## 165   1.77352271   1.99828954    1.91230127        1.28735798
## 166  -0.14042416   0.02545075   -0.07641832       -0.32366339
## 167   2.23555842   2.23555842    2.10223158        1.91230127
## 168   0.60806071   0.39149488    0.43305527       -0.06366298
## 169   1.41400510   1.52642702    1.44946373        1.61367018
## 170   1.52642702   1.17854682    1.48684468        0.73567430
## 171   1.66232963   1.34797950    1.38024023        0.32366339
## 172   0.12758531   0.28368767   -0.05091800       -0.40526982
## 173  -0.20501110  -0.33710120   -0.24416040       -0.65465430
## 174   0.80413364   1.41400510    0.97421613        0.87658763
## 175   0.95396468   0.12758531    0.65465430       -0.60806071
## 176  -0.82184079  -1.08214564   -0.76945312       -1.66232963
## 177   1.99828954   1.77352271    1.83849262        1.52642702
## 178   0.59282318   0.37779383    0.41912210       -0.10196844
## 179  -0.17908874   0.89542793    0.06366298        0.12758531
## 180   1.48684468   1.12903457    1.56855670        0.75245638
## 181   0.36416334   1.15343724    0.57772207        0.71909690
## 182   1.83849262   1.48684468    1.66232963        1.25874673
## 183  -0.68651916  -0.73567430   -0.65465430       -1.03752256
## 184   0.03818128  -0.56275157   -0.17908874       -0.75245638
## 185   1.61367018   1.23113036    1.41400510        0.78667510
## 186   0.32366339   0.50406856    0.16617364       -0.05091800
## 187   0.82184079   0.62344075    0.83980946        0.47537773
## 188   0.76945312   0.56275157    0.78667510        0.35060018
## 189   1.44946373   1.44946373    1.61367018        0.95396468
## 190   0.89542793   1.28735798    1.28735798        0.76945312
## 191   2.80216172   2.80216172    2.80216172        1.99828954
## 192   1.91230127   1.71527720    1.77352271        1.48684468
## 193   0.78667510   0.63896971    0.56275157       -0.14042416
## 194   0.31028376   0.06366298    0.19203379       -0.31028376
## 195   0.71909690   0.85805346    0.80413364        0.53318051
## 196   1.23113036   1.66232963    1.52642702        1.77352271
## 197   0.73567430   0.87658763    0.82184079        0.54790615
```

```
##     Standard_Deviation_hist.PET Skewness_hist.PET Kurtosis_hist.PET
## 1                    -0.06366298       -0.15328619       -0.31028376
## 2                     0.50406856        0.14042416       -0.24416040
## 3                    -1.48684468       -1.31706374       -1.44946373
## 4                    -0.08918610        0.17908874        0.85805346
## 5                    -1.91230127        1.12903457        1.48684468
## 6                    -1.83849262       -0.28368767        0.10196844
## 7                     0.67050162        0.19203379        0.41912210
## 8                    -0.68651916        0.28368767        0.31028376
## 9                    -0.32366339       -0.65465430       -0.51856960
## 10                   -0.12758531        0.75245638        1.01596791
## 11                   -0.46117919       -1.66232963       -0.85805346
## 12                   -1.66232963       -1.05957037       -1.05957037
## 13                    0.51856960       -1.48684468       -1.23113036
## 14                   -0.56275157        0.97421613        0.87658763
## 15                    1.10528634       -0.48967276       -0.39149488
## 16                   -0.87658763        0.11476746        0.62344075
## 17                   -0.47537773       -0.53318051       -0.08918610
## 18                    0.21802303        0.40526982        0.82184079
## 19                    0.11476746       -0.44707302       -0.07641832
## 20                    0.16617364       -0.37779383        0.01272434
## 21                   -0.33710120        0.27046566        0.71909690
## 22                   -0.76945312        0.01272434       -0.83980946
## 23                    0.07641832       -1.52642702       -1.56855670
## 24                   -0.10196844       -0.08918610        0.46117919
## 25                   -0.89542793       -0.80413364       -0.71909690
## 26                   -0.93409710        1.25874673        1.61367018
## 27                    0.24416040        0.47537773        0.68651916
## 28                   -0.62344075       -0.23107198        0.51856960
## 29                   -1.77352271       -0.14042416        0.23107198
## 30                    0.41912210       -0.70271480       -0.25729077
## 31                   -1.20442230        0.05091800       -0.41912210
## 32                   -0.07641832        0.36416334        0.50406856
## 33                   -0.01272434       -1.25874673       -0.62344075
## 34                    0.19203379        0.20501110        0.16617364
## 35                    0.47537773        0.51856960        1.03752256
## 36                   -1.41400510       -0.12758531       -0.29695946
## 37                   -1.03752256       -0.01272434       -0.33710120
## 38                    0.03818128        0.54790615        0.76945312
## 39                   -0.27046566       -1.41400510       -0.73567430
## 40                    0.57772207       -1.01596791       -1.03752256
## 41                    0.97421613        0.41912210        0.56275157
## 42                    0.27046566       -0.75245638       -0.67050162
## 43                   -0.91459156        0.85805346        1.20442230
## 44                   -1.23113036        0.03818128       -0.43305527
## 45                   -2.80216172        1.44946373        1.83849262
## 46                    1.83849262        0.73567430        0.97421613
## 47                   -2.23555842       -1.56855670       -1.34797950
## 48                    0.29695946       -1.08214564       -0.60806071
## 49                   -0.11476746       -0.78667510       -0.91459156
## 50                   -0.36416334       -1.91230127       -1.61367018
## 51                   -0.14042416       -1.03752256       -1.17854682
## 52                    0.12758531       -1.38024023       -0.95396468
## 53                   -1.31706374        0.95396468        1.34797950
## 54                    0.44707302        0.35060018        0.32366339
```

```
## 55                  -0.54790615        0.50406856        0.89542793
## 56                  -1.25874673       -1.28735798       -1.48684468
## 57                  -0.37779383        0.16617364        0.67050162
## 58                   0.60806071       -2.42690063       -0.80413364
## 59                  -1.15343724       -0.20501110       -0.53318051
## 60                   1.17854682       -0.51856960        0.33710120
## 61                  -0.35060018       -0.21802303        0.83980946
## 62                  -0.97421613       -0.27046566        0.11476746
## 63                  -0.73567430        1.83849262        2.42690063
## 64                   0.33710120        0.65465430        1.31706374
## 65                   1.01596791        0.57772207        0.73567430
## 66                   0.28368767       -2.23555842       -0.10196844
## 67                  -0.82184079        0.02545075        0.40526982
## 68                   0.68651916       -0.33710120       -0.15328619
## 69                  -0.57772207        0.32366339        0.37779383
## 70                   0.43305527        0.23107198        0.60806071
## 71                  -0.02545075       -0.39149488       -0.50406856
## 72                  -0.29695946        1.15343724        1.44946373
## 73                  -0.85805346        1.08214564        1.56855670
## 74                  -1.10528634       -0.82184079       -0.82184079
## 75                   0.08918610        0.21802303        0.75245638
## 76                  -1.01596791       -0.35060018       -0.63896971
## 77                  -2.42690063       -0.59282318       -0.44707302
## 78                   0.37779383       -0.24416040       -0.12758531
## 79                  -0.60806071        0.31028376        0.35060018
## 80                  -0.44707302        0.70271480        1.38024023
## 81                   0.01272434       -0.36416334       -0.35060018
## 82                  -0.05091800        0.59282318        1.10528634
## 83                   0.25729077        0.48967276        0.70271480
## 84                  -1.71527720       -0.11476746        0.24416040
## 85                  -1.17854682        0.06366298       -0.40526982
## 86                   0.05091800        0.56275157        0.78667510
## 87                  -0.59282318        1.38024023        1.77352271
## 88                  -0.20501110       -0.68651916       -1.12903457
## 89                  -0.28368767       -0.99487522       -1.20442230
## 90                   0.15328619       -1.34797950       -0.76945312
## 91                   0.02545075       -0.54790615       -0.14042416
## 92                   0.82184079       -0.93409710        0.03818128
## 93                   0.35060018       -0.32366339       -0.16617364
## 94                  -0.65465430        0.91459156        1.23113036
## 95                  -0.80413364        0.29695946        0.29695946
## 96                  -0.17908874       -0.31028376        0.25729077
## 97                   0.48967276        0.12758531        0.39149488
## 98                  -0.16617364       -0.29695946        0.27046566
## 99                  -0.95396468       -0.25729077        0.12758531
## 100                  0.23107198        0.44707302        0.65465430
## 101                 -1.38024023       -0.05091800       -0.48967276
## 102                  0.80413364       -0.95396468        0.02545075
## 103                  0.85805346       -0.87658763        0.06366298
## 104                 -0.63896971        0.93409710        1.25874673
## 105                  0.89542793       -0.83980946        0.07641832
## 106                 -1.99828954        0.08918610       -0.27046566
## 107                  0.91459156       -0.60806071       -0.21802303
## 108                 -1.12903457       -0.76945312       -0.75245638
## 109                 -0.75245638       -1.61367018       -0.93409710
```

```
## 110                  -1.28735798       -0.10196844       -0.28368767
## 111                   0.59282318       -0.91459156       -0.99487522
## 112                   0.99487522        0.43305527        0.57772207
## 113                   0.83980946       -0.89542793        0.05091800
## 114                  -0.21802303       -0.73567430       -1.15343724
## 115                  -1.08214564       -0.43305527       -0.70271480
## 116                  -1.34797950       -0.02545075       -0.47537773
## 117                  -0.50406856       -0.56275157       -0.11476746
## 118                  -0.48967276       -1.77352271       -0.89542793
## 119                   1.77352271        0.63896971        0.95396468
## 120                   0.14042416       -1.44946373       -0.87658763
## 121                  -0.03818128       -0.57772207       -0.19203379
## 122                   0.71909690       -1.20442230       -0.05091800
## 123                   0.31028376       -0.50406856       -0.23107198
## 124                  -0.71909690        0.82184079        1.15343724
## 125                  -0.83980946        0.24416040        0.17908874
## 126                  -0.24416040       -0.47537773        0.14042416
## 127                   0.46117919       -0.03818128        0.36416334
## 128                  -0.23107198       -0.46117919        0.15328619
## 129                  -1.05957037       -0.40526982        0.08918610
## 130                   0.20501110        0.39149488        0.63896971
## 131                  -1.61367018       -0.17908874       -0.59282318
## 132                   0.70271480       -1.23113036       -0.06366298
## 133                   0.75245638       -1.12903457       -0.02545075
## 134                  -0.70271480        0.83980946        1.17854682
## 135                   0.76945312       -1.10528634       -0.01272434
## 136                  -2.10223158       -0.07641832       -0.36416334
## 137                   0.78667510       -0.71909690       -0.32366339
## 138                  -1.44946373       -0.97421613       -0.78667510
## 139                  -0.78667510       -1.83849262       -1.08214564
## 140                  -1.52642702       -0.19203379       -0.37779383
## 141                   0.56275157       -1.17854682       -1.10528634
## 142                   0.95396468        0.37779383        0.53318051
## 143                   0.73567430       -1.15343724       -0.03818128
## 144                  -0.25729077       -0.85805346       -1.28735798
## 145                  -1.56855670       -0.16617364       -0.57772207
## 146                  -0.53318051       -0.62344075       -0.17908874
## 147                  -0.51856960       -1.99828954       -1.01596791
## 148                   1.15343724        0.15328619       -1.83849262
## 149                   0.63896971       -1.71527720       -2.80216172
## 150                   1.12903457       -0.06366298       -2.10223158
## 151                   1.38024023       -0.67050162       -1.91230127
## 152                  -0.43305527        1.99828954        1.71527720
## 153                   1.71527720        1.41400510        0.43305527
## 154                   0.53318051        1.52642702        1.28735798
## 155                  -0.41912210       -0.41912210       -2.42690063
## 156                   0.62344075        1.17854682        0.91459156
## 157                   1.99828954       -2.80216172       -1.71527720
## 158                  -0.39149488        0.99487522       -1.41400510
## 159                   2.80216172        0.53318051        0.44707302
## 160                   0.65465430        0.89542793        1.12903457
## 161                  -0.15328619        0.80413364        0.00000000
## 162                   0.17908874        2.80216172        2.80216172
## 163                   1.52642702        1.71527720        1.66232963
## 164                   2.42690063        1.61367018        0.99487522
```

```
## 165                  1.48684468       -2.10223158       -0.46117919
## 166                  0.06366298        1.03752256        0.59282318
## 167                  2.10223158        0.68651916       -0.65465430
## 168                  0.40526982        1.34797950        0.48967276
## 169                  1.66232963        1.23113036        0.80413364
## 170                  1.23113036        0.60806071       -1.38024023
## 171                  0.87658763        2.23555842        1.99828954
## 172                  0.00000000        2.10223158        2.10223158
## 173                 -0.31028376        0.10196844       -1.77352271
## 174                  1.34797950        1.20442230        1.05957037
## 175                 -0.19203379        0.67050162       -1.52642702
## 176                 -0.99487522        0.33710120       -1.31706374
## 177                  1.61367018        0.87658763       -0.54790615
## 178                  0.36416334        1.31706374        0.47537773
## 179                  0.54790615        1.77352271        1.91230127
## 180                  1.25874673        0.62344075       -0.97421613
## 181                  1.20442230        1.66232963        1.41400510
## 182                  1.44946373        1.48684468        0.93409710
## 183                 -0.67050162        1.01596791        0.19203379
## 184                 -0.40526982        1.05957037       -1.25874673
## 185                  1.31706374        1.56855670        1.08214564
## 186                  0.39149488        2.42690063        2.23555842
## 187                  1.03752256        0.25729077       -1.99828954
## 188                  0.93409710        0.00000000       -2.23555842
## 189                  1.41400510       -0.63896971       -1.66232963
## 190                  1.28735798        0.46117919       -0.56275157
## 191                  2.23555842        0.07641832       -0.20501110
## 192                  1.56855670        0.71909690       -0.68651916
## 193                  0.32366339        1.91230127        1.52642702
## 194                  0.10196844        1.28735798        0.28368767
## 195                  1.05957037        0.76945312        0.20501110
## 196                  1.91230127        1.10528634        0.54790615
## 197                  1.08214564        0.78667510        0.21802303
##     Energy_hist.PET Entropy_hist.PET AUC_hist.PET   H_suv.PET  Volume.PET
## 1       -0.19203379      -0.15328619  -0.51856960  0.05091800 -0.85805346
## 2       -0.08918610      -0.76945312  -0.35060018  1.03752256 -1.41400510
## 3       -0.20501110      -0.14042416  -0.70271480 -1.28735798 -0.21802303
## 4       -0.46117919       0.21802303   0.59282318 -0.25729077  0.41912210
## 5        0.01272434      -0.95396468   0.57772207 -1.61367018 -0.14042416
## 6       -0.17908874       0.23107198  -0.37779383 -1.41400510 -0.78667510
## 7       -0.25729077      -0.40526982  -0.63896971  1.01596791 -0.17908874
## 8       -0.06366298      -0.78667510  -0.16617364 -0.48967276  0.11476746
## 9       -0.03818128      -0.08918610  -0.60806071 -0.43305527 -0.76945312
## 10       0.06366298       0.07641832  -0.39149488  0.17908874 -0.62344075
## 11      -0.51856960       0.65465430  -0.23107198 -0.76945312 -0.28368767
## 12      -0.23107198      -0.47537773  -0.62344075 -1.31706374  0.29695946
## 13      -0.44707302       0.08918610  -0.68651916  0.65465430  0.82184079
## 14       0.95396468       0.59282318   0.33710120 -0.36416334 -0.08918610
## 15      -0.50406856       0.60806071  -0.19203379  1.20442230  1.34797950
## 16      -0.02545075      -0.83980946  -0.31028376 -0.97421613 -0.16617364
## 17      -0.39149488      -0.01272434  -0.43305527 -0.54790615 -0.80413364
## 18      -0.48967276       0.35060018   0.46117919  0.08918610  1.01596791
## 19      -0.29695946      -0.20501110  -0.67050162  0.31028376  0.05091800
## 20      -0.31028376      -0.19203379  -0.57772207  0.07641832 -0.33710120
## 21      -0.27046566      -0.37779383  -0.24416040 -0.24416040 -0.59282318
```

```
## 22       0.68651916      -2.23555842  -0.17908874 -0.08918610 -2.80216172
## 23      -0.32366339      -0.17908874  -0.50406856  0.06366298 -0.25729077
## 24      -0.47537773       0.19203379  -0.48967276  0.27046566  0.46117919
## 25       0.14042416      -1.48684468  -0.41912210 -0.59282318 -1.56855670
## 26      -0.33710120      -0.16617364   0.35060018 -1.44946373 -0.11476746
## 27       0.17908874      -1.56855670  -0.40526982 -0.11476746 -0.65465430
## 28      -0.36416334      -0.85805346  -0.56275157 -0.44707302 -0.12758531
## 29       0.02545075      -1.23113036  -0.11476746 -1.15343724 -0.71909690
## 30      -0.40526982       0.01272434  -0.59282318  0.51856960  0.03818128
## 31      -0.01272434      -0.91459156  -0.25729077 -0.91459156 -0.97421613
## 32      -0.37779383      -0.11476746  -0.12758531 -0.47537773  0.50406856
## 33      -0.43305527       0.06366298  -0.71909690 -0.33710120  0.19203379
## 34      -0.24416040      -0.43305527  -0.32366339 -0.02545075 -0.67050162
## 35      -0.35060018      -0.53318051  -0.54790615  0.60806071 -0.20501110
## 36       0.23107198      -1.77352271   0.06366298 -0.75245638 -0.10196844
## 37      -0.21802303      -0.46117919   0.03818128 -1.38024023 -0.60806071
## 38       0.10196844      -1.38024023  -0.44707302  0.24416040 -2.42690063
## 39      -0.41912210       0.05091800  -0.46117919 -0.21802303  0.27046566
## 40      -0.12758531      -0.63896971  -0.65465430  0.97421613 -1.23113036
## 41      -0.28368767      -0.33710120  -0.20501110  1.31706374 -0.54790615
## 42      -0.16617364      -0.54790615  -0.47537773  0.40526982 -1.15343724
## 43       0.05091800       0.20501110   0.65465430 -1.56855670  0.43305527
## 44      -0.05091800      -0.93409710  -0.33710120 -0.93409710 -0.99487522
## 45       0.89542793      -1.44946373   0.60806071 -2.42690063 -2.23555842
## 46       0.33710120       0.32366339   0.41912210  0.95396468  0.78667510
## 47       0.54790615      -0.48967276  -0.02545075 -1.83849262 -0.24416040
## 48       0.32366339       0.57772207   0.48967276  0.20501110  0.97421613
## 49       0.76945312      -0.97421613   0.12758531  0.11476746 -1.77352271
## 50       0.47537773      -0.31028376  -0.01272434 -0.31028376 -0.43305527
## 51       0.44707302      -0.24416040   0.05091800  0.19203379 -0.35060018
## 52       0.57772207      -0.56275157   0.17908874  0.67050162 -1.20442230
## 53       0.56275157      -0.12758531   0.47537773 -1.34797950  0.99487522
## 54       0.67050162      -0.80413364   0.56275157  0.53318051 -1.25874673
## 55       0.48967276      -0.36416334   0.01272434 -0.50406856 -0.02545075
## 56       0.85805346      -1.41400510   0.16617364 -0.63896971 -1.48684468
## 57       0.40526982       0.02545075   0.15328619 -0.28368767  0.02545075
## 58       0.37779383       0.14042416  -0.06366298  0.76945312  0.33710120
## 59       0.53318051      -0.39149488   0.25729077 -1.48684468 -0.05091800
## 60       0.31028376      -0.70271480   0.24416040  1.08214564 -0.15328619
## 61       0.35060018       0.24416040   0.37779383 -0.60806071  0.59282318
## 62       0.46117919      -0.23107198   0.40526982 -0.87658763  0.08918610
## 63       0.39149488       0.10196844   0.51856960 -0.70271480  0.71909690
## 64       0.29695946      -0.44707302   0.62344075  0.02545075  0.91459156
## 65       0.75245638      -0.87658763   0.20501110  0.71909690 -1.34797950
## 66       0.41912210       0.03818128  -0.36416334  0.56275157  0.48967276
## 67       0.65465430      -0.82184079   0.29695946 -0.68651916  0.36416334
## 68       0.28368767       0.67050162   0.54790615  0.16617364  1.03752256
## 69       0.60806071      -0.71909690   0.21802303 -0.37779383 -0.48967276
## 70       0.78667510      -1.12903457   0.10196844  0.87658763 -2.10223158
## 71       0.70271480      -1.15343724   0.36416334  0.35060018 -0.32366339
## 72       0.82184079      -0.10196844   0.63896971  0.03818128 -0.41912210
## 73       0.87658763      -1.17854682   0.53318051 -0.65465430 -1.99828954
## 74       0.80413364      -0.41912210   0.32366339 -1.20442230 -0.68651916
## 75       0.63896971      -1.25874673   0.39149488 -0.35060018 -1.38024023
## 76       1.91230127      -2.42690063   0.44707302 -0.51856960 -1.83849262
```

```
## 77       0.99487522      -1.83849262   0.27046566 -2.10223158 -1.44946373
## 78       0.83980946      -0.59282318   0.23107198  0.59282318  0.23107198
## 79       0.00000000      -0.73567430  -0.27046566 -0.40526982 -0.50406856
## 80      -0.15328619       0.17908874   0.02545075 -0.80413364 -0.63896971
## 81      -0.07641832      -0.28368767  -0.21802303 -0.07641832 -0.40526982
## 82      -0.10196844      -0.07641832   0.08918610 -0.39149488 -0.19203379
## 83       0.24416040      -1.52642702  -0.28368767 -0.10196844 -1.61367018
## 84       0.08918610      -1.20442230  -0.08918610 -1.12903457  0.06366298
## 85       0.07641832      -0.89542793  -0.14042416 -0.89542793 -0.95396468
## 86       0.20501110       0.36416334  -0.29695946  0.25729077 -1.52642702
## 87       0.03818128      -0.75245638  -0.07641832 -0.56275157 -0.07641832
## 88      -0.14042416      -1.28735798  -0.15328619  0.00000000  0.15328619
## 89      -0.11476746      -0.05091800  -0.10196844 -0.41912210  0.01272434
## 90      -0.78667510      -1.99828954  -1.01596791 -0.23107198  0.40526982
## 91      -0.80413364      -1.03752256  -0.76945312  0.12758531  0.67050162
## 92      -0.83980946       0.51856960  -0.99487522  0.44707302  1.23113036
## 93      -0.56275157      -0.62344075  -0.85805346  0.57772207  0.21802303
## 94      -0.85805346       0.15328619   0.07641832 -1.71527720  0.54790615
## 95      -0.70271480      -0.50406856  -1.03752256 -0.95396468 -0.89542793
## 96      -0.87658763       0.40526982   0.11476746 -0.05091800  1.77352271
## 97      -0.75245638       0.00000000  -0.95396468  0.62344075  0.00000000
## 98      -0.82184079       0.41912210   0.19203379 -0.03818128  1.83849262
## 99       0.71909690      -0.21802303   0.50406856 -0.83980946  0.10196844
## 100     -0.54790615      -1.61367018  -0.97421613 -0.14042416 -1.66232963
## 101     -0.60806071      -1.01596791  -0.89542793 -1.08214564 -1.03752256
## 102     -0.89542793       0.50406856  -1.05957037  0.43305527  1.20442230
## 103     -0.62344075       0.54790615  -0.87658763  0.47537773  1.28735798
## 104     -0.76945312       0.16617364   0.14042416 -1.66232963  0.56275157
## 105     -0.59282318       0.56275157  -0.78667510  0.48967276  1.31706374
## 106     -0.53318051      -0.27046566  -0.53318051 -2.23555842 -0.36416334
## 107      0.59282318       0.31028376   0.00000000  0.85805346  0.87658763
## 108      0.25729077       0.33710120   0.28368767 -1.52642702  0.25729077
## 109      0.50406856      -0.57772207  -0.05091800 -0.85805346 -0.44707302
## 110      0.91459156      -1.71527720   0.43305527 -0.73567430 -1.28735798
## 111      0.51856960      -0.60806071  -0.03818128  0.99487522  0.75245638
## 112      0.36416334      -0.32366339   0.31028376  1.34797950 -0.53318051
## 113     -0.71909690       0.53318051  -0.93409710  0.46117919  1.25874673
## 114     -0.65465430      -1.31706374  -0.83980946 -0.06366298  0.14042416
## 115      0.21802303      -2.80216172  -0.75245638 -0.57772207 -1.91230127
## 116     -0.57772207      -0.99487522  -0.82184079 -1.05957037 -1.01596791
## 117     -0.63896971      -0.03818128  -0.91459156 -0.62344075 -0.82184079
## 118     -0.73567430       0.63896971  -0.80413364 -0.82184079 -0.29695946
## 119     -0.68651916       0.29695946  -0.73567430  0.91459156  0.76945312
## 120     -1.83849262      -2.10223158  -2.23555842 -0.29695946  0.39149488
## 121     -1.91230127      -1.10528634  -1.41400510  0.10196844  0.65465430
## 122     -2.10223158       0.44707302  -2.10223158  0.33710120  1.10528634
## 123     -1.31706374      -0.68651916  -1.61367018  0.50406856  0.20501110
## 124     -2.23555842       0.11476746  -1.25874673 -1.99828954  0.51856960
## 125     -1.56855670      -0.51856960  -2.42690063 -1.17854682 -0.91459156
## 126     -2.42690063       0.37779383  -1.23113036 -0.15328619  1.66232963
## 127     -1.71527720      -0.02545075  -1.91230127  0.54790615 -0.01272434
## 128     -1.99828954       0.39149488  -1.17854682 -0.12758531  1.71527720
## 129     -0.95396468      -0.25729077  -1.08214564 -1.01596791  0.07641832
## 130     -1.28735798      -1.66232963  -1.99828954 -0.20501110 -1.71527720
## 131     -1.41400510      -1.08214564  -1.71527720 -1.25874673 -1.08214564
```

```
## 132     -2.80216172       0.43305527  -2.80216172  0.32366339  1.08214564
## 133     -1.44946373       0.47537773  -1.66232963  0.37779383  1.15343724
## 134     -1.77352271       0.12758531  -1.20442230 -1.91230127  0.53318051
## 135     -1.38024023       0.48967276  -1.44946373  0.39149488  1.17854682
## 136     -1.25874673      -0.29695946  -1.38024023 -2.80216172 -0.37779383
## 137     -0.99487522       0.27046566  -1.28735798  0.82184079  0.85805346
## 138     -1.23113036       0.28368767  -1.15343724 -1.77352271  0.24416040
## 139     -1.12903457      -0.65465430  -1.34797950 -1.03752256 -0.46117919
## 140     -0.91459156      -1.91230127  -1.10528634 -0.78667510 -1.31706374
## 141     -1.10528634      -0.67050162  -1.31706374  0.89542793  0.73567430
## 142     -1.15343724      -0.35060018  -1.12903457  1.28735798 -0.56275157
## 143     -1.61367018       0.46117919  -1.83849262  0.36416334  1.12903457
## 144     -1.52642702      -1.34797950  -1.56855670 -0.16617364  0.12758531
## 145     -1.34797950      -1.05957037  -1.52642702 -1.23113036 -1.05957037
## 146     -1.48684468      -0.06366298  -1.77352271 -0.71909690 -0.83980946
## 147     -1.66232963       0.62344075  -1.48684468 -0.99487522 -0.31028376
## 148      1.66232963       0.87658763   1.15343724  1.38024023 -0.93409710
## 149      1.25874673       1.25874673   0.97421613  0.80413364  0.28368767
## 150      1.20442230       1.31706374   1.03752256  1.48684468  0.35060018
## 151      1.38024023       1.10528634   1.23113036  1.99828954 -0.39149488
## 152      1.34797950       1.38024023   1.83849262 -0.46117919  1.99828954
## 153      1.52642702       0.95396468   2.23555842  1.66232963 -0.47537773
## 154      1.28735798       1.23113036   0.99487522  0.63896971  0.62344075
## 155      2.10223158       0.73567430   1.20442230  0.23107198 -0.73567430
## 156      1.15343724       1.56855670   1.17854682  0.83980946  0.70271480
## 157      1.10528634       1.71527720   0.95396468  2.23555842  1.05957037
## 158      1.31706374       1.20442230   1.41400510 -0.53318051  0.60806071
## 159      1.05957037       1.03752256   1.38024023  2.80216172  0.47537773
## 160      1.08214564       1.91230127   1.61367018  0.28368767  1.52642702
## 161      1.23113036       1.34797950   1.71527720 -0.01272434  0.83980946
## 162      1.12903457       1.66232963   1.91230127  0.14042416  1.61367018
## 163      1.03752256       1.15343724   2.42690063  1.23113036  1.91230127
## 164      1.61367018       0.91459156   1.28735798  2.10223158 -0.51856960
## 165      1.17854682       1.61367018   0.76945312  1.71527720  1.44946373
## 166      1.48684468       0.93409710   1.48684468  0.15328619  1.38024023
## 167      1.01596791       2.80216172   2.10223158  1.44946373  2.10223158
## 168      1.41400510       1.01596791   1.31706374  0.75245638  0.17908874
## 169      1.71527720       0.83980946   1.10528634  2.42690063 -1.17854682
## 170      1.56855670       0.82184079   1.56855670  1.56855670  0.37779383
## 171      1.83849262       1.41400510   2.80216172  1.25874673  0.31028376
## 172      2.23555842       0.80413364   1.99828954  0.21802303 -1.12903457
## 173      1.77352271       1.17854682   1.52642702 -0.32366339 -0.06366298
## 174      1.44946373       0.76945312   1.66232963  0.78667510 -0.57772207
## 175      2.80216172       0.25729077   1.77352271  0.41912210 -1.10528634
## 176      2.42690063       0.70271480   1.44946373 -1.10528634 -0.70271480
## 177      1.99828954       1.08214564   1.34797950  1.83849262  0.95396468
## 178      0.27046566       0.99487522   0.82184079  0.70271480  0.16617364
## 179      0.11476746       1.83849262   1.01596791  0.01272434 -0.03818128
## 180      0.19203379       1.28735798   0.83980946  1.10528634  0.32366339
## 181      0.16617364       1.44946373   1.08214564  0.73567430  0.44707302
## 182      0.97421613       0.71909690   0.80413364  1.05957037 -0.87658763
## 183      0.73567430       0.78667510   0.91459156 -0.27046566  0.80413364
## 184      0.62344075       0.89542793   0.87658763 -0.17908874 -0.27046566
## 185      0.93409710       1.99828954   0.78667510  1.52642702 -0.75245638
## 186      0.43305527       0.97421613   0.93409710  0.29695946  0.57772207
```

```
## 187      0.12758531       0.75245638   0.85805346  1.17854682  0.89542793
## 188      0.15328619       1.48684468   0.89542793  0.68651916  0.68651916
## 189     -1.01596791       0.68651916   0.68651916  0.93409710  1.41400510
## 190     -1.03752256       0.85805346   0.75245638  1.41400510  1.56855670
## 191     -1.08214564       2.42690063   0.70271480  1.61367018  2.23555842
## 192     -0.67050162       1.05957037   0.73567430  1.77352271  0.93409710
## 193     -1.17854682       1.77352271   1.05957037 -0.67050162  1.48684468
## 194     -0.93409710       1.12903457   0.67050162 -0.19203379 -0.23107198
## 195     -1.20442230       2.10223158   1.12903457  1.12903457  2.42690063
## 196     -0.97421613       1.52642702   0.71909690  1.91230127  0.63896971
## 197     -1.05957037       2.23555842   1.25874673  1.15343724  2.80216172
##     X3D_surface.PET ratio_3ds_vol.PET ratio_3ds_vol_norm.PET irregularity.PET
## 1       -0.83980946       -0.24416040            -0.57772207       0.32366339
## 2       -0.56275157        0.63896971             0.39149488       0.48967276
## 3        0.28368767       -0.27046566             0.14042416      -0.02545075
## 4        0.97421613       -0.82184079             0.27046566      -1.34797950
## 5       -0.63896971        0.62344075             0.37779383       0.33710120
## 6       -0.40526982        0.15328619             0.01272434       0.05091800
## 7       -0.47537773       -0.02545075             0.05091800      -0.36416334
## 8       -0.68651916        0.46117919             0.21802303       0.36416334
## 9       -0.93409710       -0.08918610            -0.31028376      -0.05091800
## 10      -1.71527720        0.28368767            -0.59282318       0.44707302
## 11       2.10223158       -0.89542793             0.20501110      -1.08214564
## 12       0.01272434       -0.23107198             0.03818128       0.12758531
## 13       0.00000000       -0.75245638            -0.50406856      -0.97421613
## 14      -2.23555842        0.85805346            -0.91459156       0.63896971
## 15       1.44946373       -0.36416334             0.63896971      -1.52642702
## 16      -0.91459156        0.17908874            -0.60806071       0.28368767
## 17      -0.35060018       -0.83980946            -0.82184079      -1.71527720
## 18       1.34797950       -0.71909690             0.40526982      -1.61367018
## 19      -0.12758531       -0.33710120             0.28368767      -0.57772207
## 20      -0.31028376       -0.63896971            -0.70271480      -0.29695946
## 21      -0.06366298       -0.12758531            -0.14042416      -0.31028376
## 22      -1.83849262        0.78667510            -0.32366339       0.65465430
## 23      -0.60806071       -0.43305527            -0.40526982      -1.48684468
## 24       1.15343724       -0.17908874             0.53318051      -1.77352271
## 25      -1.44946373        0.36416334            -0.35060018       0.01272434
## 26       0.48967276       -0.01272434             0.44707302      -0.10196844
## 27      -1.56855670        0.50406856            -0.03818128       0.39149488
## 28      -0.20501110       -0.60806071            -0.54790615      -0.75245638
## 29      -1.17854682        0.37779383            -0.47537773       0.23107198
## 30      -0.15328619       -0.78667510            -0.71909690      -0.99487522
## 31      -0.99487522        0.11476746            -0.21802303       0.21802303
## 32       0.56275157       -0.11476746             0.62344075       0.08918610
## 33       0.89542793       -0.65465430            -0.41912210      -0.85805346
## 34      -0.17908874        0.24416040             0.36416334      -0.11476746
## 35       0.59282318        0.33710120             0.51856960      -0.15328619
## 36      -1.91230127        1.15343724             0.32366339       0.54790615
## 37      -0.39149488       -0.10196844            -0.12758531      -0.12758531
## 38      -1.77352271        0.71909690            -0.19203379       0.51856960
## 39       0.54790615       -0.80413364            -0.67050162      -0.76945312
## 40      -1.38024023       -0.29695946            -0.76945312      -0.25729077
## 41       0.17908874        0.57772207             0.59282318       0.06366298
## 42      -0.78667510       -0.32366339            -0.73567430      -0.48967276
## 43       0.62344075        0.19203379             0.71909690      -0.37779383
```

```
## 44      -1.01596791        0.10196844            -0.23107198       0.19203379
## 45      -1.61367018        1.03752256             0.41912210       0.60806071
## 46       0.70271480       -0.16617364             0.67050162      -1.10528634
## 47      -0.02545075       -0.37779383            -0.15328619       0.14042416
## 48       1.83849262       -0.67050162             0.47537773      -0.70271480
## 49      -1.48684468       -0.15328619            -0.93409710      -0.32366339
## 50      -0.25729077       -0.62344075            -0.80413364      -0.78667510
## 51       0.47537773       -0.21802303             0.06366298      -1.05957037
## 52      -0.57772207       -0.14042416            -0.62344075      -0.14042416
## 53      -0.41912210       -0.25729077            -0.51856960      -0.27046566
## 54      -0.54790615        0.41912210             0.23107198       0.43305527
## 55      -0.03818128        0.65465430             0.95396468      -0.46117919
## 56      -1.66232963        0.40526982            -0.16617364       0.20501110
## 57       0.12758531       -0.40526982             0.08918610      -1.15343724
## 58       0.65465430       -0.76945312            -0.53318051      -0.65465430
## 59      -0.24416040       -0.41912210             0.02545075      -0.35060018
## 60       1.05957037        0.00000000             1.28735798      -0.83980946
## 61       0.63896971       -0.73567430             0.07641832      -0.40526982
## 62       0.21802303       -0.53318051            -0.44707302      -0.47537773
## 63       1.03752256        0.27046566             0.78667510      -0.51856960
## 64       1.77352271       -0.47537773             0.83980946      -1.44946373
## 65      -0.76945312        0.31028376            -0.11476746       0.41912210
## 66       0.24416040       -0.59282318             0.29695946      -0.23107198
## 67      -1.31706374       -0.03818128            -0.68651916       0.46117919
## 68       2.23555842       -0.70271480             0.82184079      -0.95396468
## 69      -1.10528634        0.32366339            -0.07641832       0.03818128
## 70      -1.03752256        0.25729077            -0.65465430      -0.07641832
## 71       0.06366298       -0.07641832             0.35060018      -1.12903457
## 72      -0.08918610        0.20501110             0.43305527       0.29695946
## 73      -0.85805346        0.60806071             0.00000000       0.47537773
## 74      -0.65465430       -0.39149488            -0.63896971      -0.20501110
## 75       1.25874673       -0.56275157             0.48967276      -0.63896971
## 76      -2.42690063        0.93409710            -0.87658763       0.59282318
## 77      -1.99828954        0.87658763            -0.29695946       0.62344075
## 78      -0.70271480        0.16617364            -0.36416334      -0.21802303
## 79      -1.12903457        0.29695946            -0.08918610      -0.01272434
## 80       0.95396468       -0.19203379             0.54790615      -0.19203379
## 81      -0.01272434       -0.35060018            -0.33710120      -0.68651916
## 82       0.15328619        0.35060018             0.70271480      -0.28368767
## 83      -0.19203379        0.51856960            -0.02545075       0.40526982
## 84      -1.52642702        0.39149488            -0.46117919       0.25729077
## 85      -1.15343724        0.12758531            -0.20501110       0.24416040
## 86      -0.97421613        0.73567430            -0.17908874       0.53318051
## 87      -0.75245638        0.76945312             0.46117919       0.37779383
## 88       0.46117919       -0.44707302             0.12758531      -0.54790615
## 89       0.02545075       -0.68651916            -0.56275157      -0.62344075
## 90      -0.32366339       -1.28735798            -2.23555842      -0.50406856
## 91      -0.10196844       -1.41400510            -2.10223158      -1.66232963
## 92       0.37779383       -1.61367018            -1.52642702      -1.01596791
## 93      -0.71909690        0.14042416            -0.37779383      -0.33710120
## 94       0.10196844       -1.25874673            -1.25874673      -0.06366298
## 95      -1.05957037       -1.12903457            -1.61367018       0.31028376
## 96       0.80413364       -1.56855670            -1.20442230      -1.99828954
## 97      -0.28368767       -1.15343724            -1.12903457      -0.82184079
## 98       0.82184079       -1.48684468            -1.17854682      -1.91230127
```

```
## 99       0.23107198       -0.51856960             -0.43305527      -0.44707302
## 100     -0.21802303        0.48967276             -0.05091800       0.35060018
## 101     -1.23113036        0.06366298             -0.25729077       0.15328619
## 102      0.36416334       -1.66232963             -1.56855670      -1.03752256
## 103      0.40526982       -1.44946373             -1.44946373      -0.89542793
## 104      0.11476746       -1.23113036             -1.23113036      -0.03818128
## 105      0.41912210       -1.38024023             -1.41400510      -0.87658763
## 106      0.53318051       -0.48967276              0.19203379      -0.41912210
## 107     -0.87658763        0.05091800             -0.01272434       0.27046566
## 108      1.66232963        0.23107198              1.56855670      -0.71909690
## 109     -0.80413364       -0.05091800              0.25729077      -0.39149488
## 110     -0.14042416        1.17854682              0.33710120       0.56275157
## 111     -1.34797950       -0.28368767             -0.75245638      -0.24416040
## 112      0.19203379        0.59282318              0.60806071       0.10196844
## 113      0.39149488       -1.52642702             -1.48684468      -0.93409710
## 114      0.44707302       -0.46117919              0.11476746      -0.59282318
## 115     -2.80216172        0.91459156             -0.89542793       0.57772207
## 116     -1.20442230        0.07641832             -0.24416040       0.16617364
## 117     -0.36416334       -0.85805346             -0.83980946      -1.83849262
## 118      1.99828954       -0.91459156              0.17908874      -1.17854682
## 119      0.68651916       -0.20501110              0.65465430      -1.25874673
## 120     -0.33710120       -1.71527720             -2.80216172      -0.73567430
## 121     -0.11476746       -1.83849262             -2.42690063      -2.10223158
## 122      0.31028376       -2.42690063             -1.83849262      -1.38024023
## 123     -0.73567430        0.08918610             -0.39149488      -0.53318051
## 124      0.07641832       -1.34797950             -1.38024023      -0.17908874
## 125     -1.08214564       -1.17854682             -1.99828954       0.11476746
## 126      0.76945312       -2.23555842             -1.31706374      -2.80216172
## 127     -0.29695946       -1.20442230             -1.15343724      -1.20442230
## 128      0.78667510       -1.99828954             -1.28735798      -2.42690063
## 129      0.20501110       -0.57772207             -0.48967276      -0.67050162
## 130     -0.23107198        0.47537773             -0.10196844       0.17908874
## 131     -1.28735798        0.02545075             -0.28368767       0.00000000
## 132      0.29695946       -2.80216172             -1.91230127      -1.41400510
## 133      0.33710120       -1.91230127             -1.71527720      -1.28735798
## 134      0.08918610       -1.31706374             -1.34797950      -0.16617364
## 135      0.35060018       -1.77352271             -1.66232963      -1.23113036
## 136      0.51856960       -0.54790615              0.16617364      -0.60806071
## 137     -0.89542793        0.01272434             -0.06366298       0.07641832
## 138      1.61367018        0.21802303              1.52642702      -0.91459156
## 139     -0.82184079       -0.06366298              0.24416040      -0.56275157
## 140     -0.16617364        1.12903457              0.31028376       0.50406856
## 141     -1.41400510       -0.31028376             -0.78667510      -0.43305527
## 142      0.16617364        0.56275157              0.57772207      -0.08918610
## 143      0.32366339       -2.10223158             -1.77352271      -1.31706374
## 144      0.43305527       -0.50406856              0.10196844      -0.80413364
## 145     -1.25874673        0.03818128             -0.27046566       0.02545075
## 146     -0.37779383       -0.87658763             -0.85805346      -2.23555842
## 147      1.91230127       -0.93409710              0.15328619      -1.56855670
## 148     -0.59282318        1.08214564              0.50406856       1.12903457
## 149      0.67050162        0.67050162              0.68651916       0.85805346
## 150      1.23113036        1.01596791              1.31706374       0.76945312
## 151      0.25729077        1.10528634              0.80413364       1.31706374
## 152      0.50406856        0.99487522              0.89542793       1.17854682
## 153      0.27046566        1.77352271              1.44946373       1.91230127
```

```
## 154      0.85805346        1.99828954             2.42690063       1.03752256
## 155     -0.67050162        1.71527720             1.10528634       1.48684468
## 156      1.01596791        0.89542793             1.38024023       0.73567430
## 157      1.31706374        0.43305527             0.87658763       0.89542793
## 158      0.71909690        0.83980946             1.25874673       1.08214564
## 159      1.56855670        1.25874673             2.80216172       0.82184079
## 160      1.28735798        0.44707302             1.34797950       1.05957037
## 161      1.10528634        0.75245638             0.93409710       1.01596791
## 162      1.52642702        1.44946373             1.99828954       0.97421613
## 163      2.42690063        0.80413364             2.23555842       0.71909690
## 164     -0.07641832        1.52642702             1.12903457       1.83849262
## 165      1.12903457        0.68651916             1.48684468       1.20442230
## 166     -0.53318051        1.23113036             0.73567430       1.99828954
## 167      2.80216172        0.53318051             2.10223158       0.80413364
## 168     -0.48967276        1.56855670             1.17854682       1.44946373
## 169     -0.44707302        1.41400510             0.75245638       1.34797950
## 170      0.93409710        1.20442230             1.61367018       0.75245638
## 171      0.83980946        1.38024023             1.66232963       1.61367018
## 172     -0.27046566        1.91230127             1.23113036       2.10223158
## 173      0.14042416        0.95396468             0.76945312       1.25874673
## 174      1.71527720        0.70271480             1.77352271       0.91459156
## 175     -2.10223158        2.80216172             0.56275157       2.42690063
## 176     -0.95396468        2.42690063             1.03752256       2.80216172
## 177      0.05091800        1.34797950             0.99487522       1.23113036
## 178     -0.50406856        1.48684468             1.15343724       1.41400510
## 179      1.48684468        1.05957037             1.83849262       1.28735798
## 180      0.87658763        0.97421613             1.01596791       0.87658763
## 181      1.08214564        1.61367018             1.91230127       1.15343724
## 182      0.73567430        1.83849262             1.20442230       1.77352271
## 183     -0.62344075        1.66232963             0.91459156       1.56855670
## 184     -0.51856960        1.28735798             1.05957037       1.52642702
## 185     -0.43305527        2.10223158             1.08214564       2.23555842
## 186     -0.05091800        2.23555842             1.71527720       1.71527720
## 187      1.20442230        0.82184079             1.41400510       0.95396468
## 188      0.91459156        0.54790615             0.85805346       0.93409710
## 189      0.57772207       -1.01596791            -1.10528634       0.99487522
## 190      0.75245638       -1.03752256            -1.08214564       0.70271480
## 191      1.17854682       -1.10528634            -1.03752256       0.78667510
## 192      0.03818128        1.31706374             0.97421613       1.10528634
## 193      0.99487522       -0.99487522            -1.01596791       1.38024023
## 194     -0.46117919       -0.95396468            -1.05957037       1.66232963
## 195      1.38024023       -1.08214564            -0.99487522       0.67050162
## 196      0.60806071       -0.97421613            -0.95396468       0.83980946
## 197      1.41400510       -1.05957037            -0.97421613       0.68651916
##     tumor_length.PET Compactness_v1.PET Compactness_v2.PET
## 1        -0.33710120        -0.30361487        -0.49685779
## 2        -0.51856960        -0.67050162        -0.91459156
## 3        -0.01272434        -0.54790615        -0.76945312
## 4         0.68651916        -0.59282318        -0.82184079
## 5        -0.75245638        -0.65465430        -0.89542793
## 6        -0.21802303        -0.50406856        -0.71909690
## 7        -0.31028376        -0.53318051        -0.75245638
## 8        -0.27046566        -0.57772207        -0.80413364
## 9        -0.73567430        -0.41218607        -0.61573253
## 10       -1.91230127        -0.30361487        -0.49685779
```

```
## 11        1.56855670        -0.56275157        -0.78667510
## 12       -0.03818128        -0.51856960        -0.73567430
## 13        0.32366339        -0.33710120        -0.53318051
## 14       -2.23555842        -0.16617364        -0.37779383
## 15        0.83980946        -0.80413364        -1.05957037
## 16       -1.08214564        -0.28368767        -0.47537773
## 17       -0.06366298        -0.17908874        -0.39149488
## 18        0.67050162        -0.70271480        -0.93409710
## 19        0.29695946        -0.60806071        -0.83980946
## 20       -0.12758531        -0.25729077        -0.44707302
## 21       -0.14042416        -0.46117919        -0.67050162
## 22       -2.10223158        -0.41218607        -0.61573253
## 23       -0.23107198        -0.37779383        -0.57772207
## 24        0.76945312        -0.75245638        -0.99487522
## 25       -1.99828954        -0.39149488        -0.59282318
## 26        0.20501110        -0.71909690        -0.95396468
## 27       -0.82184079        -0.48967276        -0.70271480
## 28       -0.10196844        -0.32366339        -0.51856960
## 29       -1.38024023        -0.35060018        -0.54790615
## 30        0.31028376        -0.24416040        -0.43305527
## 31       -0.95396468        -0.43305527        -0.63896971
## 32        0.46117919        -0.78667510        -1.03752256
## 33        0.99487522        -0.36416334        -0.56275157
## 34       -0.32366339        -0.63896971        -0.87658763
## 35        0.19203379        -0.73567430        -0.97421613
## 36       -1.48684468        -0.62344075        -0.85805346
## 37        0.10196844        -0.47537773        -0.68651916
## 38       -1.83849262        -0.44707302        -0.65465430
## 39       -0.15328619        -0.27046566        -0.46117919
## 40       -1.17854682        -0.21802303        -0.40526982
## 41        0.03818128        -0.76945312        -1.01596791
## 42       -1.10528634        -0.23107198        -0.41912210
## 43        0.33710120        -0.82184079        -1.08214564
## 44       -0.97421613        -0.83980946        -1.10528634
## 45       -0.05091800         0.48967276         0.08918610
## 46        0.62344075         0.46117919         0.06366298
## 47       -0.02545075         0.62344075         0.20501110
## 48        1.08214564         0.47537773         0.07641832
## 49       -1.41400510         0.76945312         0.32366339
## 50       -0.44707302         0.75245638         0.31028376
## 51       -0.20501110         0.56275157         0.15328619
## 52       -0.78667510         0.70271480         0.27046566
## 53       -0.46117919         0.67050162         0.24416040
## 54       -0.11476746         0.51856960         0.11476746
## 55        0.28368767         0.40526982         0.01272434
## 56       -1.66232963         0.63896971         0.21802303
## 57        0.16617364         0.53318051         0.12758531
## 58        0.43305527         0.68651916         0.25729077
## 59        0.08918610         0.57772207         0.16617364
## 60        1.10528634         0.39149488         0.00000000
## 61        0.48967276         0.54790615         0.14042416
## 62       -0.17908874         0.65465430         0.23107198
## 63        0.70271480         0.44707302         0.05091800
## 64        1.23113036         0.41912210         0.02545075
## 65       -0.48967276         0.60806071         0.19203379
```

```
## 66        0.57772207         0.50406856         0.10196844
## 67       -0.76945312         0.73567430         0.29695946
## 68        1.91230127         0.43305527         0.03818128
## 69       -0.24416040         0.59282318         0.17908874
## 70       -1.28735798         0.71909690         0.28368767
## 71        0.06366298         0.85805346         0.36416334
## 72        0.17908874         0.83980946         0.35060018
## 73       -1.31706374         0.87658763         0.39149488
## 74       -0.47537773         0.95396468         0.43305527
## 75        0.56275157         0.82184079         0.33710120
## 76       -2.42690063         0.97421613         0.44707302
## 77       -1.12903457         0.91459156         0.40526982
## 78       -0.87658763         0.93409710         0.41912210
## 79       -0.25729077        -0.12758531        -0.36416334
## 80        0.89542793        -0.10196844        -0.33710120
## 81       -0.35060018        -0.02545075        -0.25729077
## 82       -0.28368767        -0.11476746        -0.35060018
## 83       -0.80413364        -0.06366298        -0.29695946
## 84       -1.34797950        -0.01272434        -0.24416040
## 85       -0.93409710        -0.03818128        -0.27046566
## 86       -1.77352271        -0.05091800        -0.28368767
## 87       -0.29695946        -0.08918610        -0.32366339
## 88        0.14042416        -0.07641832        -0.31028376
## 89        0.24416040         0.00000000        -0.23107198
## 90        0.23107198         0.28368767         1.99828954
## 91        0.39149488         0.25729077         1.83849262
## 92       -0.58525594         0.07641832         1.38024023
## 93       -0.89542793        -0.87658763        -1.15343724
## 94       -0.39149488        -0.20501110         1.12903457
## 95       -1.52642702         0.08918610         1.56855670
## 96       -1.20442230        -0.68651916         1.08214564
## 97        0.02545075        -0.19203379         1.05957037
## 98       -0.58525594        -0.15328619         1.10528634
## 99       -0.16617364         0.89542793         0.37779383
## 100      -0.83980946        -1.03752256        -1.38024023
## 101      -1.01596791        -1.01596791        -1.34797950
## 102      -0.60806071         0.02545075         1.34797950
## 103      -0.54790615         0.27046566         1.44946373
## 104      -0.37779383        -0.14042416         1.15343724
## 105      -0.53318051         0.32366339         1.52642702
## 106       0.40526982        -0.85805346        -1.12903457
## 107      -0.50406856         0.36416334        -0.02545075
## 108       0.80413364         0.29695946        -0.07641832
## 109      -0.36416334         0.35060018        -0.03818128
## 110      -1.44946373         0.33710120        -0.05091800
## 111      -1.15343724         0.37779383        -0.01272434
## 112       0.05091800         0.31028376        -0.06366298
## 113      -0.56275157         0.24416040         1.41400510
## 114       0.12758531        -0.95396468        -1.25874673
## 115      -2.80216172        -0.89542793        -1.17854682
## 116      -0.99487522        -0.93409710        -1.23113036
## 117      -0.07641832        -0.91459156        -1.20442230
## 118       1.52642702        -0.97421613        -1.28735798
## 119       0.60806071        -0.99487522        -1.31706374
## 120       0.21802303        -1.28735798         1.61367018
```

```
## 121       0.36416334        -1.34797950         1.48684468
## 122      -0.69459421        -1.44946373         1.20442230
## 123      -0.91459156        -1.83849262        -1.83849262
## 124      -0.43305527        -1.66232963         1.01596791
## 125      -1.61367018        -1.41400510         1.31706374
## 126      -1.25874673        -1.71527720         0.97421613
## 127       0.00000000        -1.61367018         0.95396468
## 128      -0.69459421        -1.56855670         0.99487522
## 129      -0.19203379        -1.08214564        -1.44946373
## 130      -0.85805346        -2.80216172        -2.80216172
## 131      -1.05957037        -2.42690063        -2.42690063
## 132      -0.71909690        -1.48684468         1.17854682
## 133      -0.65465430        -1.31706374         1.25874673
## 134      -0.41912210        -1.52642702         1.03752256
## 135      -0.63896971        -1.20442230         1.28735798
## 136       0.37779383        -1.77352271        -1.77352271
## 137      -0.62344075        -1.12903457        -1.52642702
## 138       0.78667510        -1.25874673        -1.71527720
## 139      -0.40526982        -1.15343724        -1.56855670
## 140      -1.56855670        -1.17854682        -1.61367018
## 141      -1.23113036        -1.10528634        -1.48684468
## 142       0.01272434        -1.23113036        -1.66232963
## 143      -0.67050162        -1.38024023         1.23113036
## 144       0.11476746        -2.10223158        -2.10223158
## 145      -1.03752256        -1.99828954        -1.99828954
## 146      -0.08918610        -1.91230127        -1.91230127
## 147       1.48684468        -2.23555842        -2.23555842
## 148       0.27046566         1.71527720         0.78667510
## 149       0.87658763         1.66232963         0.76945312
## 150       1.05957037         1.25874673         0.59282318
## 151       0.63896971         1.52642702         0.71909690
## 152       0.85805346         1.44946373         0.68651916
## 153       1.15343724         1.17854682         0.54790615
## 154       1.44946373         1.05957037         0.47537773
## 155       0.15328619         1.38024023         0.65465430
## 156       1.31706374         1.20442230         0.56275157
## 157       1.66232963         1.48684468         0.70271480
## 158       1.25874673         1.28735798         0.60806071
## 159       2.23555842         1.03752256         0.46117919
## 160       1.71527720         1.23113036         0.57772207
## 161       1.12903457         1.41400510         0.67050162
## 162       1.99828954         1.12903457         0.51856960
## 163       2.42690063         1.08214564         0.48967276
## 164       0.75245638         1.34797950         0.63896971
## 165       1.83849262         1.15343724         0.53318051
## 166       0.65465430         1.61367018         0.75245638
## 167       2.80216172         1.10528634         0.50406856
## 168       1.03752256         1.31706374         0.62344075
## 169       0.44707302         1.56855670         0.73567430
## 170       1.20442230         1.91230127         0.83980946
## 171       1.34797950         1.83849262         0.82184079
## 172       0.41912210         1.99828954         0.85805346
## 173       0.82184079         2.42690063         0.91459156
## 174       1.77352271         1.77352271         0.80413364
## 175      -1.71527720         2.80216172         0.93409710
```

```
## 176       0.50406856         2.10223158         0.87658763
## 177       0.54790615         2.23555842         0.89542793
## 178       1.01596791         0.10196844        -0.21802303
## 179       2.10223158         0.12758531        -0.19203379
## 180       0.93409710         0.20501110        -0.11476746
## 181       0.97421613         0.11476746        -0.20501110
## 182       0.59282318         0.16617364        -0.15328619
## 183       0.35060018         0.21802303        -0.10196844
## 184       0.51856960         0.19203379        -0.12758531
## 185       0.07641832         0.17908874        -0.14042416
## 186       0.95396468         0.14042416        -0.17908874
## 187       1.28735798         0.15328619        -0.16617364
## 188       1.41400510         0.23107198        -0.08918610
## 189       1.38024023         1.01596791         2.80216172
## 190       1.61367018         0.99487522         2.42690063
## 191       0.72736061         0.78667510         2.10223158
## 192       0.53318051        -1.05957037        -1.41400510
## 193       0.91459156         0.03818128         1.91230127
## 194       0.25729077         0.80413364         2.23555842
## 195       0.47537773         0.01272434         1.71527720
## 196       1.17854682         0.05091800         1.66232963
## 197       0.72736061         0.06366298         1.77352271
##     Spherical_disproportion.PET Sphericity.PET Asphericity.PET
## 1                    -0.57772207    -0.19203379     -0.57772207
## 2                     0.39149488    -0.83980946      0.39149488
## 3                     0.14042416    -0.65465430      0.14042416
## 4                     0.27046566    -0.71909690      0.27046566
## 5                     0.37779383    -0.82184079      0.37779383
## 6                     0.01272434    -0.57772207      0.01272434
## 7                     0.05091800    -0.63896971      0.05091800
## 8                     0.21802303    -0.68651916      0.21802303
## 9                    -0.31028376    -0.43305527     -0.31028376
## 10                   -0.59282318    -0.17908874     -0.59282318
## 11                    0.20501110    -0.67050162      0.20501110
## 12                    0.03818128    -0.62344075      0.03818128
## 13                   -0.50406856    -0.25729077     -0.50406856
## 14                   -0.91459156     0.17908874     -0.91459156
## 15                    0.63896971    -1.31706374      0.65465430
## 16                   -0.60806071    -0.11476746     -0.60806071
## 17                   -0.82184079     0.15328619     -0.82184079
## 18                    0.40526982    -0.87658763      0.40526982
## 19                    0.28368767    -0.73567430      0.28368767
## 20                   -0.70271480    -0.02545075     -0.70271480
## 21                   -0.14042416    -0.53318051     -0.14042416
## 22                   -0.32366339    -0.41912210     -0.32366339
## 23                   -0.40526982    -0.35060018     -0.40526982
## 24                    0.53318051    -1.12903457      0.54790615
## 25                   -0.35060018    -0.40526982     -0.35060018
## 26                    0.44707302    -0.99487522      0.44707302
## 27                   -0.03818128    -0.56275157     -0.03818128
## 28                   -0.54790615    -0.23107198     -0.54790615
## 29                   -0.47537773    -0.27046566     -0.47537773
## 30                   -0.71909690    -0.01272434     -0.71909690
## 31                   -0.21802303    -0.46117919     -0.21802303
## 32                    0.62344075    -1.20442230      0.62344075
```

```
## 33                  -0.41912210    -0.33710120     -0.41912210
## 34                   0.36416334    -0.80413364      0.36416334
## 35                   0.51856960    -1.10528634      0.53318051
## 36                   0.32366339    -0.76945312      0.32366339
## 37                  -0.12758531    -0.54790615     -0.12758531
## 38                  -0.19203379    -0.48967276     -0.19203379
## 39                  -0.67050162    -0.03818128     -0.67050162
## 40                  -0.76945312     0.06366298     -0.76945312
## 41                   0.59282318    -1.15343724      0.59282318
## 42                  -0.73567430     0.00000000     -0.73567430
## 43                   0.71909690    -1.41400510      0.76945312
## 44                  -0.23107198    -0.51856960     -0.23107198
## 45                   0.41912210    -0.36416334      0.41912210
## 46                   0.67050162    -0.75245638      0.68651916
## 47                  -0.15328619     0.03818128     -0.15328619
## 48                   0.47537773    -0.59282318      0.48967276
## 49                  -0.93409710     0.35060018     -0.93409710
## 50                  -0.80413364     0.29695946     -0.80413364
## 51                   0.06366298    -0.07641832      0.06366298
## 52                  -0.62344075     0.20501110     -0.62344075
## 53                  -0.51856960     0.11476746     -0.51856960
## 54                   0.23107198    -0.15328619      0.23107198
## 55                   0.95396468    -0.97421613      0.99487522
## 56                  -0.16617364     0.05091800     -0.16617364
## 57                   0.08918610    -0.10196844      0.08918610
## 58                  -0.53318051     0.14042416     -0.53318051
## 59                   0.02545075    -0.05091800      0.02545075
## 60                   1.28735798    -1.05957037      1.41400510
## 61                   0.07641832    -0.08918610      0.07641832
## 62                  -0.44707302     0.08918610     -0.44707302
## 63                   0.78667510    -0.89542793      0.80413364
## 64                   0.83980946    -0.95396468      0.89542793
## 65                  -0.11476746     0.02545075     -0.11476746
## 66                   0.29695946    -0.20501110      0.29695946
## 67                  -0.68651916     0.23107198     -0.68651916
## 68                   0.82184079    -0.91459156      0.87658763
## 69                  -0.07641832     0.01272434     -0.07641832
## 70                  -0.65465430     0.21802303     -0.65465430
## 71                   0.35060018    -0.14042416      0.35060018
## 72                   0.43305527    -0.24416040      0.43305527
## 73                   0.00000000     0.07641832      0.00000000
## 74                  -0.63896971     0.27046566     -0.63896971
## 75                   0.48967276    -0.47537773      0.50406856
## 76                  -0.87658763     0.37779383     -0.87658763
## 77                  -0.29695946     0.10196844     -0.29695946
## 78                  -0.36416334     0.16617364     -0.36416334
## 79                  -0.08918610    -0.50406856     -0.08918610
## 80                   0.54790615    -1.03752256      0.56275157
## 81                  -0.33710120    -0.31028376     -0.33710120
## 82                   0.70271480    -1.28735798      0.75245638
## 83                  -0.02545075    -0.44707302     -0.02545075
## 84                  -0.46117919    -0.16617364     -0.46117919
## 85                  -0.20501110    -0.37779383     -0.20501110
## 86                  -0.17908874    -0.39149488     -0.17908874
## 87                   0.46117919    -0.93409710      0.46117919
```

```
## 88                    0.12758531    -0.60806071      0.12758531
## 89                   -0.56275157    -0.12758531     -0.56275157
## 90                   -2.23555842     1.71527720     -2.23555842
## 91                   -2.10223158     1.66232963     -2.10223158
## 92                   -1.52642702     1.41400510     -1.52642702
## 93                   -0.37779383    -0.85805346     -0.37779383
## 94                   -1.25874673     1.12903457     -1.25874673
## 95                   -1.61367018     1.56855670     -1.61367018
## 96                   -1.20442230     1.08214564     -1.20442230
## 97                   -1.12903457     1.05957037     -1.12903457
## 98                   -1.17854682     1.10528634     -1.17854682
## 99                   -0.43305527     0.19203379     -0.43305527
## 100                  -0.05091800    -1.17854682     -0.05091800
## 101                  -0.25729077    -1.08214564     -0.25729077
## 102                  -1.56855670     1.34797950     -1.56855670
## 103                  -1.44946373     1.48684468     -1.44946373
## 104                  -1.23113036     1.15343724     -1.23113036
## 105                  -1.41400510     1.52642702     -1.41400510
## 106                   0.19203379    -0.78667510      0.19203379
## 107                  -0.01272434    -0.06366298     -0.01272434
## 108                   1.56855670    -1.23113036      1.61367018
## 109                   0.25729077    -0.21802303      0.25729077
## 110                   0.33710120    -0.29695946      0.33710120
## 111                  -0.75245638     0.25729077     -0.75245638
## 112                   0.60806071    -0.70271480      0.60806071
## 113                  -1.48684468     1.44946373     -1.48684468
## 114                   0.11476746    -1.25874673      0.11476746
## 115                  -0.89542793    -0.28368767     -0.89542793
## 116                  -0.24416040    -1.01596791     -0.24416040
## 117                  -0.83980946    -0.32366339     -0.83980946
## 118                   0.17908874    -1.34797950      0.17908874
## 119                   0.65465430    -1.48684468      0.67050162
## 120                  -2.80216172     1.61367018     -2.80216172
## 121                  -2.42690063     1.38024023     -2.42690063
## 122                  -1.83849262     1.20442230     -1.83849262
## 123                  -0.39149488    -1.83849262     -0.39149488
## 124                  -1.38024023     1.01596791     -1.38024023
## 125                  -1.99828954     1.31706374     -1.99828954
## 126                  -1.31706374     0.97421613     -1.31706374
## 127                  -1.15343724     0.95396468     -1.15343724
## 128                  -1.28735798     0.99487522     -1.28735798
## 129                  -0.48967276    -1.44946373     -0.48967276
## 130                  -0.10196844    -2.10223158     -0.10196844
## 131                  -0.28368767    -1.99828954     -0.28368767
## 132                  -1.91230127     1.17854682     -1.91230127
## 133                  -1.71527720     1.25874673     -1.71527720
## 134                  -1.34797950     1.03752256     -1.34797950
## 135                  -1.66232963     1.28735798     -1.66232963
## 136                   0.16617364    -1.77352271      0.16617364
## 137                  -0.06366298    -1.52642702     -0.06366298
## 138                   1.52642702    -2.23555842      1.56855670
## 139                   0.24416040    -1.56855670      0.24416040
## 140                   0.31028376    -1.61367018      0.31028376
## 141                  -0.78667510    -1.38024023     -0.78667510
## 142                   0.57772207    -1.71527720      0.57772207
```

```
## 143                  -1.77352271     1.23113036     -1.77352271
## 144                   0.10196844    -2.42690063      0.10196844
## 145                  -0.27046566    -1.91230127     -0.27046566
## 146                  -0.85805346    -1.66232963     -0.85805346
## 147                   0.15328619    -2.80216172      0.15328619
## 148                   0.50406856     0.91459156      0.47537773
## 149                   0.68651916     0.89542793      0.63896971
## 150                   1.31706374     0.63896971      1.28735798
## 151                   0.80413364     0.82184079      0.78667510
## 152                   0.89542793     0.76945312      0.85805346
## 153                   1.44946373     0.56275157      1.44946373
## 154                   2.42690063     0.31028376      2.42690063
## 155                   1.10528634     0.70271480      1.10528634
## 156                   1.38024023     0.60806071      1.34797950
## 157                   0.87658763     0.78667510      0.83980946
## 158                   1.25874673     0.65465430      1.25874673
## 159                   2.80216172     0.24416040      2.80216172
## 160                   1.34797950     0.62344075      1.31706374
## 161                   0.93409710     0.73567430      0.93409710
## 162                   1.99828954     0.39149488      1.99828954
## 163                   2.23555842     0.32366339      2.23555842
## 164                   1.12903457     0.68651916      1.12903457
## 165                   1.48684468     0.53318051      1.48684468
## 166                   0.73567430     0.85805346      0.70271480
## 167                   2.10223158     0.36416334      2.10223158
## 168                   1.17854682     0.67050162      1.17854682
## 169                   0.75245638     0.83980946      0.71909690
## 170                   1.61367018     0.57772207      1.52642702
## 171                   1.66232963     0.51856960      1.66232963
## 172                   1.23113036     0.71909690      1.23113036
## 173                   0.76945312     0.87658763      0.73567430
## 174                   1.77352271     0.44707302      1.77352271
## 175                   0.56275157     0.93409710      0.51856960
## 176                   1.03752256     0.75245638      1.03752256
## 177                   0.99487522     0.80413364      0.97421613
## 178                   1.15343724     0.43305527      1.15343724
## 179                   1.83849262     0.28368767      1.83849262
## 180                   1.01596791     0.50406856      1.01596791
## 181                   1.91230127     0.12758531      1.91230127
## 182                   1.20442230     0.46117919      1.20442230
## 183                   0.91459156     0.54790615      0.91459156
## 184                   1.05957037     0.48967276      1.05957037
## 185                   1.08214564     0.47537773      1.08214564
## 186                   1.71527720     0.33710120      1.71527720
## 187                   1.41400510     0.41912210      1.38024023
## 188                   0.85805346     0.59282318      0.82184079
## 189                  -1.10528634     2.80216172     -1.10528634
## 190                  -1.08214564     2.42690063     -1.08214564
## 191                  -1.03752256     2.10223158     -1.03752256
## 192                   0.97421613     0.40526982      0.95396468
## 193                  -1.01596791     1.99828954     -1.01596791
## 194                  -1.05957037     2.23555842     -1.05957037
## 195                  -0.99487522     1.83849262     -0.99487522
## 196                  -0.95396468     1.77352271     -0.95396468
## 197                  -0.97421613     1.91230127     -0.97421613
```

```
##     Center_of_mass.PET Max_3D_diam.PET Major_axis_length.PET
## 1           0.36416334     -0.62344075           -0.83980946
## 2          -0.03818128     -0.76945312           -0.78667510
## 3          -0.75245638     -0.28368767           -0.25729077
## 4           0.47537773      0.31028376            0.29695946
## 5          -0.19203379     -0.82184079           -0.76945312
## 6          -1.05957037     -0.50406856           -0.47537773
## 7          -0.27046566     -0.59282318           -0.40526982
## 8          -0.10196844     -0.56275157           -0.53318051
## 9           0.91459156     -0.80413364           -0.89542793
## 10          0.31028376     -1.91230127           -1.77352271
## 11          1.01596791      0.95396468            1.10528634
## 12          0.00000000     -0.31028376           -0.31028376
## 13         -0.20501110     -0.01272434            0.08918610
## 14         -1.99828954     -2.23555842           -2.23555842
## 15          0.71909690      0.40526982            0.56275157
## 16         -1.15343724     -1.17854682           -0.91459156
## 17          0.14042416     -0.33710120           -0.56275157
## 18          0.62344075      0.29695946            0.31028376
## 19         -1.71527720     -0.03818128           -0.12758531
## 20         -1.31706374     -0.40526982           -0.41912210
## 21         -0.02545075     -0.41912210           -0.32366339
## 22         -2.10223158     -2.10223158           -2.10223158
## 23         -0.82184079     -0.51856960           -0.63896971
## 24         -1.10528634      0.35060018            0.68651916
## 25         -0.16617364     -1.99828954           -1.99828954
## 26          0.53318051     -0.08918610           -0.36416334
## 27          0.16617364     -0.89542793           -0.95396468
## 28         -1.48684468     -0.37779383           -0.48967276
## 29         -0.31028376     -1.44946373           -1.41400510
## 30         -0.28368767     -0.02545075            0.00000000
## 31         -0.87658763     -1.03752256           -1.10528634
## 32          1.15343724      0.12758531            0.14042416
## 33         -0.47537773      0.51856960            0.62344075
## 34          0.83980946     -0.60806071           -0.46117919
## 35          0.15328619     -0.10196844            0.03818128
## 36         -2.42690063     -1.56855670           -1.48684468
## 37         -1.77352271     -0.19203379           -0.24416040
## 38         -0.46117919     -1.83849262           -1.91230127
## 39         -0.43305527     -0.43305527           -0.44707302
## 40         -1.28735798     -1.28735798           -1.31706374
## 41          0.60806071     -0.25729077           -0.15328619
## 42         -0.65465430     -1.20442230           -1.01596791
## 43          0.51856960      0.00000000           -0.27046566
## 44         -0.89542793     -1.05957037           -1.12903457
## 45         -1.01596791     -0.32366339           -0.39149488
## 46          2.23555842      0.25729077            0.33710120
## 47         -0.50406856     -0.29695946           -0.23107198
## 48          0.48967276      0.57772207            0.67050162
## 49         -0.73567430     -1.48684468           -1.56855670
## 50         -1.91230127     -0.68651916           -0.68651916
## 51         -0.80413364     -0.48967276           -0.54790615
## 52         -0.76945312     -0.85805346           -1.03752256
## 53          0.01272434     -0.70271480           -0.62344075
## 54          0.95396468     -0.39149488           -0.28368767
```

```
## 55          0.23107198     -0.05091800            0.12758531
## 56         -0.48967276     -1.66232963           -1.66232963
## 57         -0.07641832     -0.12758531           -0.21802303
## 58         -0.54790615      0.10196844            0.27046566
## 59          0.40526982     -0.20501110           -0.05091800
## 60          1.08214564      0.59282318            0.71909690
## 61         -0.14042416      0.14042416           -0.03818128
## 62         -1.56855670     -0.46117919           -0.35060018
## 63         -0.17908874      0.32366339            0.41912210
## 64          1.56855670      0.71909690            0.75245638
## 65          0.44707302     -0.73567430           -0.67050162
## 66         -0.62344075      0.21802303            0.43305527
## 67         -0.78667510     -0.83980946           -0.80413364
## 68          1.99828954      1.52642702            1.83849262
## 69         -0.12758531     -0.53318051           -0.50406856
## 70         -1.44946373     -1.34797950           -1.05957037
## 71         -0.41912210     -0.23107198           -0.29695946
## 72         -0.06366298     -0.11476746            0.21802303
## 73         -0.08918610     -1.38024023           -1.71527720
## 74         -1.03752256     -0.71909690           -0.59282318
## 75          0.03818128      0.20501110            0.20501110
## 76         -1.41400510     -2.42690063           -2.42690063
## 77         -1.20442230     -1.23113036           -1.25874673
## 78         -1.23113036     -0.95396468           -0.82184079
## 79         -0.15328619     -0.54790615           -0.51856960
## 80          1.12903457      0.44707302           -0.01272434
## 81          0.29695946     -0.63896971           -0.65465430
## 82          0.70271480      0.08918610            0.15328619
## 83          0.17908874     -0.87658763           -0.93409710
## 84         -0.29695946     -1.41400510           -1.38024023
## 85         -0.85805346     -1.01596791           -1.08214564
## 86         -0.44707302     -1.77352271           -1.83849262
## 87          0.43305527     -0.57772207           -0.43305527
## 88         -0.05091800     -0.15328619           -0.06366298
## 89         -0.71909690     -0.07641832           -0.17908874
## 90         -0.63896971      0.63896971           -0.19203379
## 91         -0.25729077      0.67050162            0.17908874
## 92         -0.36416334      1.38024023            1.48684468
## 93         -1.34797950     -0.97421613           -0.85805346
## 94         -0.68651916      0.87658763            0.39149488
## 95          0.39149488      0.06366298           -0.10196844
## 96          0.73567430      1.08214564            0.83980946
## 97          0.19203379      0.47537773            0.06366298
## 98          0.76945312      1.10528634            0.85805346
## 99         -1.52642702     -0.44707302           -0.33710120
## 100         0.10196844     -0.91459156           -0.97421613
## 101        -0.99487522     -1.10528634           -1.17854682
## 102        -0.37779383      1.34797950            1.44946373
## 103        -0.33710120      1.44946373            1.56855670
## 104        -0.67050162      0.89542793            0.40526982
## 105        -0.32366339      1.48684468            1.61367018
## 106         1.28735798      0.03818128            0.02545075
## 107         0.12758531     -0.75245638           -0.73567430
## 108         1.52642702      0.37779383            0.51856960
## 109         1.10528634     -0.65465430           -0.70271480
```

```
## 110        -2.23555842     -1.52642702           -1.44946373
## 111        -1.25874673     -1.25874673           -1.28735798
## 112         0.63896971     -0.24416040           -0.14042416
## 113        -0.35060018      1.41400510            1.52642702
## 114        -0.11476746     -0.16617364           -0.07641832
## 115        -1.66232963     -2.80216172           -2.80216172
## 116        -0.97421613     -1.08214564           -1.15343724
## 117         0.08918610     -0.35060018           -0.57772207
## 118         0.99487522      0.93409710            1.08214564
## 119         2.10223158      0.24416040            0.32366339
## 120        -0.91459156      0.62344075           -0.20501110
## 121        -0.40526982      0.65465430            0.16617364
## 122        -0.59282318      1.23113036            1.31706374
## 123        -1.61367018     -0.99487522           -0.87658763
## 124        -0.95396468      0.83980946            0.36416334
## 125         0.25729077      0.05091800           -0.11476746
## 126         0.65465430      1.03752256            0.80413364
## 127         0.07641832      0.46117919            0.05091800
## 128         0.67050162      1.05957037            0.82184079
## 129        -1.83849262     -0.47537773           -0.37779383
## 130         0.05091800     -0.93409710           -0.99487522
## 131        -1.12903457     -1.15343724           -1.23113036
## 132        -0.60806071      1.20442230            1.28735798
## 133        -0.53318051      1.28735798            1.38024023
## 134        -0.93409710      0.85805346            0.37779383
## 135        -0.51856960      1.31706374            1.41400510
## 136         1.23113036      0.02545075            0.01272434
## 137         0.06366298     -0.78667510           -0.75245638
## 138         1.48684468      0.36416334            0.50406856
## 139         1.03752256     -0.67050162           -0.71909690
## 140        -2.80216172     -1.61367018           -1.52642702
## 141        -1.38024023     -1.31706374           -1.34797950
## 142         0.57772207     -0.27046566           -0.16617364
## 143        -0.56275157      1.25874673            1.34797950
## 144        -0.21802303     -0.17908874           -0.08918610
## 145        -1.08214564     -1.12903457           -1.20442230
## 146         0.02545075     -0.36416334           -0.60806071
## 147         0.93409710      0.91459156            1.05957037
## 148         0.27046566     -0.06366298            0.11476746
## 149        -1.17854682      0.43305527            0.48967276
## 150         0.20501110      0.56275157            0.60806071
## 151         0.24416040      0.27046566            0.28368767
## 152         0.97421613      0.41912210            0.57772207
## 153         1.77352271      0.68651916            0.78667510
## 154         1.25874673      0.82184079            1.12903457
## 155         0.41912210     -0.14042416            0.10196844
## 156         0.85805346      0.76945312            0.87658763
## 157         0.37779383      1.01596791            1.25874673
## 158         1.38024023      0.73567430            0.97421613
## 159         1.83849262      1.71527720            1.91230127
## 160         0.78667510      1.12903457            0.99487522
## 161        -0.83980946      0.60806071            0.73567430
## 162         0.68651916      1.56855670            1.71527720
## 163         2.42690063      1.91230127            1.99828954
## 164         1.44946373      0.33710120            0.53318051
```

```
## 165         0.35060018      1.17854682            1.77352271
## 166         0.21802303      0.28368767            0.47537773
## 167         2.80216172      2.80216172            2.80216172
## 168         0.80413364      0.54790615            0.65465430
## 169        -0.70271480      0.11476746            0.25729077
## 170         0.50406856      0.70271480            0.76945312
## 171         0.87658763      0.78667510            1.23113036
## 172         0.82184079      0.07641832            0.07641832
## 173        -0.01272434      0.39149488            0.59282318
## 174         1.05957037      1.15343724            1.20442230
## 175        -0.57772207     -1.71527720           -1.61367018
## 176        -0.23107198      0.15328619            0.23107198
## 177        -0.24416040      0.19203379            0.46117919
## 178         0.75245638      0.53318051            0.63896971
## 179         1.91230127      1.61367018            1.01596791
## 180         1.31706374      0.48967276            0.54790615
## 181         1.61367018      0.99487522            1.15343724
## 182         1.17854682      0.23107198            0.35060018
## 183         0.56275157      0.01272434            0.19203379
## 184         0.11476746      0.16617364            0.24416040
## 185         0.46117919     -0.21802303           -0.02545075
## 186         1.41400510      0.50406856            0.70271480
## 187         0.89542793      0.75245638            0.95396468
## 188         0.28368767      0.80413364            0.91459156
## 189         0.33710120      1.77352271            0.89542793
## 190         0.59282318      1.83849262            1.17854682
## 191         0.54790615      2.42690063            2.42690063
## 192        -0.39149488      0.17908874            0.44707302
## 193         0.32366339      1.99828954            1.66232963
## 194         1.34797950      0.97421613            0.93409710
## 195         1.66232963      2.10223158            2.10223158
## 196         1.20442230      1.66232963            1.03752256
## 197         1.71527720      2.23555842            2.23555842
##     Minor_axis_length.PET Least_axis_length.PET Elongation.PET Flatness.PET
## 1             -0.80413364           -0.37779383    -0.23107198   0.32366339
## 2             -0.63896971           -0.75245638    -0.07641832  -0.16617364
## 3             -0.48967276           -0.29695946    -0.82184079  -0.39149488
## 4              0.78667510            0.95396468     0.27046566   0.71909690
## 5             -1.12903457           -0.73567430    -0.67050162  -0.25729077
## 6             -0.44707302           -1.34797950    -0.29695946  -1.31706374
## 7             -0.36416334           -0.56275157    -0.32366339  -0.57772207
## 8             -0.78667510           -1.41400510    -0.80413364  -1.20442230
## 9             -0.53318051           -0.83980946     0.28368767  -0.24416040
## 10            -1.61367018           -0.99487522    -0.35060018   0.25729077
## 11             0.89542793            1.10528634    -1.25874673  -0.83980946
## 12            -0.35060018           -0.65465430    -0.43305527  -0.82184079
## 13            -0.11476746            0.08918610    -0.56275157  -0.19203379
## 14            -2.80216172           -1.99828954    -0.51856960   0.12758531
## 15             1.08214564            1.12903457     0.29695946   0.35060018
## 16            -1.52642702           -1.15343724    -0.97421613  -0.56275157
## 17            -0.15328619            0.12758531     0.60806071   0.82184079
## 18             0.82184079            0.78667510     0.35060018   0.33710120
## 19            -0.01272434           -0.19203379    -0.02545075  -0.50406856
## 20            -0.51856960           -0.31028376    -0.62344075  -0.12758531
## 21            -0.41912210           -0.60806071    -0.41912210  -0.70271480
```

```
## 22          -1.99828954          -1.52642702    0.15328619   0.02545075
## 23          -0.31028376          -0.11476746    0.40526982   0.51856960
## 24           0.03818128           0.23107198   -1.34797950  -1.01596791
## 25          -1.17854682          -1.20442230    0.59282318   0.19203379
## 26           0.00000000          -0.02545075    0.56275157   0.20501110
## 27          -1.71527720          -1.05957037   -1.05957037  -0.43305527
## 28          -0.37779383           0.00000000   -0.14042416   0.40526982
## 29          -1.34797950          -1.61367018   -0.06366298  -0.99487522
## 30          -0.32366339          -0.20501110   -0.85805346  -0.59282318
## 31          -0.93409710          -0.41912210    0.12758531   0.68651916
## 32           0.59282318           0.73567430    0.46117919   0.54790615
## 33          -0.54790615          -0.39149488   -1.61367018  -1.66232963
## 34          -0.33710120          -0.24416040   -0.17908874   0.03818128
## 35          -0.19203379           0.06366298   -0.60806071  -0.21802303
## 36          -1.25874673          -2.42690063    0.00000000  -2.42690063
## 37          -0.57772207          -0.67050162   -0.99487522  -0.95396468
## 38          -1.41400510          -1.77352271    0.16617364  -1.05957037
## 39          -0.03818128           0.16617364    0.47537773   0.73567430
## 40          -0.67050162          -0.97421613    0.53318051  -0.02545075
## 41          -0.24416040          -0.08918610   -0.53318051  -0.29695946
## 42          -0.83980946          -0.71909690    0.02545075   0.11476746
## 43           0.36416334           0.28368767    0.63896971   0.63896971
## 44          -0.95396468          -0.43305527    0.11476746   0.67050162
## 45          -1.91230127          -1.66232963   -1.56855670  -1.71527720
## 46           0.15328619           0.39149488   -0.54790615  -0.03818128
## 47          -0.56275157          -0.28368767   -0.95396468  -0.31028376
## 48           0.99487522           0.85805346   -0.24416040  -0.14042416
## 49          -1.48684468          -1.23113036   -0.25729077  -0.36416334
## 50          -0.50406856          -0.25729077    0.24416040   0.60806071
## 51          -0.08918610          -0.27046566    0.65465430   0.28368767
## 52          -1.08214564          -0.68651916   -0.11476746   0.23107198
## 53          -0.70271480          -0.78667510   -0.46117919  -0.48967276
## 54          -0.89542793          -0.93409710   -1.15343724  -1.10528634
## 55           0.19203379          -0.76945312   -0.10196844  -1.23113036
## 56          -1.10528634          -1.38024023    0.36416334  -0.35060018
## 57          -0.28368767           0.07641832   -0.28368767   0.16617364
## 58          -0.29695946          -0.06366298   -1.08214564  -0.78667510
## 59          -0.40526982          -0.03818128   -0.91459156  -0.27046566
## 60           0.76945312           0.76945312   -0.93409710  -0.62344075
## 61           0.54790615           0.33710120    0.62344075   0.44707302
## 62          -0.06366298          -0.53318051    0.33710120  -0.54790615
## 63           0.93409710           0.68651916    0.54790615   0.01272434
## 64           0.95396468           0.97421613   -0.57772207  -0.33710120
## 65          -1.20442230          -1.12903457   -0.78667510  -0.73567430
## 66           0.51856960          -0.32366339   -0.37779383  -1.12903457
## 67          -1.56855670          -1.17854682   -1.03752256  -0.65465430
## 68           1.25874673           1.41400510   -1.23113036  -0.80413364
## 69          -0.75245638          -1.25874673   -0.76945312  -1.15343724
## 70          -1.44946373          -1.48684468   -0.59282318  -0.85805346
## 71          -0.10196844          -0.05091800    0.10196844   0.07641832
## 72          -0.21802303          -0.70271480   -0.87658763  -1.28735798
## 73          -1.15343724          -1.31706374    0.41912210  -0.20501110
## 74          -0.82184079          -0.50406856   -0.68651916  -0.11476746
## 75           0.65465430           0.75245638    0.50406856   0.47537773
## 76          -2.23555842          -1.83849262    0.48967276   0.75245638
```

```
## 77          -2.10223158          -2.10223158   -1.12903457  -1.34797950
## 78          -0.59282318          -0.87658763    0.19203379  -0.37779383
## 79          -0.76945312          -1.28735798   -0.83980946  -1.17854682
## 80           0.35060018           0.27046566    0.23107198   0.24416040
## 81          -0.14042416          -0.14042416    0.67050162   0.62344075
## 82          -0.27046566          -0.12758531   -0.89542793  -0.60806071
## 83          -1.66232963          -1.03752256   -1.01596791  -0.41912210
## 84          -1.31706374          -1.56855670   -0.03818128  -0.97421613
## 85          -0.91459156          -0.40526982    0.14042416   0.70271480
## 86          -1.38024023          -1.71527720    0.20501110  -1.03752256
## 87          -0.47537773          -1.44946373   -0.47537773  -1.38024023
## 88           0.07641832           0.21802303    0.01272434   0.15328619
## 89          -0.20501110          -0.17908874   -0.40526982  -0.44707302
## 90           0.10196844           0.36416334    0.08918610   0.41912210
## 91           0.40526982           0.48967276   -0.05091800   0.31028376
## 92           0.29695946           0.62344075   -1.83849262  -1.56855670
## 93          -0.60806071          -0.89542793    0.03818128  -0.47537773
## 94           0.46117919           0.50406856   -0.50406856  -0.06366298
## 95          -0.71909690          -0.80413364   -1.38024023  -1.25874673
## 96           0.70271480           0.91459156   -1.20442230  -0.68651916
## 97           0.17908874           0.15328619   -0.08918610  -0.07641832
## 98           0.71909690           0.93409710   -1.17854682  -0.67050162
## 99          -0.05091800          -0.51856960    0.37779383  -0.53318051
## 100         -1.77352271          -1.08214564   -1.10528634  -0.51856960
## 101         -0.99487522          -0.46117919    0.06366298   0.56275157
## 102          0.28368767           0.60806071   -1.91230127  -1.61367018
## 103          0.32366339           0.65465430   -1.71527720  -1.48684468
## 104          0.47537773           0.51856960   -0.48967276  -0.05091800
## 105          0.33710120           0.67050162   -1.66232963  -1.44946373
## 106          0.12758531          -0.21802303   -0.01272434  -0.63896971
## 107         -0.85805346          -0.57772207   -0.39149488   0.06366298
## 108          1.03752256           1.01596791    0.39149488   0.29695946
## 109         -0.43305527          -0.33710120    0.44707302   0.39149488
## 110         -1.23113036          -2.23555842    0.05091800  -2.23555842
## 111         -0.65465430          -0.95396468    0.57772207   0.00000000
## 112         -0.23107198          -0.07641832   -0.44707302  -0.23107198
## 113          0.31028376           0.63896971   -1.77352271  -1.52642702
## 114          0.06366298           0.20501110   -0.12758531   0.05091800
## 115         -2.42690063          -1.91230127    0.32366339   0.57772207
## 116         -0.97421613          -0.44707302    0.07641832   0.59282318
## 117         -0.16617364           0.11476746    0.51856960   0.78667510
## 118          0.87658763           1.08214564   -1.31706374  -0.89542793
## 119          0.14042416           0.37779383   -0.71909690  -0.15328619
## 120          0.08918610           0.35060018   -0.15328619   0.27046566
## 121          0.39149488           0.44707302   -0.31028376   0.10196844
## 122          0.23107198           0.54790615   -2.42690063  -1.99828954
## 123         -0.62344075          -0.91459156   -0.21802303  -0.71909690
## 124          0.43305527           0.46117919   -0.75245638  -0.32366339
## 125         -0.73567430          -0.82184079   -1.52642702  -1.41400510
## 126          0.67050162           0.87658763   -1.44946373  -0.93409710
## 127          0.16617364           0.14042416   -0.33710120  -0.40526982
## 128          0.68651916           0.89542793   -1.41400510  -0.91459156
## 129         -0.07641832          -0.54790615    0.17908874  -0.76945312
## 130         -1.83849262          -1.10528634   -1.28735798  -0.75245638
## 131         -1.05957037          -0.48967276   -0.19203379   0.36416334
```

```
## 132          0.21802303          0.53318051   -2.80216172  -2.10223158
## 133          0.25729077          0.57772207   -2.10223158  -1.83849262
## 134          0.44707302          0.47537773   -0.73567430  -0.28368767
## 135          0.27046566          0.59282318   -1.99828954  -1.77352271
## 136          0.11476746         -0.23107198   -0.27046566  -0.87658763
## 137         -0.87658763         -0.59282318   -0.63896971  -0.08918610
## 138          1.01596791          0.99487522    0.21802303   0.08918610
## 139         -0.46117919         -0.35060018    0.25729077   0.21802303
## 140         -1.28735798         -2.80216172   -0.20501110  -2.80216172
## 141         -0.68651916         -1.01596791    0.43305527  -0.17908874
## 142         -0.25729077         -0.10196844   -0.70271480  -0.46117919
## 143          0.24416040          0.56275157   -2.23555842  -1.91230127
## 144          0.05091800          0.19203379   -0.36416334  -0.10196844
## 145         -1.03752256         -0.47537773   -0.16617364   0.37779383
## 146         -0.17908874          0.10196844    0.31028376   0.53318051
## 147          0.85805346          1.05957037   -1.48684468  -1.08214564
## 148          0.01272434          0.05091800    1.17854682   1.20442230
## 149          0.91459156          1.17854682    1.66232963   2.10223158
## 150          1.31706374          1.15343724    2.42690063   1.71527720
## 151          0.53318051          0.71909690    1.20442230   1.61367018
## 152          0.75245638          0.41912210    1.08214564   1.08214564
## 153          0.57772207          0.29695946    0.75245638   0.80413364
## 154          1.48684468          0.43305527    1.23113036   0.48967276
## 155          0.50406856         -0.01272434    1.77352271   1.23113036
## 156          1.12903457          1.38024023    1.15343724   1.56855670
## 157          1.10528634          1.28735798    0.78667510   0.91459156
## 158          1.05957037          1.34797950    0.85805346   1.28735798
## 159          2.10223158          1.99828954    0.83980946   1.01596791
## 160          1.77352271          1.56855670    2.23555842   1.91230127
## 161          1.34797950          0.80413364    1.71527720   1.05957037
## 162          2.23555842          1.83849262    2.10223158   1.44946373
## 163          2.42690063          2.42690063    1.01596791   1.25874673
## 164          0.41912210          0.24416040    0.93409710   0.93409710
## 165          1.71527720          1.03752256    1.12903457   0.76945312
## 166         -0.02545075          0.17908874    0.80413364   0.99487522
## 167          2.80216172          2.80216172    0.70271480   0.89542793
## 168          0.63896971          0.03818128    0.95396468   0.65465430
## 169          0.02545075         -0.16617364    0.99487522   0.87658763
## 170          1.28735798          1.31706374    1.44946373   1.48684468
## 171          1.17854682          0.70271480    0.89542793   0.43305527
## 172          0.48967276          0.01272434    1.83849262   1.31706374
## 173          0.60806071          0.82184079    0.97421613   1.34797950
## 174          1.83849262          1.91230127    1.99828954   1.99828954
## 175         -1.01596791         -0.63896971    1.91230127   2.80216172
## 176         -0.39149488         -0.85805346    0.76945312   0.17908874
## 177          0.83980946          0.32366339    1.52642702   1.17854682
## 178          0.62344075          0.02545075    0.91459156   0.50406856
## 179          1.56855670          1.52642702    1.61367018   1.66232963
## 180          1.23113036          1.23113036    2.80216172   2.23555842
## 181          1.15343724          1.25874673    0.87658763   1.03752256
## 182         -0.12758531          0.25729077    0.82184079   1.15343724
## 183          0.37779383         -0.36416334    1.31706374   0.85805346
## 184          0.56275157          0.83980946    1.48684468   2.42690063
## 185          0.20501110         -0.62344075    1.56855670   0.83980946
## 186          0.97421613         -0.15328619    1.05957037   0.14042416
```

```
## 187            1.38024023            1.48684468     1.34797950   1.52642702
## 188            1.20442230            1.20442230     1.10528634   1.12903457
## 189            1.41400510            1.61367018     1.41400510   1.83849262
## 190            1.61367018            1.66232963     1.28735798   1.77352271
## 191            1.52642702            1.77352271    -0.65465430  -0.01272434
## 192            0.80413364            0.31028376     1.38024023   1.10528634
## 193            1.66232963            1.71527720     1.03752256   1.41400510
## 194            0.73567430            0.40526982     0.68651916   0.46117919
## 195            1.91230127            2.10223158     0.71909690   0.95396468
## 196            1.44946373            1.44946373     1.25874673   1.38024023
## 197            1.99828954            2.23555842     0.73567430   0.97421613
##     Max_cooc.L.PET Average_cooc.L.PET Variance_cooc.L.PET Entropy_cooc.L.PET
## 1      -0.35060018        -0.10196844          0.06366298         0.10196844
## 2       0.03818128        -0.29695946          0.33710120        -0.75245638
## 3      -0.32366339         0.47537773          0.11476746         0.37779383
## 4      -0.15328619        -1.17854682         -1.83849262        -0.76945312
## 5      -0.02545075        -1.31706374         -0.62344075        -1.20442230
## 6      -0.27046566        -0.05091800         -0.20501110         0.11476746
## 7      -0.17908874        -0.01272434         -0.08918610         0.06366298
## 8      -0.05091800        -0.39149488          0.24416040        -0.31028376
## 9      -0.25729077         0.28368767          0.01272434        -0.71909690
## 10      0.00000000        -1.01596791         -0.11476746        -1.23113036
## 11     -0.41912210        -0.02545075         -0.82184079         0.01272434
## 12     -0.28368767         0.29695946         -0.23107198         0.16617364
## 13     -0.47537773         0.48967276         -0.15328619         0.62344075
## 14      0.15328619        -0.60806071          1.10528634        -2.42690063
## 15     -0.48967276         0.02545075         -0.44707302         0.40526982
## 16      0.12758531        -0.17908874         -0.70271480        -0.83980946
## 17     -0.10196844        -0.67050162         -0.71909690        -0.25729077
## 18     -0.08918610        -1.25874673         -0.68651916        -0.60806071
## 19     -0.33710120        -0.27046566         -0.37779383         0.19203379
## 20     -0.39149488        -0.20501110         -0.35060018         0.12758531
## 21     -0.23107198        -0.87658763         -0.32366339        -0.02545075
## 22      0.11476746         0.50406856          1.15343724        -1.91230127
## 23     -0.50406856         0.65465430          0.65465430         0.65465430
## 24     -0.46117919        -0.99487522         -0.80413364         0.02545075
## 25     -0.11476746         0.75245638          0.73567430        -1.17854682
## 26      0.17908874        -2.23555842         -1.52642702        -1.52642702
## 27      0.10196844        -0.75245638          0.60806071        -1.61367018
## 28     -0.24416040        -0.28368767         -0.48967276         0.14042416
## 29      0.01272434         0.08918610         -0.14042416        -0.80413364
## 30     -0.43305527         0.33710120         -0.29695946         0.50406856
## 31     -0.12758531         0.21802303          0.87658763        -0.53318051
## 32     -0.19203379        -0.89542793          0.05091800         0.05091800
## 33     -0.40526982         0.36416334         -0.41912210         0.44707302
## 34      0.06366298        -0.91459156         -0.03818128        -0.16617364
## 35     -0.21802303        -1.23113036         -0.63896971        -0.63896971
## 36     -0.06366298         0.06366298          0.70271480        -1.34797950
## 37     -0.29695946        -0.16617364          0.17908874         0.41912210
## 38     -0.16617364        -0.33710120          0.40526982        -0.93409710
## 39     -0.36416334         0.46117919         -0.33710120         0.48967276
## 40     -0.44707302         0.54790615          0.46117919         0.46117919
## 41     -0.20501110        -0.63896971          0.51856960         0.23107198
## 42     -0.37779383         0.35060018         -0.01272434         0.24416040
## 43      0.07641832        -1.41400510         -1.56855670        -1.03752256
```

```
## 44     -0.31028376         0.20501110          0.85805346         -0.54790615
## 45      1.41400510        -1.99828954         -0.31028376         -1.99828954
## 46      0.83980946        -1.48684468         -0.89542793         -1.10528634
## 47      0.46117919         0.70271480         -0.10196844          0.35060018
## 48      0.36416334        -0.71909690         -0.95396468         -0.23107198
## 49      0.50406856         0.63896971          0.63896971         -0.05091800
## 50      0.37779383         0.68651916          0.20501110          0.51856960
## 51      0.32366339         0.39149488          0.14042416          0.59282318
## 52      0.59282318         0.51856960         -0.16617364          0.21802303
## 53      0.65465430        -1.34797950         -0.97421613         -0.99487522
## 54      0.68651916         0.40526982          0.21802303         -0.47537773
## 55      0.54790615        -1.05957037         -0.36416334         -0.67050162
## 56      0.85805346         0.76945312          0.75245638         -1.05957037
## 57      0.40526982        -1.03752256         -0.87658763         -0.40526982
## 58      0.62344075         0.43305527         -0.67050162          0.31028376
## 59      0.41912210         0.27046566          0.29695946          0.36416334
## 60      0.51856960        -0.85805346         -0.93409710         -0.43305527
## 61      0.57772207        -1.38024023         -2.10223158         -1.41400510
## 62      0.43305527        -0.80413364         -0.59282318          0.07641832
## 63      0.99487522        -2.80216172         -2.80216172         -2.80216172
## 64      0.70271480        -2.10223158         -1.91230127         -1.44946373
## 65      0.67050162        -0.95396468          0.25729077         -0.89542793
## 66      0.60806071        -0.93409710         -1.99828954         -1.15343724
## 67      0.73567430        -0.31028376         -0.47537773         -0.73567430
## 68      0.33710120        -0.97421613         -0.78667510         -0.14042416
## 69      0.53318051        -0.56275157          0.16617364         -0.08918610
## 70      0.56275157        -0.35060018         -0.21802303         -0.85805346
## 71      0.71909690        -0.08918610          0.00000000          0.53318051
## 72      0.89542793        -1.91230127         -0.99487522         -1.01596791
## 73      0.97421613        -1.52642702         -1.12903457         -1.71527720
## 74      0.82184079        -0.07641832         -0.43305527         -0.07641832
## 75      0.78667510        -1.20442230         -1.15343724         -0.82184079
## 76      0.91459156         0.44707302          0.95396468         -2.10223158
## 77      0.95396468         0.60806071          0.35060018         -1.28735798
## 78      0.80413364        -0.19203379         -0.05091800         -0.06366298
## 79     -0.01272434        -0.59282318          0.15328619         -0.11476746
## 80      0.16617364        -2.42690063         -2.23555842         -1.83849262
## 81     -0.07641832         0.32366339          0.19203379          0.54790615
## 82      0.08918610        -1.28735798         -1.01596791         -0.87658763
## 83      0.19203379        -0.73567430          0.62344075         -1.56855670
## 84      0.14042416         0.10196844         -0.12758531         -0.78667510
## 85      0.05091800         0.23107198          0.89542793         -0.50406856
## 86      0.02545075        -0.32366339          0.41912210         -0.91459156
## 87      0.21802303        -1.83849262         -0.46117919         -1.48684468
## 88     -0.03818128         0.14042416          0.10196844          0.63896971
## 89     -0.14042416         0.37779383         -0.02545075          0.57772207
## 90     -0.78667510         0.03818128         -0.51856960          0.29695946
## 91     -0.85805346        -0.36416334         -0.54790615          0.32366339
## 92     -0.76945312        -0.44707302         -1.28735798         -0.24416040
## 93     -0.56275157        -0.21802303         -0.06366298         -0.12758531
## 94     -0.73567430        -1.66232963         -1.66232963         -0.97421613
## 95     -0.75245638        -0.24416040          0.44707302          0.25729077
## 96     -0.87658763        -1.10528634         -1.05957037         -0.33710120
## 97     -0.80413364        -0.47537773         -0.27046566          0.39149488
## 98     -0.82184079        -1.08214564         -1.03752256         -0.32366339
```

```
## 99      0.75245638        -0.78667510         -0.57772207         0.08918610
## 100    -0.59282318        -0.76945312          0.59282318        -1.66232963
## 101    -0.71909690         0.17908874          0.82184079        -0.57772207
## 102    -0.89542793        -0.46117919         -1.31706374        -0.27046566
## 103    -0.60806071        -0.41912210         -1.23113036        -0.20501110
## 104    -0.68651916        -1.61367018         -1.61367018        -0.95396468
## 105    -0.53318051        -0.40526982         -1.20442230        -0.19203379
## 106    -0.51856960        -0.11476746          0.03818128         0.03818128
## 107     0.44707302         0.25729077         -0.17908874        -0.62344075
## 108     0.31028376        -0.14042416         -0.39149488        -0.15328619
## 109     0.39149488         0.82184079         -0.24416040        -0.44707302
## 110     0.48967276         0.07641832          0.71909690        -1.31706374
## 111     0.29695946         0.56275157          0.47537773         0.47537773
## 112     0.35060018        -0.62344075          0.53318051         0.28368767
## 113    -0.65465430        -0.43305527         -1.25874673        -0.21802303
## 114    -0.67050162         0.12758531          0.08918610         0.60806071
## 115    -0.57772207         0.41912210          0.93409710        -2.23555842
## 116    -0.63896971         0.19203379          0.83980946        -0.56275157
## 117    -0.62344075        -0.68651916         -0.73567430        -0.29695946
## 118    -0.70271480        -0.03818128         -0.83980946        -0.01272434
## 119    -0.54790615        -1.56855670         -0.91459156        -1.25874673
## 120    -1.91230127         0.01272434         -0.53318051         0.20501110
## 121    -2.23555842        -0.37779383         -0.56275157         0.27046566
## 122    -1.83849262        -0.53318051         -1.44946373        -0.39149488
## 123    -1.31706374        -0.23107198         -0.07641832        -0.17908874
## 124    -1.71527720        -1.77352271         -1.77352271        -1.12903457
## 125    -1.77352271        -0.25729077          0.39149488         0.15328619
## 126    -2.42690063        -1.15343724         -1.10528634        -0.51856960
## 127    -1.99828954        -0.57772207         -0.28368767         0.33710120
## 128    -2.10223158        -1.12903457         -1.08214564        -0.48967276
## 129    -1.03752256        -0.83980946         -0.60806071         0.00000000
## 130    -1.34797950        -0.82184079          0.57772207        -1.77352271
## 131    -1.66232963         0.15328619          0.78667510        -0.68651916
## 132    -2.80216172        -0.54790615         -1.48684468        -0.41912210
## 133    -1.38024023        -0.50406856         -1.38024023        -0.36416334
## 134    -1.56855670        -1.71527720         -1.71527720        -1.08214564
## 135    -1.28735798        -0.48967276         -1.34797950        -0.35060018
## 136    -1.25874673        -0.12758531          0.02545075        -0.03818128
## 137    -1.12903457         0.24416040         -0.19203379        -0.70271480
## 138    -1.20442230        -0.15328619         -0.40526982        -0.28368767
## 139    -1.15343724         0.80413364         -0.25729077        -0.59282318
## 140    -1.10528634         0.05091800          0.68651916        -1.38024023
## 141    -1.23113036         0.53318051          0.43305527         0.43305527
## 142    -1.17854682        -0.65465430          0.50406856         0.17908874
## 143    -1.48684468        -0.51856960         -1.41400510        -0.37779383
## 144    -1.52642702         0.11476746          0.07641832         0.56275157
## 145    -1.44946373         0.16617364          0.80413364        -0.65465430
## 146    -1.41400510        -0.70271480         -0.75245638        -0.46117919
## 147    -1.61367018        -0.06366298         -0.85805346        -0.10196844
## 148     1.15343724         2.23555842          2.10223158         1.44946373
## 149     1.05957037         2.42690063          1.56855670         1.91230127
## 150     1.01596791         1.71527720          1.41400510         2.42690063
## 151     1.31706374         1.99828954          1.20442230         1.52642702
## 152     1.44946373         0.73567430          0.48967276         0.87658763
## 153     1.52642702         1.77352271          1.61367018         1.10528634
```

```
## 154     1.23113036         0.89542793          1.08214564         1.05957037
## 155     1.91230127         2.80216172          2.23555842         0.83980946
## 156     1.08214564         0.91459156          0.56275157         1.15343724
## 157     1.38024023         1.83849262          0.76945312         1.66232963
## 158     1.10528634         1.56855670          1.71527720         1.77352271
## 159     1.17854682         0.99487522          0.54790615         1.12903457
## 160     1.28735798         0.71909690         -0.76945312         0.78667510
## 161     1.12903457         1.01596791          0.91459156         1.48684468
## 162     2.80216172        -1.44946373         -2.42690063         0.67050162
## 163     1.56855670         0.31028376         -0.50406856         0.76945312
## 164     1.48684468         0.95396468          1.66232963         0.93409710
## 165     1.34797950         0.97421613         -0.65465430         0.82184079
## 166     1.66232963         1.23113036          1.01596791         1.03752256
## 167     1.03752256         0.93409710          0.67050162         1.25874673
## 168     1.20442230         1.08214564          1.48684468         1.34797950
## 169     1.25874673         1.17854682          1.17854682         0.97421613
## 170     1.61367018         1.34797950          1.34797950         1.99828954
## 171     1.99828954         0.57772207          0.37779383         0.85805346
## 172     2.42690063         0.67050162          0.28368767         0.71909690
## 173     1.83849262         1.38024023          1.05957037         1.38024023
## 174     1.71527720         0.83980946          0.27046566         0.99487522
## 175     2.10223158         1.91230127          2.80216172         0.68651916
## 176     2.23555842         2.10223158          1.77352271         0.80413364
## 177     1.77352271         1.31706374          1.28735798         1.41400510
## 178     0.25729077         1.05957037          1.44946373         1.31706374
## 179     0.76945312         0.00000000         -1.17854682         0.70271480
## 180     0.23107198         1.61367018          1.52642702         2.10223158
## 181     0.47537773         0.78667510          0.36416334         0.95396468
## 182     0.87658763         1.03752256          1.99828954         0.73567430
## 183     0.63896971         1.44946373          1.23113036         1.01596791
## 184     0.28368767         1.52642702          2.42690063         1.08214564
## 185     0.27046566         1.20442230          1.83849262         0.91459156
## 186     0.93409710         0.59282318          1.03752256         0.75245638
## 187     0.24416040         1.48684468          1.38024023         2.80216172
## 188     0.20501110         1.66232963          1.31706374         2.23555842
## 189    -0.97421613         1.41400510          0.99487522         1.61367018
## 190    -1.05957037         1.15343724          0.97421613         1.71527720
## 191    -0.95396468         1.12903457          0.23107198         1.23113036
## 192    -0.83980946         1.28735798          1.25874673         1.28735798
## 193    -0.91459156         0.62344075          0.12758531         0.89542793
## 194    -0.93409710         1.25874673          1.91230127         1.56855670
## 195    -1.08214564         0.85805346          0.31028376         1.17854682
## 196    -0.99487522         1.10528634          1.12903457         1.83849262
## 197    -1.01596791         0.87658763          0.32366339         1.20442230
##     DAVE_cooc.L.PET DVAR_cooc.L.PET DENT_cooc.L.PET SAVE_cooc.L.PET
## 1       -0.11476746     -0.29695946     -0.16617364     -0.10196844
## 2        0.46117919      0.63896971      0.40526982     -0.29695946
## 3       -0.05091800     -0.28368767     -0.14042416      0.47537773
## 4       -1.34797950     -1.52642702     -1.34797950     -1.17854682
## 5       -0.48967276     -0.35060018     -0.50406856     -1.31706374
## 6       -0.14042416     -0.27046566     -0.20501110     -0.06366298
## 7        0.05091800      0.37779383      0.15328619     -0.01272434
## 8        0.50406856      0.53318051      0.41912210     -0.39149488
## 9       -0.59282318     -1.15343724     -0.63896971      0.28368767
## 10      -0.03818128      0.39149488     -0.05091800     -1.01596791
```

```
## 11      -1.17854682     -1.31706374     -1.17854682     -0.02545075
## 12      -0.21802303     -0.40526982     -0.25729077      0.31028376
## 13      -0.07641832     -0.06366298     -0.08918610      0.48967276
## 14       0.97421613     -0.85805346      0.62344075     -0.60806071
## 15      -0.37779383     -0.43305527     -0.35060018      0.01272434
## 16      -0.43305527      0.10196844     -0.43305527     -0.17908874
## 17      -0.76945312     -0.73567430     -0.70271480     -0.67050162
## 18      -1.20442230     -0.89542793     -1.03752256     -1.25874673
## 19      -0.15328619     -0.33710120     -0.23107198     -0.27046566
## 20      -0.50406856     -0.71909690     -0.56275157     -0.21802303
## 21      -0.24416040     -0.25729077     -0.24416040     -0.85805346
## 22       1.03752256      1.28735798      0.65465430      0.50406856
## 23       0.63896971      0.65465430      0.54790615      0.65465430
## 24      -0.31028376     -0.54790615     -0.37779383     -0.99487522
## 25       0.27046566     -0.12758531      0.03818128      0.75245638
## 26      -1.56855670     -1.25874673     -1.41400510     -2.23555842
## 27       0.19203379      0.47537773      0.10196844     -0.75245638
## 28      -0.44707302     -0.46117919     -0.46117919     -0.28368767
## 29      -0.10196844     -0.21802303     -0.15328619      0.08918610
## 30      -0.17908874     -0.17908874     -0.19203379      0.33710120
## 31       0.41912210      0.01272434      0.20501110      0.21802303
## 32      -0.63896971     -0.67050162     -0.65465430     -0.89542793
## 33      -0.29695946     -0.44707302     -0.33710120      0.36416334
## 34      -0.19203379     -0.23107198     -0.21802303     -0.91459156
## 35      -0.51856960     -0.41912210     -0.51856960     -1.23113036
## 36       0.71909690      0.87658763      0.56275157      0.06366298
## 37       0.44707302      0.40526982      0.39149488     -0.16617364
## 38       0.47537773      0.73567430      0.35060018     -0.33710120
## 39      -0.40526982     -0.36416334     -0.36416334      0.46117919
## 40       0.59282318      0.70271480      0.48967276      0.54790615
## 41       0.11476746      0.46117919      0.24416040     -0.63896971
## 42      -0.02545075      0.07641832     -0.03818128      0.35060018
## 43      -1.83849262     -1.91230127     -1.77352271     -1.41400510
## 44       0.40526982      0.00000000      0.19203379      0.20501110
## 45      -0.41912210      0.16617364     -0.39149488     -1.99828954
## 46      -1.91230127     -0.14042416     -1.91230127     -1.48684468
## 47      -0.20501110     -0.48967276     -0.28368767      0.70271480
## 48      -1.12903457      0.12758531     -0.97421613     -0.71909690
## 49       0.75245638      0.91459156      0.59282318      0.63896971
## 50       0.15328619      0.28368767      0.28368767      0.68651916
## 51       0.53318051      0.59282318      0.46117919      0.39149488
## 52       0.14042416      0.14042416      0.23107198      0.51856960
## 53      -0.82184079     -0.91459156     -0.78667510     -1.34797950
## 54       0.03818128      0.57772207      0.25729077      0.40526982
## 55      -0.57772207     -0.70271480     -0.54790615     -1.05957037
## 56       0.67050162      0.67050162      0.51856960      0.76945312
## 57      -0.65465430     -0.87658763     -0.67050162     -1.03752256
## 58      -0.47537773     -0.39149488     -0.40526982      0.41912210
## 59      -0.39149488     -0.68651916     -0.44707302      0.27046566
## 60      -1.31706374     -1.23113036     -1.25874673     -0.87658763
## 61      -2.23555842     -2.42690063     -2.23555842     -1.38024023
## 62      -0.35060018     -0.51856960     -0.32366339     -0.82184079
## 63      -2.80216172      0.27046566     -2.80216172     -2.80216172
## 64      -2.10223158      0.36416334     -2.10223158     -2.10223158
## 65      -0.16617364      0.03818128     -0.17908874     -0.95396468
```

```
## 66      -1.77352271     -1.99828954     -1.61367018     -0.93409710
## 67      -0.25729077     -0.32366339     -0.27046566     -0.31028376
## 68      -1.28735798     -1.28735798     -1.15343724     -0.97421613
## 69       0.23107198      0.24416040      0.31028376     -0.57772207
## 70       0.56275157      0.78667510      0.47537773     -0.35060018
## 71       0.51856960      0.51856960      0.44707302     -0.08918610
## 72      -0.70271480     -0.59282318     -0.68651916     -1.91230127
## 73      -0.75245638      0.08918610     -0.76945312     -1.52642702
## 74      -0.27046566     -0.37779383     -0.29695946     -0.07641832
## 75      -1.71527720      0.11476746     -1.66232963     -1.20442230
## 76       0.91459156      1.10528634      0.63896971      0.44707302
## 77       0.00000000     -0.07641832     -0.07641832      0.60806071
## 78       0.31028376      0.35060018      0.37779383     -0.19203379
## 79       0.21802303      0.23107198      0.29695946     -0.59282318
## 80      -2.42690063     -2.80216172     -2.42690063     -2.42690063
## 81       0.06366298      0.15328619      0.07641832      0.32366339
## 82      -1.38024023     -1.44946373     -1.38024023     -1.28735798
## 83       0.20501110      0.48967276      0.12758531     -0.73567430
## 84      -0.08918610     -0.20501110     -0.12758531      0.10196844
## 85       0.43305527      0.02545075      0.21802303      0.23107198
## 86       0.48967276      0.75245638      0.36416334     -0.32366339
## 87      -0.53318051      0.05091800     -0.48967276     -1.83849262
## 88       0.02545075     -0.08918610      0.02545075      0.14042416
## 89      -0.06366298     -0.19203379     -0.10196844      0.37779383
## 90      -0.60806071     -0.56275157     -0.59282318      0.03818128
## 91      -0.54790615     -0.60806071     -0.57772207     -0.36416334
## 92      -0.95396468     -0.99487522     -0.87658763     -0.44707302
## 93       0.29695946      0.33710120      0.33710120     -0.20501110
## 94      -1.44946373     -1.61367018     -1.48684468     -1.66232963
## 95       0.25729077      0.56275157      0.32366339     -0.24416040
## 96      -0.68651916     -0.80413364     -0.75245638     -1.10528634
## 97       0.10196844      0.19203379      0.08918610     -0.54790615
## 98      -0.67050162     -0.78667510     -0.71909690     -1.08214564
## 99      -0.33710120     -0.50406856     -0.31028376     -0.80413364
## 100      0.17908874      0.44707302      0.05091800     -0.76945312
## 101      0.37779383     -0.02545075      0.11476746      0.17908874
## 102     -0.97421613     -1.01596791     -0.91459156     -0.46117919
## 103     -0.91459156     -0.95396468     -0.83980946     -0.41912210
## 104     -1.41400510     -1.56855670     -1.44946373     -1.61367018
## 105     -0.87658763     -0.93409710     -0.80413364     -0.40526982
## 106     -0.80413364     -1.17854682     -0.82184079     -0.11476746
## 107     -0.28368767     -0.63896971     -0.41912210      0.25729077
## 108     -1.61367018     -2.10223158     -1.71527720     -0.14042416
## 109     -1.10528634     -1.77352271     -1.23113036      0.82184079
## 110      0.73567430      0.89542793      0.57772207      0.07641832
## 111      0.60806071      0.71909690      0.50406856      0.56275157
## 112      0.12758531      0.50406856      0.27046566     -0.62344075
## 113     -0.93409710     -0.97421613     -0.85805346     -0.43305527
## 114      0.01272434     -0.10196844     -0.02545075      0.12758531
## 115      0.89542793      1.08214564      0.60806071      0.43305527
## 116      0.39149488     -0.01272434      0.14042416      0.19203379
## 117     -0.78667510     -0.75245638     -0.73567430     -0.68651916
## 118     -1.23113036     -1.34797950     -1.20442230     -0.03818128
## 119     -1.99828954     -0.15328619     -1.99828954     -1.56855670
## 120     -0.62344075     -0.57772207     -0.62344075      0.02545075
```

```
## 121     -0.56275157     -0.62344075     -0.60806071     -0.37779383
## 122     -1.05957037     -1.10528634     -1.10528634     -0.51856960
## 123      0.28368767      0.32366339      0.17908874     -0.23107198
## 124     -1.52642702     -1.71527720     -1.56855670     -1.77352271
## 125      0.24416040      0.54790615      0.16617364     -0.25729077
## 126     -0.73567430     -0.83980946     -0.95396468     -1.15343724
## 127      0.07641832      0.17908874     -0.01272434     -0.56275157
## 128     -0.71909690     -0.82184079     -0.89542793     -1.12903457
## 129     -0.36416334     -0.53318051     -0.47537773     -0.83980946
## 130      0.16617364      0.41912210     -0.06366298     -0.78667510
## 131      0.32366339     -0.05091800      0.00000000      0.15328619
## 132     -1.08214564     -1.12903457     -1.12903457     -0.53318051
## 133     -1.01596791     -1.05957037     -1.05957037     -0.48967276
## 134     -1.48684468     -1.66232963     -1.52642702     -1.71527720
## 135     -0.99487522     -1.03752256     -0.99487522     -0.47537773
## 136     -0.85805346     -1.20442230     -1.01596791     -0.12758531
## 137     -0.32366339     -0.65465430     -0.53318051      0.24416040
## 138     -1.66232963     -2.23555842     -1.83849262     -0.15328619
## 139     -1.15343724     -1.83849262     -1.31706374      0.80413364
## 140      0.70271480      0.85805346      0.53318051      0.05091800
## 141      0.57772207      0.68651916      0.43305527      0.53318051
## 142      0.08918610      0.43305527      0.06366298     -0.65465430
## 143     -1.03752256     -1.08214564     -1.08214564     -0.50406856
## 144     -0.01272434     -0.11476746     -0.11476746      0.11476746
## 145      0.33710120     -0.03818128      0.01272434      0.16617364
## 146     -0.83980946     -0.76945312     -0.93409710     -0.70271480
## 147     -1.25874673     -1.38024023     -1.28735798     -0.05091800
## 148      2.42690063      2.42690063      2.42690063      2.23555842
## 149      1.44946373      1.48684468      1.52642702      2.42690063
## 150      1.99828954      1.91230127      1.99828954      1.71527720
## 151      1.41400510      1.25874673      1.44946373      1.99828954
## 152      0.78667510      0.21802303      0.85805346      0.73567430
## 153      1.31706374      1.83849262      1.48684468      1.77352271
## 154      0.95396468      0.60806071      1.01596791      0.89542793
## 155      2.23555842      1.99828954      2.23555842      2.80216172
## 156      0.87658763      0.25729077      0.95396468      0.91459156
## 157      1.05957037      0.93409710      1.08214564      1.83849262
## 158      1.08214564      0.62344075      1.05957037      1.56855670
## 159      0.65465430      0.06366298      0.80413364      0.99487522
## 160     -0.23107198     -1.41400510      0.70271480      0.71909690
## 161      1.10528634      0.83980946      1.10528634      1.01596791
## 162     -0.89542793      1.44946373      0.67050162     -1.44946373
## 163     -0.12758531      1.61367018      0.71909690      0.29695946
## 164      1.17854682      1.15343724      1.17854682      0.95396468
## 165      0.35060018     -0.47537773      0.75245638      0.97421613
## 166      1.15343724      0.97421613      1.15343724      1.23113036
## 167      0.68651916     -0.16617364      0.82184079      0.93409710
## 168      1.56855670      1.41400510      1.61367018      1.08214564
## 169      2.10223158      2.23555842      2.10223158      1.17854682
## 170      1.91230127      1.71527720      1.91230127      1.34797950
## 171      0.82184079      0.80413364      0.93409710      0.57772207
## 172      0.80413364      1.20442230      0.87658763      0.67050162
## 173      1.12903457      0.95396468      1.12903457      1.38024023
## 174      0.36416334      1.23113036      0.73567430      0.83980946
## 175      2.80216172      2.80216172      2.80216172      1.91230127
```

```
## 176      1.25874673      1.05957037      1.25874673      2.10223158
## 177      1.71527720      1.56855670      1.83849262      1.31706374
## 178      1.52642702      1.38024023      1.56855670      1.05957037
## 179     -0.46117919     -1.48684468      0.68651916      0.00000000
## 180      1.34797950      1.31706374      1.31706374      1.61367018
## 181      0.62344075     -0.24416040      0.78667510      0.78667510
## 182      1.48684468      1.66232963      1.38024023      1.03752256
## 183      1.20442230      0.99487522      1.20442230      1.44946373
## 184      1.77352271      1.12903457      1.41400510      1.52642702
## 185      1.83849262      2.10223158      1.77352271      1.20442230
## 186      1.01596791      1.17854682      1.03752256      0.59282318
## 187      1.28735798      1.03752256      1.28735798      1.48684468
## 188      1.23113036      1.01596791      1.23113036      1.66232963
## 189      0.93409710      0.82184079      0.97421613      1.41400510
## 190      0.99487522      0.76945312      0.99487522      1.15343724
## 191      0.76945312      0.20501110      0.83980946      1.12903457
## 192      1.66232963      1.52642702      1.71527720      1.28735798
## 193      0.54790615     -0.31028376      0.76945312      0.62344075
## 194      1.61367018      1.77352271      1.66232963      1.25874673
## 195      0.83980946      0.29695946      0.89542793      0.85805346
## 196      1.38024023      1.34797950      1.34797950      1.10528634
## 197      0.85805346      0.31028376      0.91459156      0.87658763
##     SVAR_cooc.L.PET SENT_cooc.L.PET ASM_cooc.L.PET Contrast_cooc.L.PET
## 1        0.21802303      0.23107198    -0.28368767         -0.03818128
## 2        0.16617364      0.05091800    -0.10196844          0.63896971
## 3        0.27046566      0.46117919    -0.37779383         -0.02545075
## 4       -1.34797950     -0.82184079    -0.07641832         -1.28735798
## 5       -0.82184079     -0.89542793     0.00000000         -0.35060018
## 6       -0.17908874     -0.06366298    -0.35060018         -0.07641832
## 7       -0.20501110     -0.25729077    -0.23107198          0.24416040
## 8       -0.05091800     -0.17908874    -0.17908874          0.62344075
## 9        0.48967276      0.47537773    -0.15328619         -0.57772207
## 10      -0.19203379     -0.53318051    -0.01272434          0.14042416
## 11      -0.70271480     -0.39149488    -0.24416040         -1.08214564
## 12      -0.11476746      0.06366298    -0.32366339         -0.16617364
## 13      -0.16617364      0.14042416    -0.47537773          0.02545075
## 14       0.56275157     -0.75245638     0.16617364          1.83849262
## 15      -0.41912210     -0.35060018    -0.41912210         -0.27046566
## 16      -0.89542793     -0.71909690    -0.05091800         -0.36416334
## 17      -0.50406856     -0.40526982    -0.16617364         -0.71909690
## 18      -0.43305527     -0.63896971    -0.08918610         -1.05957037
## 19      -0.39149488     -0.32366339    -0.33710120         -0.14042416
## 20      -0.23107198     -0.19203379    -0.31028376         -0.53318051
## 21      -0.32366339     -0.33710120    -0.21802303         -0.15328619
## 22       0.82184079      0.16617364     0.03818128          1.71527720
## 23       0.47537773      0.56275157    -0.48967276          0.85805346
## 24      -1.17854682     -0.76945312    -0.27046566         -0.29695946
## 25       0.85805346      0.54790615    -0.03818128          0.21802303
## 26      -1.05957037     -1.01596791     0.05091800         -1.34797950
## 27       0.65465430     -0.03818128     0.02545075          0.47537773
## 28      -0.60806071     -0.44707302    -0.29695946         -0.41912210
## 29      -0.14042416     -0.10196844    -0.11476746         -0.01272434
## 30      -0.35060018     -0.20501110    -0.46117919         -0.06366298
## 31       1.10528634      0.63896971    -0.19203379          0.39149488
## 32       0.54790615      0.20501110    -0.20501110         -0.59282318
```

```
## 33      -0.37779383     -0.28368767    -0.40526982         -0.25729077
## 34       0.00000000     -0.14042416    -0.12758531         -0.08918610
## 35      -0.75245638     -0.73567430    -0.14042416         -0.43305527
## 36       0.40526982      0.08918610    -0.02545075          1.01596791
## 37      -0.10196844     -0.02545075    -0.39149488          0.60806071
## 38       0.23107198     -0.23107198    -0.06366298          0.68651916
## 39      -0.24416040      0.03818128    -0.43305527         -0.24416040
## 40       0.06366298      0.40526982    -0.44707302          0.78667510
## 41       0.51856960      0.25729077    -0.25729077          0.29695946
## 42      -0.08918610      0.21802303    -0.36416334          0.08918610
## 43      -0.99487522     -0.85805346     0.01272434         -1.71527720
## 44       1.08214564      0.62344075    -0.50406856          0.37779383
## 45      -0.33710120     -0.93409710     0.82184079         -0.12758531
## 46      -0.62344075     -0.80413364     0.80413364         -1.56855670
## 47       0.03818128      0.41912210     0.48967276         -0.20501110
## 48      -0.97421613     -0.60806071     0.59282318         -1.03752256
## 49       0.11476746      0.33710120     0.53318051          1.05957037
## 50       0.19203379      0.35060018     0.46117919          0.25729077
## 51      -0.15328619      0.15328619     0.44707302          0.71909690
## 52      -0.27046566     -0.05091800     0.54790615          0.15328619
## 53      -1.01596791     -0.87658763     0.73567430         -0.76945312
## 54       0.17908874      0.02545075     0.63896971          0.27046566
## 55      -0.21802303     -0.36416334     0.67050162         -0.56275157
## 56       0.73567430      0.48967276     0.71909690          0.91459156
## 57      -0.95396468     -0.68651916     0.60806071         -0.63896971
## 58      -0.87658763     -0.47537773     0.51856960         -0.37779383
## 59       0.75245638      0.57772207     0.47537773         -0.44707302
## 60      -0.83980946     -0.54790615     0.62344075         -1.17854682
## 61      -1.99828954     -0.99487522     0.76945312         -2.23555842
## 62      -0.78667510     -0.51856960     0.50406856         -0.32366339
## 63      -2.80216172     -2.10223158     0.97421613         -2.80216172
## 64      -1.91230127     -1.05957037     0.78667510         -2.10223158
## 65       0.43305527     -0.08918610     0.70271480         -0.05091800
## 66      -2.10223158     -1.03752256     0.75245638         -1.66232963
## 67      -0.65465430     -0.50406856     0.65465430         -0.17908874
## 68      -0.67050162     -0.46117919     0.57772207         -1.15343724
## 69      -0.06366298     -0.12758531     0.56275157          0.43305527
## 70      -0.85805346     -0.65465430     0.68651916          0.82184079
## 71      -0.25729077     -0.11476746     0.83980946          0.67050162
## 72      -1.31706374     -0.97421613     0.95396468         -0.62344075
## 73      -1.83849262     -0.95396468     0.99487522         -0.60806071
## 74      -0.44707302     -0.31028376     0.87658763         -0.23107198
## 75      -0.91459156     -0.70271480     0.91459156         -1.77352271
## 76       0.10196844     -0.62344075     1.01596791          1.38024023
## 77       0.44707302      0.37779383     0.93409710          0.07641832
## 78      -0.28368767     -0.24416040     0.89542793          0.56275157
## 79      -0.07641832     -0.16617364     0.06366298          0.41912210
## 80      -2.23555842     -1.08214564     0.20501110         -2.42690063
## 81       0.20501110      0.36416334     0.10196844          0.12758531
## 82      -0.93409710     -0.78667510     0.15328619         -1.31706374
## 83       0.67050162     -0.01272434     0.17908874          0.48967276
## 84      -0.12758531     -0.07641832     0.12758531          0.00000000
## 85       1.12903457      0.65465430     0.11476746          0.40526982
## 86       0.24416040     -0.21802303     0.14042416          0.70271480
## 87      -0.48967276     -0.91459156     0.19203379         -0.19203379
```

```
## 88       0.15328619      0.39149488     0.07641832          0.06366298
## 89      -0.01272434      0.27046566     0.08918610          0.01272434
## 90      -0.53318051     -1.99828954    -0.78667510         -0.48967276
## 91      -0.57772207     -1.77352271    -0.80413364         -0.46117919
## 92      -1.48684468     -1.41400510    -0.71909690         -0.83980946
## 93      -0.29695946     -0.29695946    -0.54790615          0.54790615
## 94      -1.10528634     -1.17854682    -0.83980946         -1.44946373
## 95       0.33710120     -2.42690063    -0.76945312          0.59282318
## 96      -1.23113036     -1.12903457    -0.85805346         -0.67050162
## 97      -0.46117919     -1.71527720    -0.82184079          0.20501110
## 98      -1.20442230     -1.10528634    -0.75245638         -0.65465430
## 99      -0.76945312     -0.48967276     0.85805346         -0.31028376
## 100      0.63896971     -0.15328619    -0.68651916          0.46117919
## 101      1.03752256      0.59282318    -0.73567430          0.35060018
## 102     -1.52642702     -1.44946373    -0.87658763         -0.85805346
## 103     -1.41400510     -1.34797950    -0.57772207         -0.80413364
## 104     -1.08214564     -1.15343724    -0.70271480         -1.41400510
## 105     -1.38024023     -1.31706374    -0.53318051         -0.78667510
## 106      0.59282318      0.32366339    -0.51856960         -0.97421613
## 107      0.02545075      0.28368767     0.41912210         -0.39149488
## 108     -0.02545075      0.19203379     0.39149488         -1.83849262
## 109      0.29695946      0.50406856     0.40526982         -1.20442230
## 110      0.41912210      0.17908874     0.43305527          1.03752256
## 111      0.07641832      0.44707302     0.36416334          0.80413364
## 112      0.53318051      0.29695946     0.37779383          0.31028376
## 113     -1.44946373     -1.38024023    -0.60806071         -0.82184079
## 114      0.14042416      0.31028376    -0.67050162          0.05091800
## 115      0.08918610     -0.67050162    -0.56275157          1.34797950
## 116      1.05957037      0.60806071    -0.63896971          0.36416334
## 117     -0.51856960     -0.43305527    -0.62344075         -0.73567430
## 118     -0.71909690     -0.41912210    -0.65465430         -1.10528634
## 119     -0.63896971     -0.83980946    -0.59282318         -1.61367018
## 120     -0.56275157     -2.23555842    -1.91230127         -0.50406856
## 121     -0.59282318     -1.91230127    -1.99828954         -0.47537773
## 122     -1.71527720     -1.61367018    -1.66232963         -0.93409710
## 123     -0.31028376     -0.37779383    -1.31706374          0.53318051
## 124     -1.15343724     -1.28735798    -2.23555842         -1.52642702
## 125      0.32366339     -2.80216172    -1.83849262          0.57772207
## 126     -1.28735798     -1.23113036    -2.42690063         -0.70271480
## 127     -0.47537773     -1.83849262    -2.10223158          0.19203379
## 128     -1.25874673     -1.20442230    -1.77352271         -0.68651916
## 129     -0.80413364     -0.59282318    -0.91459156         -0.33710120
## 130      0.62344075     -0.27046566    -1.56855670          0.44707302
## 131      0.99487522      0.51856960    -1.71527720          0.32366339
## 132     -1.77352271     -1.66232963    -2.80216172         -0.95396468
## 133     -1.61367018     -1.52642702    -1.34797950         -0.89542793
## 134     -1.12903457     -1.25874673    -1.61367018         -1.48684468
## 135     -1.56855670     -1.48684468    -1.28735798         -0.87658763
## 136      0.57772207      0.12758531    -1.25874673         -0.99487522
## 137      0.01272434      0.07641832    -1.12903457         -0.40526982
## 138     -0.03818128      0.01272434    -1.17854682         -1.91230127
## 139      0.28368767      0.43305527    -1.15343724         -1.23113036
## 140      0.39149488      0.00000000    -1.10528634          0.99487522
## 141      0.05091800      0.24416040    -1.23113036          0.76945312
## 142      0.50406856      0.10196844    -1.20442230          0.28368767
```

```
## 143     -1.66232963     -1.56855670    -1.38024023         -0.91459156
## 144      0.12758531      0.11476746    -1.52642702          0.03818128
## 145      1.01596791      0.53318051    -1.44946373          0.33710120
## 146     -0.54790615     -0.57772207    -1.41400510         -0.75245638
## 147     -0.73567430     -0.56275157    -1.48684468         -1.12903457
## 148      1.52642702      1.77352271     1.15343724          2.42690063
## 149      1.66232963      1.83849262     1.05957037          1.28735798
## 150      1.31706374      1.66232963     1.03752256          1.99828954
## 151      1.23113036      1.52642702     1.17854682          1.23113036
## 152      0.60806071      0.95396468     1.52642702          0.11476746
## 153      1.61367018      1.61367018     1.31706374          1.31706374
## 154      1.28735798      1.20442230     1.38024023          0.65465430
## 155      2.23555842      2.23555842     1.48684468          2.23555842
## 156      0.68651916      1.01596791     1.25874673          0.23107198
## 157      0.76945312      1.15343724     1.12903457          0.87658763
## 158      2.42690063      2.42690063     1.08214564          0.83980946
## 159      0.80413364      1.08214564     1.28735798         -0.11476746
## 160     -0.40526982      0.87658763     1.61367018         -1.25874673
## 161      0.83980946      1.10528634     1.10528634          0.89542793
## 162     -2.42690063      0.68651916     2.23555842         -1.99828954
## 163     -0.36416334      0.83980946     1.66232963         -1.01596791
## 164      1.91230127      1.44946373     1.44946373          1.08214564
## 165     -0.68651916      0.85805346     1.56855670         -0.51856960
## 166      0.89542793      1.12903457     1.34797950          0.97421613
## 167      0.87658763      1.17854682     1.23113036         -0.10196844
## 168      1.41400510      1.38024023     1.20442230          1.48684468
## 169      0.78667510      1.03752256     1.41400510          2.10223158
## 170      1.25874673      1.41400510     1.71527720          1.77352271
## 171      0.35060018      0.89542793     2.10223158          0.50406856
## 172      0.25729077      0.91459156     2.42690063          0.51856960
## 173      1.15343724      1.23113036     1.77352271          0.93409710
## 174      0.71909690      0.99487522     1.91230127         -0.54790615
## 175      1.48684468      1.05957037     2.80216172          2.80216172
## 176      1.99828954      1.99828954     1.99828954          1.17854682
## 177      1.20442230      1.28735798     1.83849262          1.61367018
## 178      1.38024023      1.34797950     0.21802303          1.44946373
## 179     -1.03752256      0.82184079     0.35060018         -1.38024023
## 180      1.71527720      1.91230127     0.25729077          1.20442230
## 181      0.70271480      0.97421613     0.31028376         -0.21802303
## 182      2.10223158      1.56855670     0.32366339          1.52642702
## 183      1.34797950      1.48684468     0.28368767          1.10528634
## 184      2.80216172      2.80216172     0.27046566          1.41400510
## 185      1.77352271      1.31706374     0.29695946          1.91230127
## 186      0.95396468      0.93409710     0.33710120          0.95396468
## 187      1.56855670      2.10223158     0.23107198          1.15343724
## 188      1.44946373      1.71527720     0.24416040          1.12903457
## 189      0.93409710      0.70271480    -0.99487522          0.73567430
## 190      0.91459156      0.71909690    -1.01596791          0.75245638
## 191      0.31028376      0.75245638    -0.93409710          0.10196844
## 192      1.17854682      1.25874673    -0.89542793          1.56855670
## 193      0.46117919      0.76945312    -1.05957037         -0.28368767
## 194      1.83849262      0.67050162    -0.97421613          1.66232963
## 195      0.36416334      0.78667510    -1.08214564          0.16617364
## 196      0.97421613      0.73567430    -1.03752256          1.25874673
## 197      0.37779383      0.80413364    -0.95396468          0.17908874
```

```
##     Dissimilarity_cooc.L.PET Inv_diff_cooc.L.PET Inv_diff_norm_cooc.L.PET
## 1                -0.11476746         -0.37779383              -0.33710120
## 2                 0.46117919         -0.62344075              -0.75245638
## 3                -0.05091800         -0.65465430              -0.44707302
## 4                -1.34797950          0.40526982               0.40526982
## 5                -0.48967276          0.05091800               0.02545075
## 6                -0.14042416         -0.36416334              -0.28368767
## 7                 0.05091800         -0.40526982              -0.51856960
## 8                 0.50406856         -0.78667510              -0.80413364
## 9                -0.59282318         -0.12758531               0.05091800
## 10               -0.03818128         -0.33710120              -0.41912210
## 11               -1.17854682          0.27046566               0.33710120
## 12               -0.21802303         -0.31028376              -0.20501110
## 13               -0.07641832         -0.43305527              -0.40526982
## 14                0.97421613         -1.31706374              -1.61367018
## 15               -0.37779383         -0.10196844              -0.10196844
## 16               -0.43305527         -0.03818128              -0.05091800
## 17               -0.76945312          0.46117919               0.32366339
## 18               -1.20442230          0.37779383               0.35060018
## 19               -0.15328619         -0.39149488              -0.29695946
## 20               -0.50406856         -0.08918610               0.01272434
## 21               -0.24416040         -0.21802303              -0.16617364
## 22                1.03752256         -1.61367018              -1.71527720
## 23                0.63896971         -1.20442230              -1.15343724
## 24               -0.31028376         -0.17908874              -0.14042416
## 25                0.27046566         -0.73567430              -0.70271480
## 26               -1.56855670          0.51856960               0.46117919
## 27                0.19203379         -0.59282318              -0.59282318
## 28               -0.44707302         -0.06366298              -0.03818128
## 29               -0.10196844         -0.53318051              -0.43305527
## 30               -0.17908874         -0.24416040              -0.21802303
## 31                0.41912210         -0.99487522              -0.82184079
## 32               -0.63896971          0.24416040               0.20501110
## 33               -0.29695946         -0.15328619              -0.12758531
## 34               -0.19203379         -0.05091800              -0.19203379
## 35               -0.51856960          0.07641832               0.08918610
## 36                0.71909690         -1.25874673              -1.38024023
## 37                0.44707302         -0.76945312              -0.78667510
## 38                0.47537773         -0.89542793              -0.76945312
## 39               -0.40526982         -0.07641832              -0.07641832
## 40                0.59282318         -1.05957037              -0.99487522
## 41                0.11476746         -0.47537773              -0.53318051
## 42               -0.02545075         -0.67050162              -0.48967276
## 43               -1.83849262          0.53318051               0.51856960
## 44                0.40526982         -1.10528634              -0.83980946
## 45               -0.41912210          0.33710120               0.29695946
## 46               -1.91230127          0.73567430               0.59282318
## 47               -0.20501110         -0.19203379               0.00000000
## 48               -1.12903457          0.47537773               0.48967276
## 49                0.75245638         -1.28735798              -1.20442230
## 50                0.15328619         -0.14042416              -0.24416040
## 51                0.53318051         -0.56275157              -0.54790615
## 52                0.14042416         -0.27046566              -0.27046566
## 53               -0.82184079          0.36416334               0.39149488
## 54                0.03818128         -0.01272434              -0.17908874
```

```
## 55          -0.57772207          0.23107198          0.31028376
## 56           0.67050162         -0.63896971         -0.85805346
## 57          -0.65465430          0.28368767          0.36416334
## 58          -0.47537773          0.20501110          0.27046566
## 59          -0.39149488         -0.02545075          0.19203379
## 60          -1.31706374          0.48967276          0.53318051
## 61          -2.23555842          0.67050162          0.63896971
## 62          -0.35060018          0.08918610          0.17908874
## 63          -2.80216172          0.97421613          0.65465430
## 64          -2.10223158          0.63896971          0.62344075
## 65          -0.16617364          0.12758531          0.06366298
## 66          -1.77352271          0.56275157          0.56275157
## 67          -0.25729077          0.02545075          0.11476746
## 68          -1.28735798          0.44707302          0.50406856
## 69           0.23107198         -0.41912210         -0.37779383
## 70           0.56275157         -0.51856960         -0.57772207
## 71           0.51856960         -0.54790615         -0.47537773
## 72          -0.70271480          0.39149488          0.43305527
## 73          -0.75245638          0.41912210          0.47537773
## 74          -0.27046566          0.16617364          0.21802303
## 75          -1.71527720          0.54790615          0.57772207
## 76           0.91459156         -1.34797950         -1.52642702
## 77           0.00000000         -0.23107198         -0.15328619
## 78           0.31028376         -0.28368767         -0.35060018
## 79           0.21802303         -0.71909690         -0.60806071
## 80          -2.42690063          0.71909690          0.60806071
## 81           0.06366298         -0.60806071         -0.50406856
## 82          -1.38024023          0.43305527          0.44707302
## 83           0.20501110         -0.48967276         -0.56275157
## 84          -0.08918610         -0.44707302         -0.36416334
## 85           0.43305527         -0.93409710         -0.71909690
## 86           0.48967276         -0.85805346         -0.68651916
## 87          -0.53318051          0.29695946          0.16617364
## 88           0.02545075         -0.57772207         -0.46117919
## 89          -0.06366298         -0.50406856         -0.39149488
## 90          -0.60806071         -0.20501110         -0.25729077
## 91          -0.54790615         -0.35060018         -0.32366339
## 92          -0.95396468          0.06366298         -0.02545075
## 93           0.29695946         -1.08214564         -1.03752256
## 94          -1.44946373          0.31028376          0.25729077
## 95           0.25729077         -1.17854682         -1.17854682
## 96          -0.68651916          0.01272434         -0.11476746
## 97           0.10196844         -1.23113036         -0.97421613
## 98          -0.67050162          0.03818128         -0.08918610
## 99          -0.33710120          0.14042416          0.23107198
## 100          0.17908874         -1.01596791         -1.10528634
## 101          0.37779383         -1.52642702         -1.34797950
## 102         -0.97421613          0.00000000         -0.06366298
## 103         -0.91459156          0.11476746          0.10196844
## 104         -1.41400510          0.32366339          0.28368767
## 105         -0.87658763          0.17908874          0.14042416
## 106         -0.80413364          0.21802303          0.24416040
## 107         -0.28368767         -0.11476746          0.12758531
## 108         -1.61367018          0.50406856          0.54790615
## 109         -1.10528634          0.25729077          0.41912210
```

```
## 110          0.73567430        -0.75245638          -1.08214564
## 111          0.60806071        -0.68651916          -0.62344075
## 112          0.12758531        -0.16617364          -0.23107198
## 113         -0.93409710         0.10196844           0.07641832
## 114          0.01272434        -0.97421613          -0.87658763
## 115          0.89542793        -1.77352271          -2.42690063
## 116          0.39149488        -1.48684468          -1.31706374
## 117         -0.78667510         0.35060018           0.03818128
## 118         -1.23113036         0.15328619           0.15328619
## 119         -1.99828954         0.57772207           0.37779383
## 120         -0.62344075        -1.44946373          -1.44946373
## 121         -0.56275157        -1.56855670          -1.48684468
## 122         -1.05957037        -0.95396468          -1.12903457
## 123          0.28368767        -1.99828954          -1.83849262
## 124         -1.52642702        -0.32366339          -0.65465430
## 125          0.24416040        -2.10223158          -2.10223158
## 126         -0.73567430        -1.12903457          -1.28735798
## 127          0.07641832        -2.23555842          -1.77352271
## 128         -0.71909690        -1.03752256          -1.25874673
## 129         -0.36416334        -0.83980946          -0.73567430
## 130          0.16617364        -1.91230127          -1.99828954
## 131          0.32366339        -2.80216172          -2.80216172
## 132         -1.08214564        -1.15343724          -1.23113036
## 133         -1.01596791        -0.87658763          -0.95396468
## 134         -1.48684468        -0.29695946          -0.63896971
## 135         -0.99487522        -0.80413364          -0.91459156
## 136         -0.85805346        -0.70271480          -0.67050162
## 137         -0.32366339        -1.38024023          -0.93409710
## 138         -1.66232963         0.19203379          -0.01272434
## 139         -1.15343724        -0.46117919          -0.31028376
## 140          0.70271480        -1.71527720          -1.91230127
## 141          0.57772207        -1.66232963          -1.56855670
## 142          0.08918610        -1.41400510          -1.41400510
## 143         -1.03752256        -0.91459156          -1.01596791
## 144         -0.01272434        -1.83849262          -1.66232963
## 145          0.33710120        -2.42690063          -2.23555842
## 146         -0.83980946        -0.25729077          -1.05957037
## 147         -1.25874673        -0.82184079          -0.89542793
## 148          2.42690063         0.60806071           0.68651916
## 149          1.44946373         1.10528634           1.08214564
## 150          1.99828954         0.83980946           0.85805346
## 151          1.41400510         1.03752256           1.03752256
## 152          0.78667510         1.56855670           1.56855670
## 153          1.31706374         1.15343724           1.10528634
## 154          0.95396468         1.41400510           1.48684468
## 155          2.23555842         0.78667510           0.75245638
## 156          0.87658763         1.44946373           1.52642702
## 157          1.05957037         1.38024023           1.44946373
## 158          1.08214564         1.12903457           1.34797950
## 159          0.65465430         1.83849262           1.83849262
## 160         -0.23107198         2.23555842           2.42690063
## 161          1.10528634         1.28735798           1.31706374
## 162         -0.89542793         2.80216172           2.80216172
## 163         -0.12758531         2.10223158           2.23555842
## 164          1.17854682         1.31706374           1.23113036
```

```
## 165               0.35060018          1.99828954                1.91230127
## 166               1.15343724          1.20442230                1.25874673
## 167               0.68651916          1.77352271                1.77352271
## 168               1.56855670          0.95396468                0.95396468
## 169               2.10223158          0.87658763                0.82184079
## 170               1.91230127          0.85805346                0.89542793
## 171               0.82184079          1.61367018                1.61367018
## 172               0.80413364          1.66232963                1.71527720
## 173               1.12903457          1.34797950                1.38024023
## 174               0.36416334          1.91230127                1.99828954
## 175               2.80216172          0.59282318                0.67050162
## 176               1.25874673          1.05957037                1.12903457
## 177               1.71527720          1.01596791                0.99487522
## 178               1.52642702          0.76945312                0.80413364
## 179              -0.46117919          2.42690063                2.10223158
## 180               1.34797950          0.80413364                0.87658763
## 181               0.62344075          1.71527720                1.66232963
## 182               1.48684468          0.91459156                0.83980946
## 183               1.20442230          0.93409710                0.97421613
## 184               1.77352271          0.70271480                0.76945312
## 185               1.83849262          0.75245638                0.78667510
## 186               1.01596791          1.48684468                1.28735798
## 187               1.28735798          0.82184079                0.91459156
## 188               1.23113036          0.89542793                0.93409710
## 189               0.93409710          1.08214564                1.05957037
## 190               0.99487522          0.99487522                1.01596791
## 191               0.76945312          1.25874673                1.20442230
## 192               1.66232963          0.68651916                0.71909690
## 193               0.54790615          1.52642702                1.41400510
## 194               1.61367018          0.65465430                0.70271480
## 195               0.83980946          1.17854682                1.15343724
## 196               1.38024023          0.62344075                0.73567430
## 197               0.85805346          1.23113036                1.17854682
##     IDM_cooc.L.PET IDM_norm_cooc.L.PET Inv_var_cooc.L.PET
## 1      -0.44707302         -0.32366339        -0.41912210
## 2      -0.59282318         -0.78667510        -0.54790615
## 3      -0.70271480         -0.37779383        -0.63896971
## 4       0.41912210          0.36416334         0.47537773
## 5       0.06366298          0.05091800         0.11476746
## 6      -0.39149488         -0.24416040        -0.37779383
## 7      -0.31028376         -0.53318051        -0.33710120
## 8      -0.76945312         -0.76945312        -0.75245638
## 9      -0.15328619          0.16617364        -0.28368767
## 10     -0.29695946         -0.50406856        -0.27046566
## 11      0.27046566          0.31028376         0.31028376
## 12     -0.36416334         -0.11476746        -0.56275157
## 13     -0.46117919         -0.39149488        -0.36416334
## 14     -0.75245638         -1.66232963        -0.78667510
## 15     -0.11476746         -0.01272434        -0.08918610
## 16     -0.01272434          0.03818128        -0.21802303
## 17      0.57772207          0.24416040         0.03818128
## 18      0.39149488          0.27046566         0.40526982
## 19     -0.41912210         -0.19203379        -0.48967276
## 20     -0.14042416          0.12758531        -0.14042416
## 21     -0.24416040         -0.12758531        -0.16617364
```

```
## 22     -1.52642702         -1.61367018        -1.52642702
## 23     -0.89542793         -0.89542793        -0.93409710
## 24     -0.21802303          0.00000000        -0.15328619
## 25     -0.65465430         -0.62344075        -0.87658763
## 26      0.65465430          0.39149488         0.62344075
## 27     -0.51856960         -0.65465430        -0.68651916
## 28     -0.06366298          0.06366298        -0.11476746
## 29     -0.56275157         -0.36416334        -0.62344075
## 30     -0.25729077         -0.23107198        -0.23107198
## 31     -0.95396468         -0.67050162        -0.89542793
## 32      0.23107198          0.17908874         0.24416040
## 33     -0.23107198         -0.05091800        -0.20501110
## 34      0.10196844         -0.25729077         0.08918610
## 35      0.11476746          0.10196844         0.16617364
## 36     -0.83980946         -1.08214564        -0.73567430
## 37     -0.71909690         -0.73567430        -0.71909690
## 38     -0.87658763         -0.75245638        -0.51856960
## 39     -0.08918610         -0.02545075        -0.06366298
## 40     -0.93409710         -0.83980946        -1.05957037
## 41     -0.43305527         -0.57772207        -0.17908874
## 42     -0.73567430         -0.43305527        -0.67050162
## 43      0.63896971          0.41912210         0.60806071
## 44     -0.99487522         -0.70271480        -0.91459156
## 45      0.36416334          0.23107198         0.43305527
## 46      1.05957037          0.59282318         1.05957037
## 47     -0.20501110          0.21802303        -0.12758531
## 48      0.54790615          0.48967276         0.51856960
## 49     -0.91459156         -0.87658763        -0.85805346
## 50     -0.03818128         -0.14042416        -0.02545075
## 51     -0.40526982         -0.44707302        -0.31028376
## 52     -0.19203379         -0.07641832        -0.32366339
## 53      0.43305527          0.44707302         0.44707302
## 54      0.15328619         -0.08918610         0.17908874
## 55      0.24416040          0.37779383         0.21802303
## 56     -0.28368767         -0.68651916        -0.44707302
## 57      0.29695946          0.43305527         0.33710120
## 58      0.20501110          0.29695946         0.23107198
## 59      0.03818128          0.32366339         0.00000000
## 60      0.60806071          0.53318051         0.59282318
## 61      0.95396468          0.63896971         0.97421613
## 62      0.14042416          0.28368767         0.19203379
## 63      1.38024023          0.65465430         1.31706374
## 64      0.93409710          0.62344075         0.91459156
## 65      0.21802303          0.14042416         0.15328619
## 66      0.70271480          0.57772207         0.65465430
## 67      0.08918610          0.20501110         0.01272434
## 68      0.51856960          0.51856960         0.48967276
## 69     -0.33710120         -0.21802303        -0.24416040
## 70     -0.32366339         -0.51856960        -0.35060018
## 71     -0.37779383         -0.35060018        -0.43305527
## 72      0.46117919          0.46117919         0.54790615
## 73      0.48967276          0.47537773         0.46117919
## 74      0.17908874          0.33710120         0.25729077
## 75      0.67050162          0.60806071         0.63896971
## 76     -0.82184079         -1.23113036        -1.12903457
```

```
## 77     -0.17908874          0.11476746        -0.10196844
## 78     -0.16617364         -0.16617364        -0.19203379
## 79     -0.68651916         -0.59282318        -0.59282318
## 80      1.03752256          0.54790615         1.01596791
## 81     -0.62344075         -0.46117919        -0.57772207
## 82      0.47537773          0.40526982         0.50406856
## 83     -0.47537773         -0.56275157        -0.60806071
## 84     -0.48967276         -0.28368767        -0.53318051
## 85     -0.85805346         -0.60806071        -0.83980946
## 86     -0.80413364         -0.71909690        -0.46117919
## 87      0.33710120          0.08918610         0.37779383
## 88     -0.54790615         -0.40526982        -0.50406856
## 89     -0.50406856         -0.31028376        -0.47537773
## 90     -0.27046566         -0.47537773        -0.25729077
## 91     -0.53318051         -0.48967276        -0.40526982
## 92     -0.02545075         -0.20501110        -0.03818128
## 93     -1.01596791         -0.93409710        -0.97421613
## 94      0.28368767          0.01272434         0.32366339
## 95     -1.10528634         -1.05957037        -1.01596791
## 96     -0.05091800         -0.33710120        -0.05091800
## 97     -1.12903457         -0.91459156        -1.20442230
## 98      0.00000000         -0.27046566         0.02545075
## 99      0.16617364          0.35060018         0.20501110
## 100    -1.05957037         -0.99487522        -1.10528634
## 101    -1.44946373         -1.03752256        -1.44946373
## 102    -0.07641832         -0.29695946        -0.07641832
## 103     0.02545075         -0.06366298         0.10196844
## 104     0.31028376          0.07641832         0.35060018
## 105     0.12758531          0.02545075         0.14042416
## 106     0.19203379          0.19203379         0.28368767
## 107    -0.12758531          0.25729077        -0.01272434
## 108     0.59282318          0.56275157         0.57772207
## 109     0.25729077          0.50406856         0.27046566
## 110    -0.57772207         -0.82184079        -0.39149488
## 111    -0.60806071         -0.54790615        -0.76945312
## 112    -0.10196844         -0.17908874         0.07641832
## 113     0.01272434         -0.10196844         0.05091800
## 114    -1.08214564         -0.80413364        -0.99487522
## 115    -1.61367018         -1.99828954        -1.71527720
## 116    -1.34797950         -0.97421613        -1.38024023
## 117     0.37779383         -0.15328619        -0.29695946
## 118     0.07641832         -0.03818128         0.12758531
## 119     0.80413364          0.15328619         0.82184079
## 120    -1.56855670         -1.48684468        -1.48684468
## 121    -1.66232963         -1.52642702        -1.66232963
## 122    -1.28735798         -1.34797950        -1.31706374
## 123    -1.83849262         -1.91230127        -1.83849262
## 124    -0.67050162         -1.15343724        -0.70271480
## 125    -2.10223158         -2.80216172        -1.99828954
## 126    -1.31706374         -1.44946373        -1.34797950
## 127    -2.23555842         -1.83849262        -2.23555842
## 128    -1.25874673         -1.38024023        -1.25874673
## 129    -1.03752256         -0.85805346        -0.95396468
## 130    -1.91230127         -2.23555842        -2.10223158
## 131    -2.80216172         -2.42690063        -2.80216172
```

```
## 132    -1.38024023         -1.41400510        -1.41400510
## 133    -1.20442230         -1.20442230        -1.15343724
## 134    -0.63896971         -1.10528634        -0.65465430
## 135    -1.15343724         -1.12903457        -1.03752256
## 136    -0.97421613         -1.01596791        -0.80413364
## 137    -1.48684468         -0.95396468        -1.28735798
## 138     0.05091800         -0.41912210         0.06366298
## 139    -0.78667510         -0.63896971        -0.82184079
## 140    -1.71527720         -1.77352271        -1.61367018
## 141    -1.77352271         -1.56855670        -1.77352271
## 142    -1.41400510         -1.31706374        -1.17854682
## 143    -1.23113036         -1.25874673        -1.23113036
## 144    -1.99828954         -1.71527720        -1.91230127
## 145    -2.42690063         -2.10223158        -2.42690063
## 146    -0.35060018         -1.28735798        -1.56855670
## 147    -1.17854682         -1.17854682        -1.08214564
## 148     0.44707302          0.73567430         0.53318051
## 149     1.10528634          1.12903457         1.12903457
## 150     0.82184079          0.91459156         0.89542793
## 151     0.97421613          1.17854682         0.87658763
## 152     1.56855670          1.61367018         1.56855670
## 153     1.25874673          1.15343724         1.25874673
## 154     1.41400510          1.48684468         1.34797950
## 155     0.89542793          0.76945312         0.78667510
## 156     1.48684468          1.56855670         1.48684468
## 157     1.31706374          1.38024023         1.38024023
## 158     1.17854682          1.41400510         1.15343724
## 159     1.83849262          1.83849262         1.83849262
## 160     2.23555842          2.42690063         2.23555842
## 161     1.23113036          1.34797950         1.28735798
## 162     2.80216172          2.80216172         2.80216172
## 163     2.10223158          2.23555842         2.10223158
## 164     1.34797950          1.28735798         1.23113036
## 165     1.99828954          1.99828954         1.99828954
## 166     1.20442230          1.31706374         1.17854682
## 167     1.77352271          1.77352271         1.66232963
## 168     0.85805346          1.05957037         0.95396468
## 169     0.87658763          0.83980946         0.85805346
## 170     0.83980946          0.95396468         0.80413364
## 171     1.61367018          1.66232963         1.77352271
## 172     1.71527720          1.71527720         1.61367018
## 173     1.28735798          1.44946373         1.41400510
## 174     1.91230127          2.10223158         1.91230127
## 175     0.53318051          0.67050162         0.36416334
## 176     0.99487522          1.25874673         1.03752256
## 177     1.01596791          1.10528634         0.99487522
## 178     0.62344075          0.80413364         0.68651916
## 179     2.42690063          1.91230127         2.42690063
## 180     0.68651916          0.89542793         0.70271480
## 181     1.66232963          1.52642702         1.71527720
## 182     0.78667510          0.82184079         0.67050162
## 183     0.76945312          1.01596791         0.71909690
## 184     0.50406856          0.78667510         0.56275157
## 185     0.56275157          0.75245638         0.76945312
## 186     1.52642702          1.23113036         1.52642702
```

```
## 187     0.71909690          0.93409710         0.73567430
## 188     0.75245638          0.99487522         0.75245638
## 189     0.91459156          0.87658763         0.93409710
## 190     0.73567430          0.85805346         0.83980946
## 191     1.12903457          1.08214564         1.10528634
## 192     0.40526982          0.70271480         0.41912210
## 193     1.44946373          1.20442230         1.44946373
## 194     0.35060018          0.68651916         0.39149488
## 195     1.08214564          0.97421613         1.08214564
## 196     0.32366339          0.71909690         0.29695946
## 197     1.15343724          1.03752256         1.20442230
##     Correlation_cooc.L.PET Autocorrelation_cooc.L.PET Tendency_cooc.L.PET
## 1               0.02545075                -0.01272434          0.21802303
## 2              -1.08214564                -0.14042416          0.16617364
## 3               0.06366298                 0.75245638          0.27046566
## 4               0.39149488                -1.17854682         -1.34797950
## 5              -0.54790615                -1.41400510         -0.82184079
## 6              -0.24416040                 0.00000000         -0.17908874
## 7              -1.12903457                -0.02545075         -0.20501110
## 8              -1.20442230                -0.44707302         -0.05091800
## 9               0.67050162                 0.57772207          0.48967276
## 10             -1.05957037                -0.99487522         -0.19203379
## 11              0.48967276                 0.03818128         -0.70271480
## 12              0.05091800                 0.33710120         -0.11476746
## 13             -0.67050162                 0.67050162         -0.16617364
## 14             -2.42690063                -0.89542793          0.56275157
## 15             -0.15328619                 0.11476746         -0.41912210
## 16             -0.80413364                -0.12758531         -0.89542793
## 17              0.36416334                -0.46117919         -0.50406856
## 18              0.47537773                -1.20442230         -0.43305527
## 19             -0.78667510                -0.28368767         -0.39149488
## 20              0.32366339                -0.05091800         -0.23107198
## 21             -0.29695946                -0.76945312         -0.32366339
## 22             -1.83849262                 0.62344075          0.82184079
## 23             -1.01596791                 0.83980946          0.47537773
## 24             -1.17854682                -1.03752256         -1.17854682
## 25              0.19203379                 1.12903457          0.85805346
## 26              0.46117919                -1.99828954         -1.05957037
## 27             -0.06366298                -0.33710120          0.65465430
## 28             -0.20501110                -0.27046566         -0.60806071
## 29             -0.43305527                 0.19203379         -0.14042416
## 30             -0.65465430                 0.29695946         -0.35060018
## 31              0.24416040                 0.54790615          1.10528634
## 32              0.71909690                -0.25729077          0.54790615
## 33             -0.16617364                 0.31028376         -0.37779383
## 34              0.03818128                -0.78667510          0.00000000
## 35             -0.32366339                -1.23113036         -0.75245638
## 36             -1.41400510                 0.08918610          0.40526982
## 37             -1.23113036                -0.11476746         -0.10196844
## 38             -1.03752256                -0.16617364          0.23107198
## 39              0.07641832                 0.63896971         -0.24416040
## 40             -1.28735798                 0.70271480          0.06366298
## 41             -0.10196844                -0.23107198          0.51856960
## 42             -0.59282318                 0.32366339         -0.08918610
## 43              0.63896971                -1.44946373         -0.99487522
```

```
## 44          0.21802303          0.53318051          1.08214564
## 45         -0.31028376         -1.71527720         -0.33710120
## 46          0.80413364         -1.31706374         -0.62344075
## 47          0.31028376          0.93409710          0.03818128
## 48          0.33710120         -0.75245638         -0.97421613
## 49         -1.66232963          0.78667510          0.11476746
## 50         -0.48967276          0.85805346          0.19203379
## 51         -1.34797950          0.28368767         -0.15328619
## 52         -1.10528634          0.65465430         -0.27046566
## 53          0.15328619         -1.38024023         -1.01596791
## 54         -0.53318051          0.46117919          0.17908874
## 55          0.37779383         -0.95396468         -0.21802303
## 56         -0.82184079          1.23113036          0.73567430
## 57          0.10196844         -1.01596791         -0.95396468
## 58         -0.50406856          0.40526982         -0.87658763
## 59          0.65465430          0.59282318          0.75245638
## 60          0.53318051         -0.73567430         -0.83980946
## 61          0.62344075         -1.48684468         -1.99828954
## 62         -0.44707302         -0.82184079         -0.78667510
## 63         -0.73567430         -2.80216172         -2.80216172
## 64          0.59282318         -2.10223158         -1.91230127
## 65          0.23107198         -0.68651916          0.43305527
## 66          0.00000000         -0.93409710         -2.10223158
## 67         -0.63896971         -0.31028376         -0.65465430
## 68          0.56275157         -0.91459156         -0.67050162
## 69         -0.93409710         -0.41912210         -0.06366298
## 70         -1.99828954         -0.87658763         -0.85805346
## 71         -1.48684468         -0.10196844         -0.25729077
## 72         -0.36416334         -1.91230127         -1.31706374
## 73         -0.56275157         -1.77352271         -1.83849262
## 74         -0.12758531         -0.03818128         -0.44707302
## 75          0.76945312         -1.05957037         -0.91459156
## 76         -2.23555842          0.23107198          0.10196844
## 77          0.11476746          0.82184079          0.44707302
## 78         -1.31706374         -0.17908874         -0.28368767
## 79         -0.97421613         -0.43305527         -0.07641832
## 80          0.51856960         -2.23555842         -2.23555842
## 81         -0.41912210          0.35060018          0.20501110
## 82          0.54790615         -1.28735798         -0.93409710
## 83         -0.05091800         -0.32366339          0.67050162
## 84         -0.39149488          0.20501110         -0.12758531
## 85          0.25729077          0.56275157          1.12903457
## 86         -0.99487522         -0.15328619          0.24416040
## 87         -0.60806071         -1.83849262         -0.48967276
## 88         -0.25729077          0.27046566          0.15328619
## 89         -0.14042416          0.39149488         -0.01272434
## 90         -0.08918610          0.14042416         -0.53318051
## 91         -0.11476746         -0.39149488         -0.57772207
## 92         -0.27046566         -0.56275157         -1.48684468
## 93         -1.52642702         -0.19203379         -0.29695946
## 94          0.41912210         -1.56855670         -1.10528634
## 95         -0.95396468         -0.07641832          0.33710120
## 96         -0.35060018         -1.10528634         -1.23113036
## 97         -1.56855670         -0.70271480         -0.46117919
## 98         -0.33710120         -1.08214564         -1.20442230
```

```
## 99          -0.37779383          -0.80413364          -0.76945312
## 100         -0.23107198          -0.35060018           0.63896971
## 101          0.16617364           0.50406856           1.03752256
## 102         -0.28368767          -0.57772207          -1.52642702
## 103         -0.19203379          -0.53318051          -1.41400510
## 104          0.43305527          -1.52642702          -1.08214564
## 105         -0.17908874          -0.51856960          -1.38024023
## 106          0.85805346           0.16617364           0.59282318
## 107          0.40526982           0.37779383           0.02545075
## 108          1.17854682           0.06366298          -0.02545075
## 109          0.95396468           1.38024023           0.29695946
## 110         -1.38024023           0.10196844           0.41912210
## 111         -1.25874673           0.71909690           0.07641832
## 112         -0.03818128          -0.21802303           0.53318051
## 113         -0.21802303          -0.54790615          -1.44946373
## 114         -0.40526982           0.25729077           0.14042416
## 115         -2.80216172           0.21802303           0.08918610
## 116          0.17908874           0.51856960           1.05957037
## 117          0.27046566          -0.47537773          -0.51856960
## 118          0.44707302           0.02545075          -0.71909690
## 119          0.73567430          -1.34797950          -0.63896971
## 120         -0.51856960           0.12758531          -0.56275157
## 121         -0.57772207          -0.40526982          -0.59282318
## 122         -0.75245638          -0.63896971          -1.71527720
## 123         -1.71527720          -0.20501110          -0.31028376
## 124          0.28368767          -1.66232963          -1.15343724
## 125         -1.15343724          -0.08918610           0.32366339
## 126         -0.85805346          -1.15343724          -1.28735798
## 127         -1.77352271          -0.71909690          -0.47537773
## 128         -0.83980946          -1.12903457          -1.25874673
## 129         -0.87658763          -0.83980946          -0.80413364
## 130         -0.71909690          -0.36416334           0.62344075
## 131         -0.01272434           0.47537773           0.99487522
## 132         -0.76945312          -0.65465430          -1.77352271
## 133         -0.68651916          -0.60806071          -1.61367018
## 134          0.29695946          -1.61367018          -1.12903457
## 135         -0.62344075          -0.59282318          -1.56855670
## 136          0.75245638           0.15328619           0.57772207
## 137          0.20501110           0.36416334           0.01272434
## 138          0.97421613           0.05091800          -0.03818128
## 139          0.78667510           1.34797950           0.28368767
## 140         -1.61367018           0.07641832           0.39149488
## 141         -1.44946373           0.68651916           0.05091800
## 142         -0.46117919          -0.24416040           0.50406856
## 143         -0.70271480          -0.62344075          -1.66232963
## 144         -0.89542793           0.24416040           0.12758531
## 145          0.01272434           0.48967276           1.01596791
## 146          0.08918610          -0.48967276          -0.54790615
## 147          0.35060018           0.01272434          -0.73567430
## 148         -0.91459156           2.10223158           1.52642702
## 149          1.01596791           2.42690063           1.66232963
## 150          0.12758531           1.56855670           1.31706374
## 151          0.50406856           1.99828954           1.23113036
## 152          1.52642702          -0.06366298           0.60806071
## 153          0.93409710           1.77352271           1.61367018
```

```
## 154            1.66232963                0.73567430          1.28735798
## 155            0.82184079                2.80216172          2.23555842
## 156            1.44946373                0.60806071          0.68651916
## 157            0.99487522                1.71527720          0.76945312
## 158            2.42690063                1.91230127          2.42690063
## 159            1.83849262                0.91459156          0.80413364
## 160            2.23555842               -0.29695946         -0.40526982
## 161            1.03752256                0.89542793          0.83980946
## 162            0.83980946               -2.42690063         -2.42690063
## 163            2.10223158               -0.97421613         -0.36416334
## 164            1.56855670                0.97421613          1.91230127
## 165            1.41400510                0.76945312         -0.68651916
## 166            0.87658763                1.10528634          0.89542793
## 167            1.99828954                0.80413364          0.87658763
## 168            0.70271480                1.03752256          1.41400510
## 169           -1.91230127                0.87658763          0.78667510
## 170           -0.02545075                1.25874673          1.25874673
## 171            1.10528634               -0.85805346          0.35060018
## 172            0.91459156               -0.50406856          0.25729077
## 173            1.28735798                1.31706374          1.15343724
## 174            2.80216172                0.44707302          0.71909690
## 175           -2.10223158                1.48684468          1.48684468
## 176            1.48684468                2.23555842          1.99828954
## 177            0.14042416                1.17854682          1.20442230
## 178            0.60806071                1.01596791          1.38024023
## 179            1.77352271               -1.25874673         -1.03752256
## 180            1.05957037                1.61367018          1.71527720
## 181            1.91230127                0.17908874          0.70271480
## 182            1.38024023                1.08214564          2.10223158
## 183            1.08214564                1.44946373          1.34797950
## 184            1.61367018                1.83849262          2.80216172
## 185            0.57772207                1.20442230          1.77352271
## 186            0.89542793               -0.67050162          0.95396468
## 187            1.23113036                1.52642702          1.56855670
## 188            1.25874673                1.66232963          1.44946373
## 189            1.34797950                1.41400510          0.93409710
## 190            1.31706374                1.05957037          0.91459156
## 191            1.20442230                0.99487522          0.31028376
## 192           -0.07641832                1.15343724          1.17854682
## 193            1.71527720               -0.37779383          0.46117919
## 194            0.68651916                1.28735798          1.83849262
## 195            1.12903457                0.41912210          0.36416334
## 196           -0.47537773                0.95396468          0.97421613
## 197            1.15343724                0.43305527          0.37779383
##     Shade_cooc.L.PET Prominence_cooc.L.PET  IC1_.L.PET  IC2_.L.PET
## 1         0.35060018            0.29695946  0.11476746 -0.03818128
## 2        -0.05091800            0.11476746 -0.12758531  0.07641832
## 3        -1.44946373            0.10196844  0.33710120 -0.24416040
## 4        -0.21802303           -1.15343724  0.95396468 -0.76945312
## 5         0.75245638           -0.08918610  0.37779383 -0.36416334
## 6        -0.08918610           -0.14042416  0.31028376 -0.23107198
## 7         0.19203379           -0.20501110  0.57772207 -0.44707302
## 8         0.40526982            0.02545075  0.14042416 -0.06366298
## 9        -0.03818128            0.62344075 -0.95396468  0.54790615
## 10        0.82184079            0.50406856 -0.65465430  0.35060018
```

```
## 11       -1.48684468           -1.03752256  0.85805346 -0.62344075
## 12       -1.23113036           -0.29695946  0.25729077 -0.15328619
## 13       -1.38024023           -0.27046566  1.48684468 -1.15343724
## 14        0.78667510            0.78667510 -0.97421613  0.37779383
## 15       -0.25729077           -0.56275157  1.66232963 -1.41400510
## 16       -0.28368767           -1.01596791 -0.24416040  0.16617364
## 17       -0.47537773           -0.70271480  0.40526982 -0.31028376
## 18        0.67050162           -0.24416040  0.67050162 -0.56275157
## 19       -0.16617364           -0.50406856  1.20442230 -0.85805346
## 20        0.05091800           -0.15328619  0.44707302 -0.35060018
## 21        0.57772207            0.01272434  0.48967276 -0.41912210
## 22        0.24416040            1.05957037 -1.08214564  0.51856960
## 23       -1.41400510            0.51856960  1.08214564 -0.71909690
## 24       -0.27046566           -1.12903457  2.10223158 -2.10223158
## 25       -0.24416040            1.08214564 -1.31706374  0.62344075
## 26        0.76945312           -0.21802303  0.54790615 -0.54790615
## 27        1.15343724            0.91459156 -0.93409710  0.48967276
## 28        0.12758531           -0.40526982  1.12903457 -0.83980946
## 29       -0.19203379           -0.17908874 -0.39149488  0.20501110
## 30       -0.14042416           -0.35060018  1.23113036 -0.78667510
## 31        1.03752256            1.44946373 -0.70271480  0.43305527
## 32        1.44946373            1.01596791  0.02545075  0.01272434
## 33       -0.99487522           -0.54790615  1.28735798 -0.95396468
## 34        0.23107198            0.17908874  0.23107198 -0.16617364
## 35        0.56275157           -0.23107198  0.82184079 -0.63896971
## 36       -0.01272434            0.56275157 -1.25874673  0.59282318
## 37        0.11476746           -0.12758531  0.78667510 -0.59282318
## 38        0.85805346            0.65465430 -0.50406856  0.28368767
## 39       -1.01596791           -0.28368767  0.99487522 -0.65465430
## 40       -0.71909690            0.07641832  0.03818128  0.03818128
## 41        1.31706374            0.97421613  0.39149488 -0.27046566
## 42       -0.33710120           -0.01272434  0.19203379 -0.07641832
## 43        0.32366339           -0.59282318  0.16617364 -0.21802303
## 44        1.01596791            1.41400510 -0.71909690  0.41912210
## 45        1.52642702            0.53318051  0.00000000  0.05091800
## 46        0.54790615           -0.43305527  0.06366298  0.15328619
## 47       -1.83849262           -0.11476746  0.41912210  0.02545075
## 48       -1.17854682           -1.17854682  1.52642702 -0.67050162
## 49       -1.25874673            0.19203379 -0.60806071  0.56275157
## 50       -2.23555842           -0.10196844  1.31706374 -0.47537773
## 51       -1.15343724           -0.25729077  1.61367018 -0.70271480
## 52       -1.03752256           -0.41912210  0.56275157 -0.08918610
## 53        0.17908874           -0.75245638  0.80413364 -0.37779383
## 54        0.62344075            0.23107198  0.01272434  0.25729077
## 55        0.71909690            0.20501110  0.73567430 -0.29695946
## 56       -2.10223158            0.71909690 -0.91459156  0.60806071
## 57       -0.06366298           -0.78667510  1.56855670 -0.82184079
## 58       -1.77352271           -1.10528634  2.23555842 -1.10528634
## 59        0.68651916            0.85805346  0.08918610  0.24416040
## 60       -0.10196844           -0.76945312  0.89542793 -0.33710120
## 61       -1.12903457           -1.99828954  0.62344075 -0.32366339
## 62       -0.44707302           -0.95396468  1.77352271 -0.93409710
## 63       -1.34797950           -2.80216172  2.80216172 -2.80216172
## 64       -0.23107198           -1.83849262  1.17854682 -0.57772207
## 65        1.08214564            0.70271480 -0.35060018  0.39149488
```

```
## 66       -1.71527720           -2.23555842  1.83849262 -1.12903457
## 67       -0.31028376           -0.60806071  0.21802303  0.10196844
## 68       -0.15328619           -0.82184079  1.38024023 -0.53318051
## 69        0.46117919            0.05091800  0.46117919 -0.05091800
## 70       -0.29695946           -0.80413364  0.05091800  0.19203379
## 71       -0.20501110           -0.39149488  1.99828954 -0.80413364
## 72        0.47537773           -0.51856960  1.71527720 -0.87658763
## 73        0.03818128           -0.99487522  0.47537773 -0.14042416
## 74       -1.20442230           -0.91459156  1.34797950 -0.43305527
## 75        0.06366298           -0.65465430  0.68651916 -0.20501110
## 76       -0.95396468            0.14042416 -1.38024023  0.65465430
## 77        0.21802303            0.59282318 -1.28735798  0.67050162
## 78       -0.37779383           -0.31028376  0.51856960 -0.02545075
## 79        0.44707302            0.03818128  0.24416040 -0.10196844
## 80       -0.68651916           -2.10223158  0.50406856 -0.51856960
## 81        0.33710120            0.44707302  0.71909690 -0.50406856
## 82        0.25729077           -0.53318051  0.36416334 -0.28368767
## 83        1.17854682            0.93409710 -0.82184079  0.50406856
## 84       -0.17908874           -0.16617364 -0.33710120  0.23107198
## 85        1.05957037            1.48684468 -0.67050162  0.44707302
## 86        0.87658763            0.67050162 -0.48967276  0.29695946
## 87        1.23113036            0.46117919  0.15328619 -0.17908874
## 88       -0.59282318           -0.02545075  1.44946373 -0.97421613
## 89       -0.63896971           -0.19203379  1.41400510 -0.89542793
## 90       -1.28735798           -0.67050162  0.60806071 -0.99487522
## 91       -0.35060018           -0.62344075  0.83980946 -1.23113036
## 92       -0.82184079           -1.44946373  0.91459156 -1.38024023
## 93       -0.39149488           -0.32366339 -0.02545075 -0.19203379
## 94        0.29695946           -0.85805346  0.28368767 -0.73567430
## 95        0.60806071            0.48967276 -0.20501110 -0.12758531
## 96       -0.53318051           -1.25874673  1.05957037 -1.77352271
## 97        0.10196844           -0.47537773  0.87658763 -1.25874673
## 98       -0.51856960           -1.23113036  1.10528634 -1.66232963
## 99       -0.43305527           -0.93409710  1.91230127 -0.91459156
## 100       1.12903457            0.89542793 -1.15343724  0.40526982
## 101       0.97421613            1.34797950 -0.85805346  0.32366339
## 102      -0.83980946           -1.48684468  0.76945312 -1.44946373
## 103      -0.78667510           -1.38024023  1.03752256 -1.31706374
## 104       0.31028376           -0.83980946  0.29695946 -0.68651916
## 105      -0.76945312           -1.34797950  1.15343724 -1.28735798
## 106       0.91459156            0.75245638 -0.40526982  0.21802303
## 107      -0.11476746            0.16617364 -0.19203379  0.31028376
## 108       0.02545075           -0.06366298 -0.16617364  0.33710120
## 109      -1.61367018            0.25729077 -0.57772207  0.53318051
## 110       0.00000000            0.57772207 -1.10528634  0.63896971
## 111      -0.70271480            0.08918610  0.27046566  0.14042416
## 112       1.34797950            0.99487522  0.65465430 -0.25729077
## 113      -0.80413364           -1.41400510  0.97421613 -1.34797950
## 114      -0.60806071           -0.03818128  0.75245638 -1.08214564
## 115      -0.97421613            0.12758531 -1.66232963  0.57772207
## 116       0.99487522            1.38024023 -0.80413364  0.36416334
## 117      -0.48967276           -0.71909690  0.07641832 -0.39149488
## 118      -1.52642702           -1.05957037  0.43305527 -0.75245638
## 119       0.53318051           -0.44707302 -0.44707302 -0.01272434
## 120      -1.31706374           -0.68651916 -0.36416334 -1.20442230
```

```
## 121      -0.36416334           -0.63896971 -0.17908874 -1.52642702
## 122      -0.91459156           -1.66232963 -0.14042416 -1.91230127
## 123      -0.40526982           -0.33710120 -0.76945312 -0.46117919
## 124       0.27046566           -0.89542793 -0.54790615 -1.03752256
## 125       0.59282318            0.47537773 -0.89542793 -0.40526982
## 126      -0.56275157           -1.31706374 -0.08918610 -2.42690063
## 127       0.08918610           -0.48967276 -0.15328619 -1.56855670
## 128      -0.54790615           -1.28735798 -0.06366298 -2.23555842
## 129      -0.46117919           -0.97421613  0.35060018 -1.17854682
## 130       1.10528634            0.87658763 -1.61367018  0.17908874
## 131       0.93409710            1.28735798 -1.48684468  0.08918610
## 132      -0.93409710           -1.71527720 -0.21802303 -1.99828954
## 133      -0.87658763           -1.56855670 -0.10196844 -1.71527720
## 134       0.28368767           -0.87658763 -0.51856960 -1.01596791
## 135      -0.85805346           -1.52642702 -0.05091800 -1.61367018
## 136       0.89542793            0.73567430 -1.03752256  0.00000000
## 137      -0.12758531            0.15328619 -0.87658763  0.06366298
## 138       0.01272434           -0.07641832 -0.83980946  0.11476746
## 139      -1.66232963            0.24416040 -1.20442230  0.27046566
## 140      -0.02545075            0.54790615 -1.56855670  0.46117919
## 141      -0.73567430            0.06366298 -0.56275157 -0.11476746
## 142       1.28735798            0.95396468 -0.29695946 -0.48967276
## 143      -0.89542793           -1.61367018 -0.11476746 -1.83849262
## 144      -0.62344075           -0.05091800 -0.23107198 -1.48684468
## 145       0.95396468            1.31706374 -1.44946373  0.12758531
## 146      -0.50406856           -0.73567430 -0.75245638 -0.60806071
## 147      -1.56855670           -1.08214564 -0.46117919 -1.05957037
## 148      -1.05957037            1.52642702 -1.91230127  2.10223158
## 149      -2.80216172            1.15343724  0.10196844  1.05957037
## 150      -0.67050162            1.03752256  0.59282318  0.95396468
## 151      -0.57772207            0.76945312 -0.59282318  1.41400510
## 152       1.20442230            0.37779383 -0.32366339  1.10528634
## 153       1.77352271            1.61367018 -1.34797950  1.71527720
## 154       1.91230127            1.56855670 -0.37779383  1.17854682
## 155      -2.42690063            2.10223158 -2.23555842  2.23555842
## 156       0.70271480            0.35060018  0.53318051  0.89542793
## 157      -1.99828954            0.00000000  1.25874673  0.78667510
## 158       1.83849262            2.23555842 -1.17854682  1.66232963
## 159       0.65465430            0.36416334 -0.27046566  1.12903457
## 160      -0.65465430           -1.20442230 -0.47537773  1.15343724
## 161       0.20501110            0.27046566  0.70271480  0.83980946
## 162      -1.10528634           -2.42690063  2.42690063  0.47537773
## 163       0.48967276           -0.57772207 -0.01272434  0.97421613
## 164       2.23555842            1.99828954 -1.77352271  1.83849262
## 165      -1.91230127           -1.91230127  0.93409710  0.76945312
## 166       0.41912210            0.43305527 -1.05957037  1.52642702
## 167       0.63896971            0.32366339  0.17908874  0.99487522
## 168       1.61367018            1.23113036 -0.73567430  1.44946373
## 169       0.43305527            0.33710120 -1.23113036  1.56855670
## 170       0.50406856            0.80413364  1.01596791  0.91459156
## 171       1.66232963            0.63896971  0.63896971  0.87658763
## 172       0.73567430            0.21802303 -0.68651916  1.31706374
## 173      -0.75245638            0.28368767  0.12758531  1.08214564
## 174       0.80413364            0.40526982 -0.43305527  1.23113036
## 175      -0.41912210            1.25874673 -2.80216172  2.42690063
```

```
## 176       1.25874673            1.83849262 -2.42690063  2.80216172
## 177       0.37779383            0.83980946 -0.62344075  1.48684468
## 178       1.56855670            1.20442230 -1.01596791  1.38024023
## 179      -0.07641832           -1.77352271 -0.63896971  1.01596791
## 180       1.48684468            1.66232963 -0.41912210  1.03752256
## 181       1.38024023            0.60806071 -0.78667510  1.20442230
## 182       2.42690063            2.42690063 -2.10223158  1.99828954
## 183       0.51856960            1.12903457 -1.71527720  1.61367018
## 184       2.10223158            2.80216172 -1.99828954  1.91230127
## 185       1.99828954            1.91230127 -1.83849262  1.77352271
## 186       2.80216172            1.71527720 -1.12903457  1.28735798
## 187       0.14042416            1.17854682  0.32366339  0.82184079
## 188       0.07641832            1.10528634  0.20501110  0.85805346
## 189      -1.08214564            0.39149488 -0.53318051  0.80413364
## 190       0.39149488            0.41912210 -0.31028376  0.75245638
## 191      -0.32366339           -0.46117919 -0.25729077  0.71909690
## 192       0.36416334            0.82184079 -1.41400510  1.25874673
## 193       1.41400510            0.31028376 -0.99487522  0.93409710
## 194       1.71527720            1.77352271 -1.52642702  1.34797950
## 195       0.15328619           -0.37779383 -0.07641832  0.68651916
## 196       0.83980946            0.68651916 -0.28368767  0.73567430
## 197       0.16617364           -0.36416334 -0.03818128  0.70271480
##     Coarseness_vdif_.L.PET Contrast_vdif_.L.PET Busyness_vdif_.L.PET
## 1              -0.12758531           0.10196844          -0.48967276
## 2              -0.14042416           0.70271480          -0.56275157
## 3              -0.06366298           0.07641832          -0.87658763
## 4              -0.53318051          -1.52642702           0.89542793
## 5               0.00000000          -0.11476746          -0.54790615
## 6              -0.07641832          -0.08918610          -0.63896971
## 7              -0.24416040           0.20501110          -0.31028376
## 8              -0.08918610           0.47537773          -0.53318051
## 9               0.80413364          -0.07641832          -1.52642702
## 10              0.27046566           0.75245638          -0.97421613
## 11             -0.59282318          -1.05957037           1.20442230
## 12             -0.11476746          -0.06366298          -0.70271480
## 13             -0.44707302          -0.02545075           0.10196844
## 14              0.78667510           2.42690063          -1.56855670
## 15             -0.57772207          -0.44707302           1.10528634
## 16              0.29695946          -0.29695946          -1.08214564
## 17             -0.50406856          -0.59282318           0.41912210
## 18             -0.54790615          -0.87658763           1.17854682
## 19             -0.28368767          -0.23107198          -0.20501110
## 20             -0.21802303          -0.46117919          -0.36416334
## 21             -0.19203379          -0.28368767          -0.27046566
## 22              0.70271480           1.99828954          -1.61367018
## 23             -0.36416334           0.68651916          -0.12758531
## 24             -0.51856960          -0.53318051           0.67050162
## 25              1.10528634           0.73567430          -1.66232963
## 26             -0.43305527          -1.15343724           0.50406856
## 27              0.56275157           1.05957037          -1.31706374
## 28             -0.31028376          -0.48967276          -0.23107198
## 29              0.41912210           0.23107198          -1.41400510
## 30             -0.39837290          -0.27046566          -0.02545075
## 31              0.19203379           0.65465430          -0.99487522
## 32             -0.33710120          -0.51856960           0.33710120
```

```
## 33          -0.41912210          -0.37779383          -0.11476746
## 34          -0.23107198           0.05091800          -0.14042416
## 35          -0.37779383          -0.56275157           0.24416040
## 36           0.40526982           1.48684468          -1.25874673
## 37          -0.25729077           0.35060018          -0.07641832
## 38           0.43305527           0.89542793          -1.12903457
## 39          -0.39837290          -0.31028376          -0.19203379
## 40          -0.05091800           0.46117919          -0.76945312
## 41          -0.29695946           0.19203379           0.21802303
## 42          -0.10196844           0.17908874          -0.73567430
## 43          -0.47537773          -1.83849262           0.51856960
## 44           0.15328619           0.63896971          -1.01596791
## 45           0.85805346           0.57772207          -0.67050162
## 46           0.08918610          -1.41400510           1.01596791
## 47           0.60806071          -0.19203379          -0.89542793
## 48           0.02545075          -0.82184079           1.05957037
## 49           0.75245638           0.80413364          -0.91459156
## 50           0.31028376           0.43305527          -0.43305527
## 51           0.23107198           0.37779383          -0.01272434
## 52           0.54790615           0.31028376          -0.71909690
## 53           0.39149488          -0.47537773          -0.25729077
## 54           0.46117919           0.25729077          -0.51856960
## 55           0.36416334          -0.40526982          -0.16617364
## 56           1.15343724           1.15343724          -1.34797950
## 57           0.17908874          -0.67050162           0.20501110
## 58           0.16617364          -0.39149488          -0.06366298
## 59           0.57772207          -0.33710120          -0.50406856
## 60           0.06366298          -1.03752256           0.71909690
## 61           0.11476746          -2.10223158           0.32366339
## 62           0.25729077          -0.36416334           0.00000000
## 63           0.07641832          -2.80216172           1.23113036
## 64           0.01272434          -2.42690063           1.77352271
## 65           0.73567430           0.39149488          -0.62344075
## 66           0.12758531          -1.28735798           0.01272434
## 67           0.76945312          -0.01272434          -0.85805346
## 68          -0.02545075          -0.93409710           1.91230127
## 69           0.48967276           0.33710120          -0.41912210
## 70           0.63896971           0.82184079          -0.75245638
## 71           0.32366339           0.32366339           0.27046566
## 72           0.35060018          -0.63896971           0.31028376
## 73           0.87658763           0.03818128          -0.59282318
## 74           0.51856960          -0.03818128          -0.44707302
## 75           0.21802303          -1.71527720           0.83980946
## 76           1.44946373           2.23555842          -1.38024023
## 77           1.91230127           0.71909690          -1.44946373
## 78           0.59282318           0.41912210          -0.46117919
## 79          -0.01272434           0.28368767          -0.47537773
## 80          -0.35060018          -2.23555842           0.43305527
## 81          -0.17908874           0.08918610          -0.15328619
## 82          -0.20501110          -1.38024023           0.08918610
## 83           0.62344075           1.08214564          -1.20442230
## 84           0.50406856           0.24416040          -1.23113036
## 85           0.28368767           0.67050162          -0.95396468
## 86           0.53318051           0.91459156          -1.10528634
## 87          -0.03818128          -0.12758531          -0.29695946
```

```
## 88          -0.32366339          0.02545075          0.35060018
## 89          -0.27046566          0.01272434          0.11476746
## 90          -0.80413364         -0.54790615          0.17908874
## 91          -0.85805346         -0.60806071          0.68651916
## 92          -0.89542793         -0.97421613          0.78667510
## 93          -0.60806071          0.40526982         -0.82184079
## 94          -0.91459156         -1.66232963          1.34797950
## 95          -0.65465430          0.12758531         -0.03818128
## 96          -0.97421613         -0.85805346          1.66232963
## 97          -0.82184079         -0.16617364          0.48967276
## 98          -0.93409710         -0.83980946          1.71527720
## 99           0.37779383         -0.35060018          0.02545075
## 100         -0.15328619          1.01596791         -1.77352271
## 101         -0.56275157          0.59282318         -1.28735798
## 102         -0.95396468         -0.99487522          0.76945312
## 103         -0.71909690         -0.91459156          0.82184079
## 104         -0.87658763         -1.56855670          1.38024023
## 105         -0.67050162         -0.89542793          0.85805346
## 106         -0.16617364         -0.68651916         -0.40526982
## 107          0.97421613         -0.10196844         -1.05957037
## 108          0.10196844         -1.44946373          0.15328619
## 109          1.05957037         -0.73567430         -1.17854682
## 110          0.89542793          1.52642702         -1.03752256
## 111          0.47537773          0.54790615         -0.60806071
## 112          0.20501110          0.21802303          0.28368767
## 113         -0.78667510         -0.95396468          0.80413364
## 114         -0.70271480          0.00000000          0.29695946
## 115          0.44707302          2.10223158         -1.83849262
## 116         -0.48967276          0.60806071         -1.15343724
## 117         -0.73567430         -0.65465430          0.40526982
## 118         -0.83980946         -1.17854682          1.12903457
## 119         -0.75245638         -1.61367018          0.95396468
## 120         -1.66232963         -0.62344075         -0.08918610
## 121         -1.83849262         -0.71909690          0.47537773
## 122         -1.99828954         -1.31706374          0.60806071
## 123         -1.38024023          0.36416334         -1.71527720
## 124         -2.10223158         -1.99828954          1.28735798
## 125         -1.41400510          0.06366298         -0.37779383
## 126         -2.80216172         -1.12903457          1.56855670
## 127         -1.71527720         -0.24416040          0.36416334
## 128         -2.23555842         -1.10528634          1.61367018
## 129         -1.03752256         -0.43305527         -0.33710120
## 130         -1.25874673          0.99487522         -2.80216172
## 131         -1.34797950          0.50406856         -2.42690063
## 132         -2.42690063         -1.34797950          0.57772207
## 133         -1.52642702         -1.23113036          0.65465430
## 134         -1.91230127         -1.91230127          1.31706374
## 135         -1.44946373         -1.20442230          0.70271480
## 136         -1.28735798         -0.76945312         -0.93409710
## 137         -0.63896971         -0.21802303         -1.99828954
## 138         -1.17854682         -1.77352271         -0.17908874
## 139         -0.62344075         -0.80413364         -2.23555842
## 140         -0.68651916          1.44946373         -1.91230127
## 141         -0.99487522          0.44707302         -1.48684468
## 142         -1.12903457          0.15328619          0.03818128
```

```
## 143          -1.61367018          -1.25874673           0.63896971
## 144          -1.48684468          -0.05091800           0.05091800
## 145          -1.31706374           0.51856960          -2.10223158
## 146          -1.56855670          -0.75245638           0.25729077
## 147          -1.77352271          -1.48684468           1.08214564
## 148           1.83849262           1.66232963          -0.35060018
## 149           1.17854682           1.41400510           0.19203379
## 150           1.03752256           1.28735798           0.56275157
## 151           1.52642702           1.20442230          -0.21802303
## 152           1.28735798           0.29695946           0.39149488
## 153           1.31706374           1.12903457           0.06366298
## 154           1.25874673           0.48967276           0.44707302
## 155           2.23555842           1.91230127          -0.78667510
## 156           0.99487522           0.11476746           0.91459156
## 157           0.95396468           0.53318051           0.53318051
## 158           1.56855670           0.62344075           0.07641832
## 159           0.82184079          -0.25729077           1.44946373
## 160           0.91459156          -0.70271480           0.99487522
## 161           1.08214564           0.56275157           0.59282318
## 162           0.83980946          -1.08214564           1.83849262
## 163           0.71909690          -1.01596791           2.42690063
## 164           1.77352271           1.31706374          -0.10196844
## 165           0.93409710          -0.32366339           0.62344075
## 166           1.99828954           0.85805346          -0.32366339
## 167           0.67050162          -0.17908874           2.80216172
## 168           1.34797950           1.25874673           0.23107198
## 169           1.71527720           1.71527720          -0.24416040
## 170           1.20442230           1.23113036           0.93409710
## 171           1.23113036           0.14042416           0.97421613
## 172           2.10223158           0.95396468          -0.05091800
## 173           1.41400510           0.83980946           0.16617364
## 174           1.01596791          -0.57772207           1.52642702
## 175           2.42690063           2.80216172          -0.80413364
## 176           2.80216172           1.61367018          -0.83980946
## 177           1.61367018           1.38024023           0.14042416
## 178           0.68651916           1.17854682           0.12758531
## 179           0.03818128          -0.78667510           1.15343724
## 180           0.33710120           0.97421613           0.46117919
## 181           0.24416040          -0.41912210           0.73567430
## 182           1.66232963           1.83849262          -0.65465430
## 183           1.38024023           1.10528634          -0.68651916
## 184           1.12903457           1.56855670          -0.39149488
## 185           1.48684468           1.77352271          -0.57772207
## 186           0.65465430           0.78667510           0.37779383
## 187           0.05091800           0.93409710           1.03752256
## 188           0.14042416           0.87658763           0.75245638
## 189          -1.01596791           0.27046566           0.87658763
## 190          -1.08214564           0.16617364           1.41400510
## 191          -1.10528634          -0.20501110           1.48684468
## 192          -0.46117919           1.34797950          -0.28368767
## 193          -1.15343724          -0.50406856           1.99828954
## 194          -0.76945312           1.03752256           0.54790615
## 195          -1.23113036          -0.15328619           2.10223158
## 196          -1.05957037           0.76945312           1.25874673
## 197          -1.20442230          -0.14042416           2.23555842
```

```
##     Complexity_vdif_.L.PET Strength_vdif_.L.PET SRE_align.L.PET LRE_align.L.PET
## 1              -0.03818128           0.23107198     -0.15328619     -0.37779383
## 2               0.56275157           0.37779383      0.06366298     -0.67050162
## 3              -0.35060018           0.05091800      0.00000000     -0.68651916
## 4              -0.99487522          -1.10528634     -0.62344075      0.39149488
## 5              -0.08918610           0.80413364     -0.17908874     -0.43305527
## 6              -0.36416334           0.11476746     -0.23107198     -0.36416334
## 7               0.21802303          -0.23107198     -0.21802303     -0.39149488
## 8               0.57772207           0.39149488      0.10196844     -0.82184079
## 9              -0.87658763           0.87658763     -0.37779383     -0.10196844
## 10              0.62344075           1.01596791     -0.12758531     -0.51856960
## 11             -1.25874673          -2.10223158     -0.56275157      0.35060018
## 12             -0.48967276          -0.01272434     -0.33710120     -0.15328619
## 13             -0.32366339          -0.99487522     -0.19203379     -0.25729077
## 14              1.52642702           2.23555842      0.15328619     -1.23113036
## 15             -0.39149488          -1.31706374     -0.32366339     -0.14042416
## 16             -0.44707302           0.54790615     -0.40526982     -0.05091800
## 17             -0.65465430          -0.93409710     -1.31706374      0.65465430
## 18             -0.63896971          -1.01596791     -0.63896971      0.40526982
## 19             -0.10196844          -0.33710120     -0.25729077     -0.19203379
## 20             -0.53318051          -0.20501110     -0.35060018     -0.11476746
## 21             -0.06366298          -0.06366298     -0.14042416     -0.33710120
## 22              1.41400510           1.38024023      0.25729077     -1.41400510
## 23              0.27046566          -0.62344075     -0.02545075     -0.65465430
## 24              0.02545075          -0.91459156     -0.16617364     -0.29695946
## 25             -0.33710120           1.15343724     -0.10196844     -0.59282318
## 26             -0.70271480           0.12758531     -0.73567430      0.44707302
## 27              0.40526982           1.48684468     -0.07641832     -0.60806071
## 28             -0.40526982          -0.46117919     -0.44707302      0.02545075
## 29             -0.31028376           0.63896971     -0.08918610     -0.48967276
## 30             -0.37779383          -0.65465430     -0.31028376     -0.12758531
## 31              0.19203379           0.76945312      0.14042416     -0.95396468
## 32             -0.62344075          -0.12758531     -0.46117919      0.21802303
## 33             -0.54790615          -0.68651916     -0.28368767     -0.16617364
## 34              0.00000000           0.08918610     -0.36416334     -0.08918610
## 35             -0.15328619          -0.24416040     -0.24416040     -0.23107198
## 36              0.83980946           1.10528634      0.16617364     -1.28735798
## 37              0.46117919          -0.21802303      0.03818128     -0.73567430
## 38              0.59282318           1.03752256      0.23107198     -1.34797950
## 39             -0.56275157          -0.73567430     -0.41912210     -0.02545075
## 40              0.31028376           0.02545075     -0.05091800     -0.63896971
## 41              0.24416040          -0.15328619      0.08918610     -0.83980946
## 42              0.06366298           0.10196844      0.05091800     -0.75245638
## 43             -1.34797950          -0.25729077     -0.75245638      0.50406856
## 44              0.17908874           0.75245638      0.07641832     -1.03752256
## 45              0.03818128           1.71527720      0.39149488      0.00000000
## 46             -1.41400510          -0.47537773     -0.67050162      0.60806071
## 47             -0.71909690           0.06366298      0.50406856     -0.24416040
## 48             -0.60806071          -1.28735798     -0.11476746      0.43305527
## 49              0.68651916           0.36416334      0.62344075     -0.93409710
## 50             -0.05091800          -0.41912210      0.40526982     -0.01272434
## 51              0.36416334          -0.51856960      0.53318051     -0.44707302
## 52              0.07641832           0.00000000      0.36416334     -0.03818128
## 53             -0.51856960           0.44707302      0.12758531      0.36416334
## 54             -0.01272434           0.28368767      0.41912210     -0.06366298
```

```
## 55          -0.46117919          0.32366339     0.21802303     0.28368767
## 56           0.47537773          0.91459156     0.44707302    -0.20501110
## 57          -0.50406856         -0.35060018     0.20501110     0.29695946
## 58          -0.47537773         -0.87658763     0.27046566     0.24416040
## 59          -0.85805346          0.24416040     0.32366339     0.07641832
## 60          -0.82184079         -1.08214564    -0.27046566     0.47537773
## 61          -1.71527720         -0.39149488    -0.47537773     0.53318051
## 62          -0.27046566         -0.31028376     0.29695946     0.11476746
## 63          -1.38024023          0.27046566    -0.59282318     0.59282318
## 64          -1.48684468         -1.12903457    -0.57772207     0.57772207
## 65           0.05091800          0.99487522     0.33710120     0.12758531
## 66          -0.83980946         -0.60806071    -0.39149488     0.48967276
## 67          -0.23107198          0.46117919     0.37779383    -0.07641832
## 68          -0.80413364         -2.80216172    -0.06366298     0.41912210
## 69           0.44707302          0.35060018     0.56275157    -0.54790615
## 70           0.80413364          0.51856960     0.54790615    -0.46117919
## 71           0.54790615         -0.54790615     0.60806071    -0.27046566
## 72          -0.21802303          0.07641832     0.35060018     0.25729077
## 73          -0.16617364          1.28735798     0.31028376     0.31028376
## 74          -0.17908874         -0.02545075     0.47537773     0.06366298
## 75          -1.52642702         -0.78667510    -0.20501110     0.51856960
## 76           1.31706374          1.83849262     0.65465430    -0.76945312
## 77          -0.43305527          1.25874673     0.63896971    -0.62344075
## 78           0.51856960          0.21802303     0.59282318    -0.21802303
## 79           0.43305527          0.33710120     0.17908874    -0.80413364
## 80          -1.66232963         -0.10196844    -0.85805346     0.56275157
## 81          -0.07641832         -0.43305527     0.11476746    -0.56275157
## 82          -0.97421613         -0.19203379    -0.53318051     0.37779383
## 83           0.41912210          1.52642702     0.02545075    -0.53318051
## 84          -0.29695946          0.65465430     0.01272434    -0.41912210
## 85           0.20501110          0.78667510     0.19203379    -0.91459156
## 86           0.60806071          1.05957037     0.28368767    -1.31706374
## 87          -0.02545075          0.85805346    -0.43305527     0.20501110
## 88          -0.11476746         -0.67050162    -0.01272434    -0.31028376
## 89          -0.24416040         -0.63896971    -0.03818128    -0.32366339
## 90          -0.76945312         -1.03752256    -0.82184079    -0.17908874
## 91          -0.73567430         -1.15343724    -0.78667510    -0.35060018
## 92          -1.08214564         -1.44946373    -0.89542793     0.03818128
## 93           0.50406856          0.19203379    -0.51856960    -1.01596791
## 94          -1.99828954         -0.82184079    -1.08214564     0.32366339
## 95          -0.19203379         -0.07641832    -0.68651916    -1.20442230
## 96          -0.91459156         -1.83849262    -0.93409710     0.05091800
## 97           0.11476746         -0.75245638    -0.70271480    -1.05957037
## 98          -0.89542793         -1.77352271    -0.91459156     0.08918610
## 99          -0.25729077         -0.29695946     0.43305527     0.16617364
## 100          0.39149488          1.44946373    -0.71909690    -1.15343724
## 101          0.15328619          0.71909690    -0.60806071    -1.48684468
## 102         -1.10528634         -1.48684468    -0.95396468     0.01272434
## 103         -1.03752256         -1.38024023    -0.80413364     0.14042416
## 104         -1.91230127         -0.80413364    -1.01596791     0.33710120
## 105         -1.01596791         -1.34797950    -0.76945312     0.19203379
## 106         -1.56855670          0.20501110    -0.50406856     0.15328619
## 107         -0.57772207          0.59282318     0.48967276    -0.40526982
## 108         -1.77352271         -0.56275157    -0.29695946     0.46117919
## 109         -2.42690063          0.50406856     0.24416040     0.17908874
```

```
## 110          0.85805346          1.12903457      0.57772207     -0.71909690
## 111          0.32366339          0.03818128      0.46117919     -0.28368767
## 112          0.25729077         -0.14042416      0.51856960     -0.57772207
## 113         -1.05957037         -1.41400510     -0.83980946      0.10196844
## 114         -0.12758531         -0.70271480     -0.65465430     -0.78667510
## 115          1.28735798          1.77352271     -0.48967276     -1.66232963
## 116          0.16617364          0.73567430     -0.54790615     -1.38024023
## 117         -0.67050162         -0.95396468     -2.10223158      0.63896971
## 118         -1.28735798         -2.23555842     -0.87658763      0.23107198
## 119         -1.44946373         -0.48967276     -1.15343724      0.54790615
## 120         -0.78667510         -1.05957037     -1.61367018     -1.44946373
## 121         -0.75245638         -1.17854682     -1.52642702     -1.56855670
## 122         -1.20442230         -1.66232963     -1.77352271     -1.17854682
## 123          0.48967276          0.16617364     -1.23113036     -1.91230127
## 124         -2.23555842         -0.85805346     -2.42690063     -0.50406856
## 125         -0.20501110         -0.08918610     -1.38024023     -2.23555842
## 126         -0.95396468         -1.99828954     -1.91230127     -1.12903457
## 127          0.10196844         -0.76945312     -1.41400510     -1.99828954
## 128         -0.93409710         -1.91230127     -1.83849262     -1.10528634
## 129         -0.28368767         -0.32366339     -1.10528634     -0.89542793
## 130          0.37779383          1.41400510     -1.44946373     -2.10223158
## 131          0.12758531          0.68651916     -1.28735798     -2.80216172
## 132         -1.23113036         -1.71527720     -1.99828954     -1.25874673
## 133         -1.15343724         -1.56855670     -1.56855670     -0.99487522
## 134         -2.10223158         -0.83980946     -2.23555842     -0.47537773
## 135         -1.12903457         -1.52642702     -1.48684468     -0.85805346
## 136         -1.61367018          0.17908874     -1.20442230     -0.97421613
## 137         -0.59282318          0.57772207     -1.03752256     -1.61367018
## 138         -1.83849262         -0.57772207     -1.17854682      0.27046566
## 139         -2.80216172          0.48967276     -1.12903457     -0.87658763
## 140          0.82184079          1.08214564     -0.97421613     -1.77352271
## 141          0.29695946          0.01272434     -1.05957037     -1.52642702
## 142          0.23107198         -0.17908874     -0.99487522     -1.71527720
## 143         -1.17854682         -1.61367018     -1.66232963     -1.08214564
## 144         -0.14042416         -0.71909690     -1.34797950     -1.83849262
## 145          0.14042416          0.70271480     -1.25874673     -2.42690063
## 146         -0.68651916         -0.97421613     -2.80216172      0.62344075
## 147         -1.31706374         -2.42690063     -1.71527720     -0.70271480
## 148          2.23555842          0.97421613      2.23555842      0.73567430
## 149          1.20442230          0.15328619      1.56855670      1.15343724
## 150          1.56855670         -0.03818128      1.77352271      0.89542793
## 151          1.38024023          0.53318051      1.48684468      1.12903457
## 152          0.87658763          1.17854682      1.12903457      1.66232963
## 153          1.25874673          0.83980946      1.61367018      1.10528634
## 154          0.93409710          0.89542793      1.23113036      1.48684468
## 155          1.77352271          1.61367018      1.66232963      1.03752256
## 156          0.89542793          0.29695946      1.20442230      1.52642702
## 157          0.91459156         -0.40526982      1.25874673      1.41400510
## 158          0.70271480          0.67050162      1.38024023      1.25874673
## 159          0.73567430         -0.50406856      0.95396468      1.83849262
## 160          0.01272434          0.25729077      0.89542793      2.10223158
## 161          0.99487522          0.31028376      1.31706374      1.31706374
## 162          0.35060018          0.82184079      0.82184079      2.80216172
## 163          0.33710120         -0.53318051      0.83980946      2.42690063
## 164          1.34797950          1.66232963      1.41400510      1.34797950
```

```
## 165            0.71909690          -0.11476746      0.93409710      1.91230127
## 166            1.03752256           1.20442230      1.52642702      1.08214564
## 167            0.75245638          -1.25874673      0.99487522      1.77352271
## 168            1.71527720           0.95396468      1.91230127      0.83980946
## 169            2.42690063           1.23113036      1.83849262      0.87658763
## 170            1.99828954          -0.05091800      2.10223158      0.99487522
## 171            1.05957037           0.56275157      1.44946373      1.44946373
## 172            1.12903457           2.10223158      1.34797950      1.56855670
## 173            1.10528634           0.47537773      1.71527720      1.23113036
## 174            0.28368767          -0.36416334      0.97421613      1.99828954
## 175            2.80216172           2.80216172      2.80216172      0.78667510
## 176            0.95396468           1.99828954      2.42690063      0.80413364
## 177            1.91230127           0.62344075      1.99828954      1.01596791
## 178            1.66232963           0.93409710      1.15343724      0.76945312
## 179            0.08918610           0.41912210      0.73567430      2.23555842
## 180            1.17854682           0.14042416      1.10528634      0.82184079
## 181            0.63896971           0.40526982      0.85805346      1.71527720
## 182            1.61367018           2.42690063      1.08214564      0.85805346
## 183            0.97421613           1.31706374      1.05957037      0.91459156
## 184            1.48684468           1.34797950      1.17854682      0.75245638
## 185            2.10223158           1.91230127      1.28735798      0.67050162
## 186            1.23113036           1.56855670      0.91459156      1.38024023
## 187            1.15343724          -0.27046566      1.03752256      0.97421613
## 188            1.01596791          -0.16617364      1.01596791      0.95396468
## 189            0.76945312          -0.44707302      0.75245638      1.05957037
## 190            0.78667510          -0.59282318      0.76945312      0.93409710
## 191            0.53318051          -0.89542793      0.71909690      1.17854682
## 192            1.83849262           0.60806071      0.87658763      0.71909690
## 193           -0.41912210          -0.37779383      0.67050162      1.61367018
## 194            1.08214564           0.43305527      0.80413364      0.68651916
## 195            0.65465430          -1.23113036      0.68651916      1.20442230
## 196            1.44946373          -0.28368767      0.78667510      0.70271480
## 197            0.67050162          -1.20442230      0.70271480      1.28735798
##     GLNU_align.L.PET RLNU_align.L.PET RP_align.L.PET LGRE_align.L.PET
## 1        -0.50406856      -0.44707302    -0.12758531       0.05091800
## 2        -0.60806071      -0.75245638     0.03818128       0.10196844
## 3        -0.54790615      -0.39149488     0.02545075      -0.54790615
## 4         1.15343724       1.25874673    -0.65465430      -0.35060018
## 5        -0.46117919      -0.76945312    -0.11476746       0.51856960
## 6        -0.51856960      -0.37779383    -0.17908874      -0.33710120
## 7        -0.32366339      -0.29695946    -0.15328619      -1.12903457
## 8        -0.76945312      -0.80413364     0.10196844       0.20501110
## 9        -1.28735798      -0.93409710    -0.33710120      -0.40526982
## 10       -1.31706374      -1.31706374    -0.08918610       0.78667510
## 11        1.71527720       1.91230127    -0.56275157      -0.56275157
## 12       -0.47537773      -0.35060018    -0.25729077      -0.63896971
## 13        0.20501110       0.33710120    -0.19203379      -0.68651916
## 14       -2.23555842      -2.80216172     0.23107198       0.85805346
## 15        0.75245638       1.15343724    -0.28368767      -1.23113036
## 16       -0.85805346      -0.91459156    -0.35060018      -1.15343724
## 17        0.56275157       0.67050162    -1.15343724      -0.29695946
## 18        1.10528634       0.83980946    -0.67050162       0.17908874
## 19       -0.02545075      -0.03818128    -0.21802303      -0.05091800
## 20       -0.03818128      -0.01272434    -0.29695946      -0.10196844
## 21       -0.28368767      -0.24416040    -0.14042416      -0.08918610
```

```
## 22       -2.10223158      -2.10223158     0.33710120       0.00000000
## 23       -0.27046566       0.01272434     0.00000000      -0.32366339
## 24        0.46117919       0.51856960    -0.16617364      -0.36416334
## 25       -1.91230127      -1.48684468    -0.07641832      -0.85805346
## 26        0.41912210       0.11476746    -0.71909690       0.99487522
## 27       -1.41400510      -1.56855670    -0.06366298       1.12903457
## 28        0.05091800       0.10196844    -0.41912210      -0.59282318
## 29       -1.25874673      -1.23113036    -0.10196844      -0.78667510
## 30        0.06366298       0.24416040    -0.27046566      -0.83980946
## 31       -1.05957037      -0.99487522     0.16617364      -0.02545075
## 32        0.14042416       0.12758531    -0.50406856       0.32366339
## 33        0.24416040       0.29695946    -0.24416040      -0.80413364
## 34       -0.23107198      -0.33710120    -0.32366339       0.54790615
## 35        0.10196844       0.02545075    -0.20501110       0.25729077
## 36       -1.71527720      -1.77352271     0.21802303       0.47537773
## 37       -0.35060018      -0.27046566     0.06366298      -0.31028376
## 38       -1.56855670      -1.38024023     0.32366339      -0.21802303
## 39        0.15328619       0.31028376    -0.37779383      -0.82184079
## 40       -0.91459156      -0.63896971    -0.01272434      -0.51856960
## 41       -0.19203379      -0.20501110     0.12758531       0.11476746
## 42       -0.59282318      -0.50406856     0.08918610      -0.11476746
## 43        0.63896971       0.41912210    -0.82184079       0.75245638
## 44       -1.08214564      -1.01596791     0.11476746      -0.06366298
## 45       -0.82184079      -1.41400510     0.35060018       1.56855670
## 46        1.08214564       0.62344075    -0.76945312       0.87658763
## 47       -0.57772207      -0.43305527     0.50406856      -0.50406856
## 48        1.20442230       1.34797950    -0.31028376       0.12758531
## 49       -1.34797950      -1.12903457     0.62344075      -0.17908874
## 50       -0.36416334      -0.14042416     0.36416334      -0.20501110
## 51       -0.24416040      -0.02545075     0.53318051      -0.15328619
## 52       -0.75245638      -0.56275157     0.37779383      -0.03818128
## 53       -0.05091800      -0.36416334    -0.05091800       0.63896971
## 54       -0.53318051      -0.70271480     0.41912210      -0.89542793
## 55       -0.14042416      -0.28368767     0.15328619       0.70271480
## 56       -1.83849262      -1.44946373     0.46117919      -0.46117919
## 57        0.31028376       0.15328619     0.14042416       0.33710120
## 58        0.32366339       0.36416334     0.19203379      -0.27046566
## 59       -0.39149488      -0.25729077     0.29695946      -0.24416040
## 60        0.71909690       0.85805346    -0.43305527      -0.07641832
## 61        0.68651916       0.59282318    -0.63896971       0.46117919
## 62        0.01272434       0.05091800     0.27046566       0.14042416
## 63        1.25874673       0.37779383    -0.70271480       1.52642702
## 64        1.83849262       1.56855670    -0.68651916       0.59282318
## 65       -0.83980946      -1.17854682     0.28368767       0.89542793
## 66        0.59282318       0.48967276    -0.48967276      -0.28368767
## 67       -0.87658763      -0.83980946     0.39149488      -0.39149488
## 68        1.99828954       2.23555842    -0.23107198       0.27046566
## 69       -0.62344075      -0.71909690     0.56275157       0.36416334
## 70       -1.01596791      -1.25874673     0.54790615       0.48967276
## 71       -0.06366298       0.00000000     0.60806071       0.29695946
## 72        0.23107198      -0.10196844     0.31028376       0.68651916
## 73       -0.70271480      -1.28735798     0.25729077       1.23113036
## 74       -0.37779383      -0.32366339     0.44707302       0.21802303
## 75        1.12903457       1.12903457    -0.39149488       0.35060018
## 76       -2.42690063      -2.23555842     0.65465430       0.60806071
```

```
## 77       -1.99828954      -1.91230127     0.63896971      -0.62344075
## 78       -0.67050162      -0.57772207     0.57772207       0.31028376
## 79       -0.63896971      -0.73567430     0.20501110       0.16617364
## 80        0.76945312       0.46117919    -1.05957037       0.56275157
## 81       -0.25729077      -0.05091800     0.07641832      -0.53318051
## 82        0.37779383       0.23107198    -0.54790615       0.07641832
## 83       -1.38024023      -1.52642702     0.05091800       1.17854682
## 84       -1.23113036      -1.20442230     0.01272434      -0.70271480
## 85       -1.03752256      -0.97421613     0.24416040       0.02545075
## 86       -1.52642702      -1.34797950     0.43305527      -0.12758531
## 87       -0.33710120      -0.78667510    -0.40526982       0.95396468
## 88        0.19203379       0.28368767    -0.02545075      -0.16617364
## 89        0.03818128       0.19203379    -0.03818128      -0.41912210
## 90        0.40526982       0.44707302    -0.78667510      -0.76945312
## 91        0.51856960       0.70271480    -0.75245638      -1.05957037
## 92        0.97421613       1.03752256    -0.89542793      -1.03752256
## 93       -0.68651916      -0.59282318    -0.46117919      -0.37779383
## 94        0.82184079       0.56275157    -1.10528634       0.39149488
## 95       -0.40526982      -0.40526982    -0.59282318      -0.01272434
## 96        1.34797950       1.48684468    -0.97421613      -0.73567430
## 97        0.27046566       0.17908874    -0.62344075      -1.25874673
## 98        1.38024023       1.52642702    -0.93409710      -0.67050162
## 99        0.02545075       0.06366298     0.40526982       0.24416040
## 100      -1.44946373      -1.61367018    -0.60806071       0.93409710
## 101      -1.12903457      -1.05957037    -0.51856960      -0.47537773
## 102       0.95396468       1.01596791    -0.99487522      -1.10528634
## 103       1.01596791       1.08214564    -0.80413364      -0.91459156
## 104       0.83980946       0.57772207    -1.08214564       0.41912210
## 105       1.03752256       1.10528634    -0.73567430      -0.87658763
## 106      -0.11476746      -0.07641832    -0.53318051      -1.08214564
## 107      -0.97421613      -0.87658763     0.48967276       0.01272434
## 108       0.48967276       0.78667510    -0.44707302      -0.19203379
## 109      -0.78667510      -0.67050162     0.17908874      -1.01596791
## 110      -1.66232963      -1.71527720     0.59282318       0.62344075
## 111      -0.89542793      -0.62344075     0.47537773      -0.23107198
## 112      -0.17908874      -0.19203379     0.51856960       0.37779383
## 113       0.99487522       1.05957037    -0.85805346      -0.95396468
## 114       0.17908874       0.27046566    -0.57772207      -0.57772207
## 115      -2.80216172      -2.42690063    -0.36416334       0.08918610
## 116      -1.10528634      -1.03752256    -0.47537773      -0.43305527
## 117       0.54790615       0.65465430    -1.34797950      -0.60806071
## 118       1.66232963       1.83849262    -0.91459156      -0.93409710
## 119       1.05957037       0.60806071    -1.17854682       0.43305527
## 120       0.39149488       0.43305527    -1.61367018      -1.61367018
## 121       0.50406856       0.68651916    -1.56855670      -2.10223158
## 122       0.87658763       0.93409710    -1.77352271      -1.99828954
## 123      -0.71909690      -0.60806071    -1.23113036      -1.34797950
## 124       0.78667510       0.53318051    -2.42690063      -0.71909690
## 125      -0.41912210      -0.41912210    -1.41400510      -1.20442230
## 126       1.28735798       1.41400510    -1.99828954      -1.56855670
## 127       0.25729077       0.16617364    -1.48684468      -2.80216172
## 128       1.31706374       1.44946373    -1.91230127      -1.52642702
## 129       0.00000000       0.03818128    -1.03752256      -0.97421613
## 130      -1.48684468      -1.66232963    -1.44946373       0.28368767
## 131      -1.17854682      -1.10528634    -1.28735798      -1.41400510
```

```
## 132       0.85805346       0.91459156    -2.10223158      -2.42690063
## 133       0.91459156       0.97421613    -1.66232963      -1.71527720
## 134       0.80413364       0.54790615    -2.23555842      -0.65465430
## 135       0.93409710       0.99487522    -1.52642702      -1.66232963
## 136      -0.16617364      -0.08918610    -1.31706374      -2.23555842
## 137      -0.99487522      -0.89542793    -0.95396468      -1.17854682
## 138       0.47537773       0.76945312    -1.20442230      -1.28735798
## 139      -0.80413364      -0.68651916    -1.12903457      -1.91230127
## 140      -1.77352271      -1.83849262    -0.83980946      -0.25729077
## 141      -0.93409710      -0.65465430    -1.01596791      -1.31706374
## 142      -0.20501110      -0.21802303    -0.87658763      -0.75245638
## 143       0.89542793       0.95396468    -1.71527720      -1.83849262
## 144       0.16617364       0.25729077    -1.38024023      -1.44946373
## 145      -1.15343724      -1.08214564    -1.25874673      -1.38024023
## 146       0.53318051       0.63896971    -2.80216172      -1.48684468
## 147       1.61367018       1.77352271    -1.83849262      -1.77352271
## 148      -0.56275157      -0.47537773     2.23555842       0.76945312
## 149       0.12758531       0.32366339     1.44946373       0.73567430
## 150       0.29695946       0.40526982     1.77352271       0.82184079
## 151      -0.21802303      -0.06366298     1.48684468       0.97421613
## 152       0.36416334       0.08918610     1.01596791       1.77352271
## 153      -0.01272434      -0.15328619     1.56855670      -0.14042416
## 154       0.33710120       0.20501110     1.17854682       1.91230127
## 155      -0.95396468      -0.85805346     1.71527720       0.44707302
## 156       0.65465430       0.71909690     1.15343724       1.31706374
## 157       0.67050162       0.87658763     1.20442230       0.67050162
## 158       0.08918610       0.21802303     1.38024023       0.71909690
## 159       1.44946373       1.61367018     0.93409710       0.91459156
## 160       1.41400510       1.31706374     0.82184079       1.44946373
## 161       0.43305527       0.50406856     1.31706374       1.08214564
## 162       1.91230127       0.89542793     0.78667510       2.80216172
## 163       2.42690063       2.42690063     0.80413364       1.66232963
## 164      -0.29695946      -0.48967276     1.34797950       1.99828954
## 165       1.23113036       1.23113036     0.89542793       0.65465430
## 166      -0.31028376      -0.31028376     1.52642702       0.53318051
## 167       2.80216172       2.80216172     0.99487522       1.20442230
## 168      -0.07641832      -0.16617364     1.91230127       1.38024023
## 169      -0.43305527      -0.53318051     1.83849262       1.48684468
## 170       0.35060018       0.47537773     2.10223158       1.25874673
## 171       0.60806071       0.35060018     1.41400510       1.83849262
## 172      -0.15328619      -0.54790615     1.28735798       2.42690063
## 173       0.11476746       0.14042416     1.66232963       1.15343724
## 174       1.77352271       1.71527720     0.97421613       1.34797950
## 175      -1.61367018      -1.99828954     2.80216172       1.71527720
## 176      -1.20442230      -1.15343724     2.42690063       0.23107198
## 177      -0.10196844      -0.11476746     1.99828954       1.28735798
## 178      -0.08918610      -0.17908874     1.23113036       1.10528634
## 179       1.48684468       1.20442230     0.68651916       1.61367018
## 180       0.28368767       0.39149488     1.12903457       0.40526982
## 181       0.70271480       0.80413364     0.87658763       1.05957037
## 182      -0.65465430      -0.95396468     1.10528634       2.23555842
## 183      -0.48967276      -0.51856960     1.08214564       0.15328619
## 184      -0.44707302      -0.46117919     1.25874673       1.03752256
## 185      -0.73567430      -0.82184079     1.61367018       0.83980946
## 186       0.21802303      -0.23107198     0.95396468       2.10223158
```

```
## 187       0.57772207       0.82184079     1.05957037       0.80413364
## 188       0.44707302       0.75245638     1.03752256       0.50406856
## 189       0.73567430       1.17854682     0.75245638       0.03818128
## 190       1.17854682       1.38024023     0.76945312      -0.48967276
## 191       1.56855670       1.66232963     0.73567430      -0.44707302
## 192      -0.12758531      -0.12758531     0.91459156       0.57772207
## 193       1.52642702       1.28735798     0.67050162       1.41400510
## 194       0.07641832       0.07641832     0.85805346       1.01596791
## 195       2.10223158       1.99828954     0.70271480       0.06366298
## 196       0.62344075       0.73567430     0.83980946      -0.99487522
## 197       2.23555842       2.10223158     0.71909690       0.19203379
##     HGRE_align.L.PET LGSRE_align.L.PET HGSRE_align.L.PET LGHRE_align.L.PET
## 1         -0.03818128        0.06366298       -0.01272434        0.03818128
## 2         -0.10196844        0.10196844       -0.10196844        0.19203379
## 3          0.56275157       -0.54790615        0.56275157       -0.60806071
## 4         -1.12903457       -0.35060018       -1.12903457       -0.28368767
## 5         -1.38024023        0.54790615       -1.31706374        0.50406856
## 6          0.08918610       -0.32366339        0.08918610       -0.35060018
## 7          0.03818128       -1.12903457        0.06366298       -1.15343724
## 8         -0.39149488        0.20501110       -0.39149488        0.14042416
## 9          0.53318051       -0.40526982        0.53318051       -0.43305527
## 10        -0.89542793        0.76945312       -0.89542793        0.83980946
## 11         0.02545075       -0.56275157        0.02545075       -0.59282318
## 12         0.37779383       -0.62344075        0.37779383       -0.67050162
## 13         0.65465430       -0.63896971        0.67050162       -0.73567430
## 14        -0.27046566        0.85805346       -0.17908874        0.87658763
## 15         0.05091800       -1.23113036        0.07641832       -1.25874673
## 16        -0.19203379       -1.15343724       -0.27046566       -1.20442230
## 17        -0.63896971       -0.33710120       -0.76945312        0.01272434
## 18        -1.17854682        0.16617364       -1.20442230        0.21802303
## 19        -0.29695946       -0.05091800       -0.36416334       -0.02545075
## 20        -0.15328619       -0.10196844       -0.19203379       -0.10196844
## 21        -0.68651916       -0.08918610       -0.48967276       -0.07641832
## 22         0.60806071        0.00000000        0.65465430       -0.08918610
## 23         0.89542793       -0.31028376        0.89542793       -0.32366339
## 24        -0.97421613       -0.36416334       -0.97421613       -0.39149488
## 25         0.95396468       -0.85805346        0.95396468       -0.80413364
## 26        -1.99828954        0.93409710       -1.99828954        1.08214564
## 27        -0.71909690        1.12903457       -0.67050162        1.15343724
## 28        -0.11476746       -0.59282318       -0.11476746       -0.65465430
## 29         0.17908874       -0.75245638        0.17908874       -0.78667510
## 30         0.46117919       -0.82184079        0.46117919       -0.85805346
## 31         0.35060018       -0.01272434        0.35060018       -0.03818128
## 32        -0.76945312        0.31028376       -0.71909690        0.36416334
## 33         0.43305527       -0.78667510        0.40526982       -0.82184079
## 34        -0.82184079        0.53318051       -0.75245638        0.62344075
## 35        -1.23113036        0.27046566       -1.17854682        0.24416040
## 36         0.15328619        0.47537773        0.15328619        0.41912210
## 37        -0.05091800       -0.29695946       -0.02545075       -0.33710120
## 38        -0.21802303       -0.21802303       -0.16617364       -0.23107198
## 39         0.57772207       -0.80413364        0.57772207       -0.83980946
## 40         0.75245638       -0.48967276        0.75245638       -0.56275157
## 41        -0.32366339        0.14042416       -0.29695946        0.11476746
## 42         0.40526982       -0.11476746        0.41912210       -0.15328619
## 43        -1.44946373        0.71909690       -1.48684468        0.95396468
```

```
## 44        0.33710120       -0.06366298        0.33710120       -0.06366298
## 45       -1.91230127        1.56855670       -1.66232963        1.91230127
## 46       -1.31706374        0.78667510       -1.34797950        1.10528634
## 47        0.85805346       -0.50406856        0.85805346       -0.53318051
## 48       -0.80413364        0.12758531       -0.87658763        0.15328619
## 49        0.80413364       -0.14042416        0.80413364       -0.27046566
## 50        0.83980946       -0.19203379        0.82184079       -0.24416040
## 51        0.50406856       -0.16617364        0.51856960       -0.20501110
## 52        0.67050162       -0.02545075        0.68651916       -0.11476746
## 53       -1.41400510        0.63896971       -1.41400510        0.60806071
## 54        0.39149488       -0.87658763        0.43305527       -0.89542793
## 55       -1.10528634        0.70271480       -1.10528634        0.73567430
## 56        1.05957037       -0.44707302        1.05957037       -0.54790615
## 57       -1.15343724        0.33710120       -1.15343724        0.35060018
## 58        0.47537773       -0.27046566        0.47537773       -0.29695946
## 59        0.41912210       -0.24416040        0.39149488       -0.21802303
## 60       -0.78667510       -0.07641832       -0.73567430       -0.05091800
## 61       -1.52642702        0.44707302       -1.56855670        0.53318051
## 62       -0.85805346        0.17908874       -0.83980946        0.05091800
## 63       -2.80216172        1.52642702       -2.80216172        1.61367018
## 64       -2.10223158        0.57772207       -2.10223158        0.67050162
## 65       -0.91459156        0.89542793       -0.91459156        0.89542793
## 66       -0.99487522       -0.28368767       -1.08214564       -0.31028376
## 67       -0.44707302       -0.39149488       -0.46117919       -0.40526982
## 68       -0.93409710        0.28368767       -0.93409710        0.27046566
## 69       -0.40526982        0.40526982       -0.40526982        0.31028376
## 70       -0.46117919        0.48967276       -0.44707302        0.43305527
## 71        0.10196844        0.29695946        0.10196844        0.25729077
## 72       -1.56855670        0.65465430       -1.52642702        0.63896971
## 73       -1.61367018        1.20442230       -1.61367018        1.31706374
## 74       -0.12758531        0.21802303       -0.12758531        0.10196844
## 75       -1.20442230        0.32366339       -1.23113036        0.37779383
## 76        0.70271480        0.60806071        0.71909690        0.54790615
## 77        0.97421613       -0.60806071        0.99487522       -0.75245638
## 78       -0.06366298        0.35060018       -0.06366298        0.29695946
## 79       -0.41912210        0.19203379       -0.41912210        0.07641832
## 80       -2.23555842        0.50406856       -2.23555842        0.70271480
## 81        0.48967276       -0.51856960        0.48967276       -0.57772207
## 82       -1.28735798        0.07641832       -1.25874673        0.20501110
## 83       -0.70271480        1.15343724       -0.65465430        1.17854682
## 84        0.19203379       -0.65465430        0.19203379       -0.70271480
## 85        0.36416334        0.03818128        0.36416334       -0.01272434
## 86       -0.20501110       -0.12758531       -0.15328619       -0.12758531
## 87       -1.48684468        0.91459156       -1.44946373        0.99487522
## 88        0.27046566       -0.17908874        0.27046566       -0.14042416
## 89        0.44707302       -0.41912210        0.44707302       -0.41912210
## 90        0.07641832       -0.71909690        0.05091800       -0.76945312
## 91       -0.16617364       -1.05957037       -0.20501110       -1.03752256
## 92       -0.53318051       -1.03752256       -0.54790615       -1.01596791
## 93       -0.07641832       -0.37779383       -0.07641832       -0.37779383
## 94       -1.71527720        0.36416334       -1.77352271        0.44707302
## 95       -0.23107198       -0.03818128       -0.23107198        0.02545075
## 96       -1.03752256       -0.70271480       -1.01596791       -0.68651916
## 97       -0.36416334       -1.25874673       -0.33710120       -1.23113036
## 98       -1.01596791       -0.67050162       -0.99487522       -0.63896971
```

```
## 99       -0.83980946        0.25729077       -0.82184079        0.16617364
## 100      -0.73567430        0.95396468       -0.68651916        0.91459156
## 101       0.31028376       -0.46117919        0.31028376       -0.51856960
## 102      -0.54790615       -1.10528634       -0.56275157       -1.05957037
## 103      -0.50406856       -0.91459156       -0.51856960       -0.91459156
## 104      -1.66232963        0.39149488       -1.71527720        0.46117919
## 105      -0.48967276       -0.89542793       -0.50406856       -0.87658763
## 106       0.12758531       -1.08214564        0.12758531       -1.12903457
## 107       0.23107198        0.01272434        0.23107198        0.00000000
## 108      -0.01272434       -0.20501110       -0.03818128       -0.16617364
## 109       1.34797950       -1.01596791        1.28735798       -1.08214564
## 110       0.16617364        0.62344075        0.16617364        0.56275157
## 111       0.76945312       -0.23107198        0.76945312       -0.25729077
## 112      -0.31028376        0.37779383       -0.28368767        0.33710120
## 113      -0.51856960       -0.93409710       -0.53318051       -0.95396468
## 114       0.25729077       -0.57772207        0.25729077       -0.62344075
## 115       0.68651916        0.08918610        0.70271480        0.12758531
## 116       0.32366339       -0.43305527        0.32366339       -0.48967276
## 117      -0.65465430       -0.68651916       -0.78667510       -0.36416334
## 118       0.01272434       -0.95396468        0.01272434       -0.93409710
## 119      -1.34797950        0.43305527       -1.38024023        0.76945312
## 120       0.06366298       -1.61367018        0.03818128       -1.61367018
## 121      -0.17908874       -2.10223158       -0.21802303       -1.99828954
## 122      -0.60806071       -1.99828954       -0.62344075       -1.91230127
## 123      -0.08918610       -1.34797950       -0.08918610       -1.38024023
## 124      -1.83849262       -0.83980946       -1.91230127       -0.50406856
## 125      -0.24416040       -1.20442230       -0.24416040       -1.10528634
## 126      -1.08214564       -1.56855670       -1.05957037       -1.56855670
## 127      -0.37779383       -2.80216172       -0.35060018       -2.80216172
## 128      -1.05957037       -1.48684468       -1.03752256       -1.52642702
## 129      -0.87658763       -0.97421613       -0.85805346       -0.97421613
## 130      -0.75245638        0.23107198       -0.70271480        0.32366339
## 131       0.28368767       -1.41400510        0.28368767       -1.44946373
## 132      -0.62344075       -2.42690063       -0.63896971       -2.10223158
## 133      -0.57772207       -1.71527720       -0.59282318       -1.71527720
## 134      -1.77352271       -0.73567430       -1.83849262       -0.47537773
## 135      -0.56275157       -1.66232963       -0.57772207       -1.66232963
## 136       0.11476746       -2.23555842        0.11476746       -2.42690063
## 137       0.21802303       -1.17854682        0.21802303       -1.17854682
## 138      -0.02545075       -1.28735798       -0.05091800       -1.28735798
## 139       1.31706374       -1.91230127        1.25874673       -2.23555842
## 140       0.14042416       -0.25729077        0.14042416       -0.19203379
## 141       0.73567430       -1.31706374        0.73567430       -1.31706374
## 142      -0.33710120       -0.76945312       -0.31028376       -0.71909690
## 143      -0.59282318       -1.77352271       -0.60806071       -1.83849262
## 144       0.24416040       -1.44946373        0.24416040       -1.48684468
## 145       0.29695946       -1.38024023        0.29695946       -1.41400510
## 146      -0.67050162       -1.52642702       -0.80413364       -1.34797950
## 147       0.00000000       -1.83849262        0.00000000       -1.77352271
## 148       2.10223158        0.83980946        2.10223158        0.65465430
## 149       2.23555842        0.75245638        2.23555842        0.68651916
## 150       1.83849262        0.82184079        1.83849262        0.75245638
## 151       1.91230127        1.01596791        1.91230127        0.82184079
## 152      -0.14042416        1.77352271       -0.14042416        1.56855670
## 153       1.56855670       -0.15328619        1.61367018       -0.17908874
```

```
## 154       0.59282318        1.91230127        0.59282318        1.83849262
## 155       2.80216172        0.46117919        2.80216172        0.40526982
## 156       0.54790615        1.31706374        0.54790615        1.34797950
## 157       1.71527720        0.68651916        1.71527720        0.59282318
## 158       1.61367018        0.73567430        1.56855670        0.71909690
## 159       0.91459156        0.97421613        0.91459156        0.85805346
## 160      -0.28368767        1.44946373       -0.37779383        1.48684468
## 161       0.87658763        1.08214564        0.87658763        1.01596791
## 162      -2.42690063        2.80216172       -2.42690063        2.80216172
## 163      -0.95396468        1.66232963       -0.95396468        1.71527720
## 164       0.82184079        1.99828954        0.83980946        1.99828954
## 165       0.71909690        0.67050162        0.60806071        0.57772207
## 166       1.03752256        0.56275157        1.01596791        0.48967276
## 167       0.78667510        1.23113036        0.78667510        1.23113036
## 168       1.10528634        1.41400510        1.10528634        1.28735798
## 169       1.01596791        1.48684468        1.03752256        1.41400510
## 170       1.41400510        1.25874673        1.41400510        1.20442230
## 171      -0.35060018        1.83849262       -0.32366339        1.66232963
## 172      -0.43305527        2.42690063       -0.43305527        2.42690063
## 173       1.23113036        1.17854682        1.23113036        1.05957037
## 174       0.51856960        1.28735798        0.50406856        1.38024023
## 175       1.99828954        1.71527720        1.99828954        1.52642702
## 176       2.42690063        0.24416040        2.42690063        0.08918610
## 177       1.28735798        1.34797950        1.34797950        1.25874673
## 178       1.08214564        1.10528634        1.08214564        1.03752256
## 179      -1.25874673        1.61367018       -1.28735798        1.77352271
## 180       1.77352271        0.41912210        1.77352271        0.39149488
## 181       0.20501110        1.05957037        0.20501110        1.12903457
## 182       0.93409710        2.23555842        0.93409710        2.23555842
## 183       1.44946373        0.15328619        1.44946373        0.17908874
## 184       1.52642702        1.03752256        1.52642702        0.93409710
## 185       1.17854682        0.87658763        1.20442230        0.80413364
## 186      -0.25729077        2.10223158       -0.25729077        2.10223158
## 187       1.48684468        0.80413364        1.48684468        0.78667510
## 188       1.66232963        0.51856960        1.66232963        0.47537773
## 189       1.38024023        0.02545075        1.38024023        0.06366298
## 190       1.20442230       -0.53318051        1.17854682       -0.46117919
## 191       0.99487522       -0.47537773        0.97421613       -0.44707302
## 192       1.25874673        0.59282318        1.31706374        0.51856960
## 193      -0.47537773        1.38024023       -0.47537773        1.44946373
## 194       1.15343724        0.99487522        1.15343724        0.97421613
## 195       0.62344075        0.05091800        0.62344075        0.23107198
## 196       1.12903457       -0.99487522        1.12903457       -0.99487522
## 197       0.63896971        0.11476746        0.63896971        0.28368767
##     HGLRE_align.L.PET GLNU_norm_align.L.PET RLNU_norm_align.L.PET
## 1         -0.07641832           -0.28368767           -0.11476746
## 2         -0.23107198            0.00000000            0.20501110
## 3          0.57772207           -0.48967276            0.15328619
## 4         -1.10528634           -0.10196844           -0.73567430
## 5         -1.41400510            0.24416040           -0.14042416
## 6          0.01272434           -0.35060018           -0.19203379
## 7         -0.06366298           -0.21802303           -0.17908874
## 8         -0.70271480           -0.11476746            0.24416040
## 9          0.60806071           -0.47537773           -0.35060018
## 10        -0.97421613            0.12758531           -0.07641832
```

```
## 11         0.07641832           -0.40526982           -0.65465430
## 12         0.40526982           -0.43305527           -0.32366339
## 13         0.67050162           -0.68651916           -0.16617364
## 14        -0.60806071            0.73567430            0.40526982
## 15         0.00000000           -0.29695946           -0.29695946
## 16        -0.24416040           -0.07641832           -0.37779383
## 17         0.14042416           -0.27046566           -0.50406856
## 18        -1.20442230           -0.03818128           -0.78667510
## 19        -0.25729077           -0.24416040           -0.21802303
## 20        -0.19203379           -0.32366339           -0.31028376
## 21        -0.73567430           -0.19203379           -0.08918610
## 22         0.53318051            0.31028376            0.51856960
## 23         0.89542793           -0.70271480            0.10196844
## 24        -0.99487522           -0.17908874           -0.12758531
## 25         0.95396468           -0.23107198           -0.03818128
## 26        -2.10223158            0.59282318           -0.91459156
## 27        -0.76945312            0.27046566            0.01272434
## 28        -0.17908874           -0.31028376           -0.43305527
## 29         0.17908874           -0.14042416            0.00000000
## 30         0.48967276           -0.54790615           -0.28368767
## 31         0.29695946           -0.16617364            0.29695946
## 32        -0.71909690           -0.12758531           -0.54790615
## 33         0.43305527           -0.51856960           -0.24416040
## 34        -0.87658763           -0.01272434           -0.33710120
## 35        -1.23113036            0.01272434           -0.20501110
## 36        -0.02545075            0.05091800            0.39149488
## 37        -0.10196844           -0.33710120            0.17908874
## 38        -0.56275157            0.02545075            0.47537773
## 39         0.63896971           -0.62344075           -0.39149488
## 40         0.70271480           -0.59282318            0.08918610
## 41        -0.37779383           -0.15328619            0.23107198
## 42         0.39149488           -0.44707302            0.19203379
## 43        -1.44946373            0.23107198           -1.03752256
## 44         0.28368767           -0.20501110            0.25729077
## 45        -1.91230127            0.91459156            0.31028376
## 46        -1.31706374            0.68651916           -1.23113036
## 47         0.83980946            0.11476746            0.44707302
## 48        -0.63896971            0.25729077           -0.53318051
## 49         0.76945312            0.17908874            0.63896971
## 50         0.85805346            0.03818128            0.32366339
## 51         0.47537773            0.08918610            0.48967276
## 52         0.65465430            0.19203379            0.27046566
## 53        -1.48684468            0.75245638           -0.36416334
## 54         0.37779383            0.51856960            0.35060018
## 55        -1.12903457            0.53318051           -0.10196844
## 56         1.12903457            0.37779383            0.41912210
## 57        -1.17854682            0.44707302           -0.15328619
## 58         0.50406856            0.20501110           -0.05091800
## 59         0.41912210            0.16617364            0.14042416
## 60        -0.59282318            0.28368767           -0.59282318
## 61        -1.38024023            0.62344075           -0.87658763
## 62        -0.83980946            0.33710120            0.11476746
## 63        -2.80216172            1.38024023           -1.08214564
## 64        -1.99828954            0.76945312           -1.05957037
## 65        -0.95396468            0.67050162            0.16617364
```

```
## 66        -0.93409710            0.54790615           -0.70271480
## 67        -0.57772207            0.36416334            0.28368767
## 68        -0.91459156            0.32366339           -0.48967276
## 69        -0.67050162            0.39149488            0.57772207
## 70        -0.65465430            0.50406856            0.53318051
## 71        -0.05091800            0.29695946            0.59282318
## 72        -1.56855670            0.78667510            0.05091800
## 73        -1.83849262            0.82184079           -0.06366298
## 74        -0.15328619            0.43305527            0.33710120
## 75        -1.15343724            0.57772207           -0.62344075
## 76         0.56275157            0.80413364            0.65465430
## 77         0.93409710            0.47537773            0.62344075
## 78        -0.11476746            0.41912210            0.56275157
## 79        -0.68651916           -0.08918610            0.36416334
## 80        -2.23555842            0.60806071           -1.38024023
## 81         0.46117919           -0.37779383            0.12758531
## 82        -1.28735798            0.10196844           -0.63896971
## 83        -0.75245638            0.40526982            0.07641832
## 84         0.19203379           -0.02545075            0.06366298
## 85         0.31028376           -0.05091800            0.37779383
## 86        -0.54790615            0.07641832            0.54790615
## 87        -1.52642702            0.65465430           -0.47537773
## 88         0.36416334           -0.36416334            0.02545075
## 89         0.44707302           -0.46117919           -0.01272434
## 90         0.03818128           -1.05957037           -0.76945312
## 91        -0.20501110           -1.01596791           -0.68651916
## 92        -0.44707302           -0.93409710           -0.89542793
## 93        -0.12758531           -0.76945312           -0.25729077
## 94        -1.66232963           -0.65465430           -1.20442230
## 95        -0.27046566           -0.83980946           -0.40526982
## 96        -1.03752256           -0.91459156           -0.99487522
## 97        -0.32366339           -0.95396468           -0.41912210
## 98        -1.01596791           -0.85805346           -0.93409710
## 99        -0.82184079            0.46117919            0.21802303
## 100       -0.78667510           -0.53318051           -0.46117919
## 101        0.25729077           -0.87658763           -0.27046566
## 102       -0.46117919           -0.99487522           -0.95396468
## 103       -0.41912210           -0.80413364           -0.82184079
## 104       -1.61367018           -0.56275157           -1.12903457
## 105       -0.40526982           -0.73567430           -0.80413364
## 106        0.16617364           -0.50406856           -0.51856960
## 107        0.21802303            0.21802303            0.46117919
## 108        0.10196844            0.14042416           -0.57772207
## 109        1.34797950            0.15328619           -0.02545075
## 110       -0.01272434            0.56275157            0.60806071
## 111        0.71909690            0.06366298            0.43305527
## 112       -0.36416334            0.35060018            0.50406856
## 113       -0.43305527           -0.82184079           -0.85805346
## 114        0.35060018           -1.03752256           -0.44707302
## 115        0.54790615           -0.25729077            0.03818128
## 116        0.27046566           -0.78667510           -0.23107198
## 117        0.12758531           -0.89542793           -0.75245638
## 118        0.06366298           -0.97421613           -0.97421613
## 119       -1.34797950           -0.57772207           -1.66232963
## 120        0.02545075           -2.80216172           -1.56855670
```

```
## 121       -0.21802303           -2.23555842           -1.48684468
## 122       -0.51856960           -1.83849262           -1.83849262
## 123       -0.14042416           -1.41400510           -1.15343724
## 124       -1.77352271           -1.34797950           -2.80216172
## 125       -0.28368767           -1.56855670           -1.25874673
## 126       -1.08214564           -1.77352271           -2.23555842
## 127       -0.33710120           -1.91230127           -1.28735798
## 128       -1.05957037           -1.61367018           -1.91230127
## 129       -0.85805346           -1.10528634           -0.83980946
## 130       -0.80413364           -1.28735798           -1.34797950
## 131        0.23107198           -1.66232963           -1.17854682
## 132       -0.53318051           -2.10223158           -1.99828954
## 133       -0.48967276           -1.48684468           -1.71527720
## 134       -1.71527720           -1.31706374           -2.42690063
## 135       -0.47537773           -1.38024023           -1.61367018
## 136        0.15328619           -1.25874673           -1.41400510
## 137        0.20501110           -1.15343724           -0.67050162
## 138        0.08918610           -1.20442230           -1.44946373
## 139        1.31706374           -1.17854682           -1.01596791
## 140       -0.03818128           -1.08214564           -0.56275157
## 141        0.68651916           -1.23113036           -0.71909690
## 142       -0.39149488           -1.12903457           -0.60806071
## 143       -0.50406856           -1.52642702           -1.77352271
## 144        0.33710120           -2.42690063           -1.31706374
## 145        0.24416040           -1.44946373           -1.10528634
## 146        0.11476746           -1.71527720           -1.52642702
## 147        0.05091800           -1.99828954           -2.10223158
## 148        2.10223158            1.01596791            2.42690063
## 149        2.23555842            0.89542793            1.44946373
## 150        1.77352271            0.95396468            1.71527720
## 151        1.99828954            1.03752256            1.38024023
## 152       -0.16617364            1.91230127            0.99487522
## 153        1.56855670            1.48684468            1.52642702
## 154        0.62344075            1.52642702            1.05957037
## 155        2.80216172            1.20442230            1.66232963
## 156        0.51856960            1.34797950            1.03752256
## 157        1.83849262            1.05957037            1.10528634
## 158        1.61367018            0.99487522            1.31706374
## 159        1.03752256            1.08214564            0.89542793
## 160       -0.08918610            1.71527720            0.78667510
## 161        0.87658763            1.15343724            1.25874673
## 162       -2.42690063            2.80216172            0.70271480
## 163       -0.89542793            1.99828954            0.71909690
## 164        0.78667510            1.83849262            1.34797950
## 165        0.80413364            1.56855670            0.82184079
## 166        1.05957037            1.17854682            1.41400510
## 167        0.82184079            1.12903457            0.91459156
## 168        0.99487522            1.23113036            1.99828954
## 169        1.01596791            1.44946373            1.77352271
## 170        1.38024023            1.10528634            2.10223158
## 171       -0.31028376            2.10223158            1.17854682
## 172       -0.62344075            2.42690063            1.08214564
## 173        1.23113036            1.31706374            1.48684468
## 174        0.59282318            1.61367018            0.87658763
## 175        1.91230127            2.23555842            2.80216172
```

```
## 176        2.42690063            1.41400510            2.23555842
## 177        1.28735798            1.28735798            1.91230127
## 178        0.97421613            0.83980946            1.56855670
## 179       -1.25874673            1.66232963            0.67050162
## 180        1.71527720            0.70271480            1.28735798
## 181        0.32366339            0.97421613            0.85805346
## 182        0.91459156            1.25874673            1.23113036
## 183        1.44946373            0.87658763            1.20442230
## 184        1.48684468            0.85805346            1.61367018
## 185        1.08214564            0.93409710            1.83849262
## 186       -0.29695946            1.77352271            0.93409710
## 187        1.52642702            0.71909690            1.15343724
## 188        1.66232963            0.63896971            1.12903457
## 189        1.41400510           -0.75245638            0.80413364
## 190        1.20442230           -0.71909690            0.83980946
## 191        1.10528634           -0.63896971            0.76945312
## 192        1.25874673           -0.06366298            1.01596791
## 193       -0.35060018            0.48967276            0.68651916
## 194        1.17854682           -0.39149488            0.97421613
## 195        0.73567430           -0.60806071            0.73567430
## 196        1.15343724           -0.67050162            0.95396468
## 197        0.75245638           -0.41912210            0.75245638
##     GLVAR_align.L.PET RLVAR_align.L.PET Entropy_align.L.PET  SZSE.L.PET
## 1          0.06366298       -0.32366339          0.01272434 -0.51856960
## 2          0.31028376       -0.54790615         -0.87658763  0.25729077
## 3          0.40526982       -0.57772207          0.27046566  0.53318051
## 4         -1.44946373        0.48967276         -0.48967276 -0.91459156
## 5         -0.91459156       -0.40526982         -1.52642702  0.35060018
## 6         -0.11476746       -0.33710120          0.12758531 -0.29695946
## 7         -0.21802303       -0.39149488         -0.15328619  0.07641832
## 8         -0.01272434       -0.68651916         -0.78667510  0.54790615
## 9          0.43305527       -0.08918610          0.15328619 -0.73567430
## 10        -0.10196844       -0.44707302         -1.15343724 -0.02545075
## 11        -0.68651916        0.35060018          0.33710120 -0.47537773
## 12        -0.14042416       -0.17908874          0.23107198 -0.35060018
## 13         0.05091800       -0.31028376          0.63896971 -0.31028376
## 14         0.80413364       -0.80413364         -2.42690063  0.32366339
## 15        -0.50406856       -0.06366298          0.10196844 -0.14042416
## 16        -0.75245638       -0.10196844         -0.85805346 -0.27046566
## 17        -0.63896971        0.68651916          0.02545075 -2.23555842
## 18        -0.76945312        0.57772207         -0.37779383 -0.80413364
## 19        -0.44707302       -0.15328619         -0.08918610 -0.12758531
## 20        -0.29695946       -0.03818128          0.07641832 -0.33710120
## 21        -0.31028376       -0.29695946         -0.20501110 -0.06366298
## 22         1.05957037       -0.89542793         -1.91230127  0.65465430
## 23         0.73567430       -0.51856960          0.65465430  0.03818128
## 24        -0.87658763       -0.27046566         -0.63896971 -0.10196844
## 25         0.68651916       -0.46117919         -0.56275157  0.24416040
## 26        -1.83849262        0.63896971         -1.61367018 -0.97421613
## 27         0.36416334       -0.50406856         -1.48684468  0.31028376
## 28        -0.54790615        0.03818128          0.11476746 -0.28368767
## 29        -0.27046566       -0.37779383         -0.82184079  0.41912210
## 30        -0.24416040       -0.02545075          0.56275157 -0.48967276
## 31         0.91459156       -0.71909690         -0.40526982 -0.43305527
## 32        -0.03818128        0.17908874          0.00000000 -0.65465430
```

```
## 33        -0.35060018       -0.11476746          0.40526982  0.19203379
## 34        -0.23107198       -0.07641832         -0.70271480 -0.23107198
## 35        -0.73567430       -0.21802303         -0.95396468  0.05091800
## 36         0.63896971       -0.78667510         -1.17854682  0.46117919
## 37         0.07641832       -0.62344075          0.03818128  0.12758531
## 38         0.08918610       -0.87658763         -1.12903457  0.33710120
## 39        -0.12758531        0.01272434          0.60806071 -0.15328619
## 40         0.57772207       -0.47537773          0.48967276 -0.19203379
## 41         0.19203379       -0.70271480         -0.36416334  0.23107198
## 42         0.16617364       -0.63896971          0.14042416  0.15328619
## 43        -1.52642702        0.76945312         -1.03752256 -1.15343724
## 44         0.89542793       -0.75245638         -0.41912210 -0.46117919
## 45        -0.85805346        0.31028376         -2.23555842  0.29695946
## 46        -0.93409710        1.41400510         -0.83980946 -1.10528634
## 47         0.02545075        0.16617364          0.46117919  0.48967276
## 48        -0.83980946        0.78667510          0.08918610 -0.24416040
## 49         0.67050162       -0.23107198          0.28368767  0.56275157
## 50         0.53318051        0.29695946          0.62344075  0.02545075
## 51         0.29695946        0.08918610          0.50406856  0.57772207
## 52         0.15328619        0.27046566          0.37779383  0.39149488
## 53        -1.41400510        0.59282318         -1.38024023 -0.08918610
## 54         0.01272434        0.23107198         -0.62344075  0.36416334
## 55        -0.48967276        0.53318051         -0.89542793  0.11476746
## 56         0.95396468        0.15328619         -0.57772207 -0.03818128
## 57        -0.89542793        0.56275157         -0.71909690 -0.17908874
## 58        -0.46117919        0.46117919          0.36416334 -0.01272434
## 59         0.44707302        0.36416334          0.47537773 -0.05091800
## 60        -0.82184079        0.85805346          0.20501110 -0.59282318
## 61        -1.99828954        1.10528634         -1.01596791 -0.93409710
## 62        -0.60806071        0.37779383         -0.29695946 -0.21802303
## 63        -2.80216172        1.25874673         -2.80216172 -1.25874673
## 64        -2.10223158        1.20442230         -1.20442230 -0.99487522
## 65        -0.02545075        0.41912210         -1.05957037  0.21802303
## 66        -1.91230127        0.89542793         -0.97421613 -0.82184079
## 67        -0.56275157        0.21802303         -0.73567430  0.00000000
## 68        -0.80413364        0.75245638          0.06366298 -0.37779383
## 69        -0.05091800        0.05091800         -0.59282318  0.50406856
## 70        -0.28368767        0.10196844         -0.99487522  0.17908874
## 71         0.03818128        0.20501110          0.31028376  0.51856960
## 72        -1.56855670        0.51856960         -1.41400510  0.10196844
## 73        -1.48684468        0.62344075         -1.83849262  0.59282318
## 74        -0.40526982        0.44707302         -0.12758531  0.06366298
## 75        -1.31706374        0.97421613         -0.17908874 -0.41912210
## 76         0.78667510        0.00000000         -1.99828954  0.62344075
## 77         0.46117919        0.11476746         -0.54790615  0.60806071
## 78        -0.15328619        0.24416040         -0.14042416  0.28368767
## 79        -0.06366298       -0.59282318         -0.65465430  0.27046566
## 80        -2.23555842        1.01596791         -1.71527720 -1.20442230
## 81         0.39149488       -0.35060018          0.53318051  0.16617364
## 82        -1.34797950        0.50406856         -0.91459156 -0.87658763
## 83         0.37779383       -0.41912210         -1.44946373  0.37779383
## 84        -0.25729077       -0.25729077         -0.80413364  0.44707302
## 85         0.93409710       -0.65465430         -0.39149488 -0.40526982
## 86         0.10196844       -0.82184079         -1.08214564  0.40526982
## 87        -0.78667510        0.19203379         -1.77352271 -0.67050162
```

```
## 88          0.27046566       -0.20501110          0.51856960 -0.25729077
## 89          0.14042416       -0.24416040          0.57772207  0.14042416
## 90         -0.41912210       -0.73567430          0.24416040 -0.57772207
## 91         -0.51856960       -0.83980946          0.17908874 -0.44707302
## 92         -1.03752256       -0.53318051         -0.06366298 -0.76945312
## 93         -0.16617364       -0.91459156         -0.25729077 -0.39149488
## 94         -1.66232963       -0.14042416         -1.28735798 -1.12903457
## 95          0.23107198       -0.99487522         -0.33710120 -0.20501110
## 96         -1.23113036       -0.60806071         -0.44707302 -0.83980946
## 97         -0.32366339       -0.97421613         -0.11476746 -0.36416334
## 98         -1.20442230       -0.48967276         -0.43305527 -0.78667510
## 99         -0.59282318        0.47537773         -0.23107198 -0.16617364
## 100         0.35060018       -1.01596791         -1.56855670 -0.11476746
## 101         0.85805346       -1.05957037         -0.47537773 -0.71909690
## 102        -1.05957037       -0.67050162         -0.07641832 -0.85805346
## 103        -0.99487522       -0.36416334         -0.03818128 -0.63896971
## 104        -1.61367018       -0.05091800         -1.25874673 -1.08214564
## 105        -0.97421613       -0.19203379         -0.02545075 -0.60806071
## 106         0.12758531        0.06366298          0.35060018  0.01272434
## 107        -0.19203379        0.07641832         -0.10196844  0.20501110
## 108        -0.37779383        0.83980946          0.59282318 -0.50406856
## 109        -0.07641832        0.39149488          0.44707302  0.43305527
## 110         0.65465430       -0.16617364         -1.10528634  0.63896971
## 111         0.59282318        0.14042416          0.54790615  0.08918610
## 112         0.20501110        0.02545075         -0.27046566  0.47537773
## 113        -1.01596791       -0.43305527         -0.05091800 -0.70271480
## 114         0.25729077       -0.93409710          0.43305527 -0.56275157
## 115         0.76945312       -1.10528634         -2.10223158 -0.07641832
## 116         0.87658763       -1.03752256         -0.46117919 -0.62344075
## 117        -0.65465430        0.25729077         -0.01272434 -2.42690063
## 118        -0.70271480       -0.28368767          0.25729077 -0.68651916
## 119        -0.95396468        0.80413364         -0.93409710 -1.77352271
## 120        -0.43305527       -1.71527720          0.16617364 -1.38024023
## 121        -0.53318051       -1.77352271          0.05091800 -1.28735798
## 122        -1.15343724       -1.56855670         -0.28368767 -1.66232963
## 123        -0.17908874       -1.83849262         -0.51856960 -1.23113036
## 124        -1.77352271       -1.31706374         -1.34797950 -2.10223158
## 125         0.21802303       -2.10223158         -0.60806071 -1.05957037
## 126        -1.28735798       -1.61367018         -0.68651916 -1.83849262
## 127        -0.33710120       -1.99828954         -0.35060018 -1.17854682
## 128        -1.25874673       -1.52642702         -0.67050162 -1.71527720
## 129        -0.62344075       -1.08214564         -0.50406856 -1.03752256
## 130         0.33710120       -2.23555842         -1.66232963 -1.01596791
## 131         0.82184079       -2.80216172         -0.76945312 -1.61367018
## 132        -1.17854682       -1.66232963         -0.31028376 -1.91230127
## 133        -1.10528634       -1.44946373         -0.21802303 -1.48684468
## 134        -1.71527720       -1.28735798         -1.31706374 -1.99828954
## 135        -1.08214564       -1.38024023         -0.19203379 -1.41400510
## 136         0.11476746       -1.23113036          0.21802303 -0.95396468
## 137        -0.20501110       -1.20442230         -0.32366339 -0.75245638
## 138        -0.39149488       -0.76945312          0.41912210 -1.31706374
## 139        -0.08918610       -1.12903457          0.32366339 -0.54790615
## 140         0.62344075       -1.34797950         -1.23113036 -0.32366339
## 141         0.56275157       -1.17854682          0.39149488 -0.89542793
## 142         0.17908874       -1.25874673         -0.53318051 -0.53318051
```

```
## 143       -1.12903457       -1.48684468         -0.24416040 -1.56855670
## 144        0.24416040       -1.91230127          0.29695946 -1.34797950
## 145        0.83980946       -2.42690063         -0.75245638 -1.44946373
## 146       -0.67050162       -1.15343724         -0.16617364 -2.80216172
## 147       -0.71909690       -1.41400510          0.19203379 -1.52642702
## 148        2.10223158        0.70271480          1.66232963  1.99828954
## 149        1.99828954        1.23113036          2.80216172  1.23113036
## 150        1.66232963        0.91459156          1.99828954  2.10223158
## 151        1.52642702        1.17854682          1.83849262  1.66232963
## 152        0.41912210        1.66232963          0.78667510  1.10528634
## 153        1.38024023        1.12903457          1.05957037  1.56855670
## 154        1.03752256        1.56855670          0.95396468  1.31706374
## 155        2.80216172        0.99487522          1.10528634  1.15343724
## 156        0.60806071        1.61367018          1.01596791  1.08214564
## 157        1.08214564        1.44946373          1.77352271  1.17854682
## 158        1.83849262        1.28735798          1.91230127  1.12903457
## 159        0.70271480        1.83849262          1.56855670  0.85805346
## 160       -0.47537773        2.23555842          0.87658763  0.73567430
## 161        0.97421613        1.31706374          1.25874673  1.03752256
## 162       -2.42690063        2.80216172          0.67050162  0.67050162
## 163       -0.57772207        2.42690063          0.82184079  0.71909690
## 164        1.34797950        1.34797950          0.85805346  1.44946373
## 165       -0.36416334        1.91230127          0.91459156  0.78667510
## 166        0.99487522        1.08214564          0.99487522  1.20442230
## 167        0.71909690        1.77352271          1.48684468  0.97421613
## 168        1.31706374        0.87658763          1.08214564  1.83849262
## 169        1.17854682        0.93409710          0.89542793  1.41400510
## 170        1.41400510        1.05957037          1.71527720  1.91230127
## 171        0.28368767        1.52642702          0.76945312  1.28735798
## 172        0.32366339        1.71527720          0.70271480  2.23555842
## 173        1.12903457        1.38024023          1.38024023  1.25874673
## 174        0.48967276        1.99828954          1.31706374  0.91459156
## 175        2.23555842        0.82184079          0.68651916  2.80216172
## 176        1.91230127        0.95396468          1.12903457  2.42690063
## 177        1.25874673        1.15343724          1.34797950  1.52642702
## 178        1.28735798        0.33710120          1.03752256  1.48684468
## 179       -1.38024023        2.10223158          0.73567430  0.68651916
## 180        1.77352271        0.60806071          2.23555842  1.38024023
## 181        0.47537773        1.48684468          0.93409710  0.75245638
## 182        1.71527720        0.54790615          0.75245638  1.61367018
## 183        1.20442230        0.65465430          0.97421613  1.77352271
## 184        2.42690063        0.28368767          1.20442230  0.93409710
## 185        1.44946373       -0.01272434          0.83980946  1.71527720
## 186        0.75245638        1.03752256          0.71909690  0.83980946
## 187        1.61367018        0.71909690          2.10223158  1.01596791
## 188        1.48684468        0.67050162          2.42690063  1.34797950
## 189        1.10528634        0.12758531          1.61367018  0.87658763
## 190        1.01596791       -0.12758531          1.52642702  0.89542793
## 191        0.54790615        0.40526982          1.44946373  0.82184079
## 192        1.23113036       -0.56275157          1.28735798  0.95396468
## 193        0.00000000        0.73567430          0.80413364  0.70271480
## 194        1.56855670       -0.95396468          1.23113036  1.05957037
## 195        0.50406856        0.32366339          1.15343724  0.76945312
## 196        1.15343724       -0.85805346          1.41400510  0.99487522
## 197        0.51856960        0.43305527          1.17854682  0.80413364
```

```
##      LZSE.L.PET LGLZE.L.PET HGLZE.L.PET SZLGE.L.PET SZHGE.L.PET LZLGE.L.PET
## 1    0.19203379  0.02545075 -0.01272434 -0.02545075 -0.08918610  0.16617364
## 2   -0.70271480  0.10196844 -0.12758531  0.10196844 -0.10196844  0.12758531
## 3   -2.23555842 -0.48967276  0.54790615 -0.40526982  0.59282318 -0.75245638
## 4    0.44707302 -0.36416334 -1.12903457 -0.36416334 -1.05957037 -0.03818128
## 5   -1.56855670  0.54790615 -1.38024023  0.62344075 -1.23113036  0.27046566
## 6   -0.14042416 -0.37779383  0.08918610 -0.39149488  0.02545075 -0.20501110
## 7   -0.62344075 -1.12903457  0.07641832 -1.01596791  0.10196844 -1.20442230
## 8   -2.10223158  0.19203379 -0.39149488  0.28368767 -0.29695946 -0.10196844
## 9    0.32366339 -0.33710120  0.37779383 -0.31028376  0.08918610 -0.57772207
## 10  -0.47537773  0.57772207 -0.85805346  0.51856960 -0.54790615  1.05957037
## 11   0.15328619 -0.54790615  0.02545075 -0.51856960 -0.01272434 -0.62344075
## 12  -0.31028376 -0.60806071  0.39149488 -0.54790615  0.36416334 -0.76945312
## 13  -0.08918610 -0.65465430  0.57772207 -0.62344075  0.56275157 -0.78667510
## 14  -1.44946373  0.95396468 -0.32366339  0.97421613 -0.24416040  0.67050162
## 15  -0.48967276 -1.23113036  0.03818128 -1.17854682  0.07641832 -1.41400510
## 16  -0.41912210 -1.17854682 -0.17908874 -1.10528634 -0.17908874 -1.28735798
## 17   2.80216172 -0.28368767 -0.54790615 -1.12903457 -2.10223158  1.41400510
## 18   0.41912210  0.20501110 -1.17854682  0.19203379 -1.08214564  0.25729077
## 19  -0.24416040 -0.07641832 -0.37779383 -0.17908874 -0.40526982  0.01272434
## 20  -0.03818128 -0.14042416 -0.25729077 -0.19203379 -0.37779383 -0.06366298
## 21  -0.65465430 -0.05091800 -0.75245638  0.00000000 -0.71909690 -0.16617364
## 22  -2.80216172  0.00000000  0.60806071  0.08918610  0.75245638 -0.32366339
## 23  -0.46117919 -0.27046566  0.85805346 -0.21802303  0.78667510 -0.50406856
## 24  -0.54790615 -0.39149488 -0.97421613 -0.37779383 -0.89542793 -0.39149488
## 25  -1.34797950 -0.83980946  0.99487522 -0.73567430  1.03752256 -0.95396468
## 26   0.46117919  0.97421613 -1.99828954  0.83980946 -1.77352271  1.15343724
## 27  -0.99487522  1.10528634 -0.50406856  1.08214564 -0.43305527  0.95396468
## 28  -0.39149488 -0.62344075 -0.11476746 -0.63896971 -0.12758531 -0.67050162
## 29  -1.83849262 -0.71909690  0.17908874 -0.65465430  0.39149488 -0.99487522
## 30   0.29695946 -0.80413364  0.50406856 -0.68651916  0.46117919 -0.85805346
## 31  -0.06366298 -0.06366298  0.29695946 -0.23107198  0.21802303  0.03818128
## 32   0.40526982  0.32366339 -0.76945312  0.23107198 -0.82184079  0.44707302
## 33  -1.05957037 -0.82184079  0.43305527 -0.67050162  0.43305527 -1.03752256
## 34  -0.01272434  0.56275157 -0.89542793  0.56275157 -0.80413364  0.57772207
## 35  -0.75245638  0.25729077 -1.23113036  0.21802303 -1.15343724  0.14042416
## 36  -1.99828954  0.50406856  0.15328619  0.57772207  0.33710120  0.21802303
## 37  -0.85805346 -0.32366339 -0.02545075 -0.27046566  0.03818128 -0.48967276
## 38  -1.52642702 -0.23107198 -0.15328619 -0.16617364  0.00000000 -0.36416334
## 39  -0.17908874 -0.85805346  0.59282318 -0.76945312  0.60806071 -0.83980946
## 40  -0.43305527 -0.50406856  0.71909690 -0.47537773  0.71909690 -0.56275157
## 41  -1.08214564  0.14042416 -0.28368767  0.16617364 -0.15328619 -0.02545075
## 42  -0.67050162 -0.03818128  0.40526982  0.05091800  0.44707302 -0.35060018
## 43   0.48967276  0.63896971 -1.41400510  0.53318051 -1.38024023  1.28735798
## 44  -0.07641832 -0.08918610  0.28368767 -0.24416040  0.20501110  0.02545075
## 45  -0.19203379  1.41400510 -1.91230127  1.17854682 -1.52642702  1.99828954
## 46   0.59282318  0.73567430 -1.31706374  0.60806071 -1.25874673  1.61367018
## 47  -1.03752256 -0.51856960  0.83980946 -0.46117919  0.80413364 -0.63896971
## 48   0.23107198  0.12758531 -0.87658763  0.12758531 -0.83980946  0.10196844
## 49  -0.87658763 -0.12758531  0.82184079 -0.01272434  0.85805346 -0.47537773
## 50   0.17908874 -0.10196844  0.80413364  0.01272434  0.76945312 -0.44707302
## 51  -1.01596791 -0.24416040  0.51856960 -0.20501110  0.51856960 -0.28368767
## 52  -0.40526982  0.01272434  0.65465430  0.15328619  0.67050162 -0.27046566
## 53  -0.20501110  0.71909690 -1.48684468  0.76945312 -1.34797950  0.43305527
## 54  -0.80413364 -0.89542793  0.47537773 -0.80413364  0.54790615 -1.10528634
```

```
## 55  -0.02545075  0.65465430 -1.10528634  0.63896971 -1.01596791  0.70271480
## 56   0.12758531 -0.40526982  0.93409710 -0.35060018  0.89542793 -0.65465430
## 57   0.21802303  0.33710120 -1.15343724  0.37779383 -1.03752256  0.35060018
## 58   0.14042416 -0.31028376  0.44707302 -0.29695946  0.41912210 -0.43305527
## 59  -0.10196844 -0.19203379  0.41912210 -0.10196844  0.37779383 -0.41912210
## 60   0.50406856 -0.02545075 -0.78667510 -0.03818128 -0.85805346 -0.01272434
## 61   0.54790615  0.46117919 -1.56855670  0.44707302 -1.48684468  0.82184079
## 62   0.24416040  0.05091800 -0.82184079  0.03818128 -0.75245638  0.15328619
## 63   0.60806071  1.56855670 -2.80216172  1.44946373 -2.80216172  1.91230127
## 64   0.51856960  0.59282318 -2.10223158  0.54790615 -1.83849262  0.73567430
## 65  -0.53318051  0.82184079 -0.91459156  0.73567430 -0.78667510  0.78667510
## 66   0.53318051 -0.21802303 -1.08214564 -0.14042416 -1.10528634 -0.33710120
## 67  -0.11476746 -0.41912210 -0.43305527 -0.41912210 -0.51856960 -0.37779383
## 68   0.35060018  0.23107198 -0.95396468  0.17908874 -0.91459156  0.29695946
## 69  -0.97421613  0.41912210 -0.40526982  0.46117919 -0.32366339  0.11476746
## 70  -0.16617364  0.43305527 -0.44707302  0.35060018 -0.50406856  0.56275157
## 71  -0.68651916  0.29695946  0.10196844  0.27046566  0.11476746  0.24416040
## 72  -0.21802303  0.60806071 -1.52642702  0.65465430 -1.41400510  0.68651916
## 73  -0.82184079  1.20442230 -1.61367018  1.28735798 -1.44946373  1.08214564
## 74   0.00000000  0.28368767 -0.21802303  0.29695946 -0.39149488 -0.05091800
## 75   0.43305527  0.31028376 -1.20442230  0.25729077 -1.12903457  0.40526982
## 76  -1.31706374  0.67050162  0.78667510  0.75245638  0.83980946  0.28368767
## 77  -1.25874673 -0.63896971  0.95396468 -0.56275157  0.97421613 -0.89542793
## 78  -0.56275157  0.37779383 -0.06366298  0.43305527 -0.05091800  0.00000000
## 79  -1.12903457  0.17908874 -0.41912210  0.24416040 -0.33710120 -0.08918610
## 80   0.56275157  0.53318051 -2.23555842  0.50406856 -1.91230127  0.87658763
## 81  -0.59282318 -0.56275157  0.48967276 -0.50406856  0.48967276 -0.51856960
## 82   0.47537773  0.03818128 -1.28735798 -0.07641832 -1.17854682  0.37779383
## 83  -0.95396468  1.12903457 -0.48967276  1.10528634 -0.41912210  0.97421613
## 84  -1.71527720 -0.67050162  0.19203379 -0.57772207  0.40526982 -0.91459156
## 85  -0.05091800 -0.01272434  0.31028376 -0.12758531  0.23107198  0.08918610
## 86  -1.48684468 -0.11476746 -0.14042416 -0.06366298  0.01272434 -0.29695946
## 87   0.33710120  0.93409710 -1.44946373  0.80413364 -1.31706374  1.10528634
## 88   0.16617364 -0.17908874  0.35060018 -0.15328619  0.27046566 -0.11476746
## 89  -0.63896971 -0.44707302  0.46117919 -0.43305527  0.47537773 -0.31028376
## 90  -0.44707302 -0.78667510  0.06366298 -0.71909690  0.06366298 -0.73567430
## 91  -0.57772207 -1.10528634 -0.19203379 -1.08214564 -0.27046566 -1.01596791
## 92   0.03818128 -0.99487522 -0.63896971 -0.99487522 -0.60806071 -1.05957037
## 93  -0.78667510 -0.35060018 -0.07641832 -0.32366339 -0.06366298 -0.59282318
## 94   0.36416334  0.39149488 -1.71527720  0.33710120 -1.61367018  0.63896971
## 95  -1.17854682 -0.15328619 -0.23107198 -0.25729077 -0.19203379  0.19203379
## 96   0.07641832 -0.73567430 -1.01596791 -0.78667510 -0.95396468 -0.60806071
## 97  -0.76945312 -1.20442230 -0.35060018 -1.20442230 -0.35060018 -1.38024023
## 98   0.10196844 -0.68651916 -0.99487522 -0.70271480 -0.93409710 -0.54790615
## 99   0.25729077  0.16617364 -0.80413364  0.11476746 -0.73567430  0.20501110
## 100 -1.23113036  0.80413364 -0.51856960  0.71909690 -0.44707302  0.85805346
## 101 -0.15328619 -0.47537773  0.25729077 -0.59282318  0.17908874 -0.21802303
## 102  0.01272434 -1.08214564 -0.65465430 -1.05957037 -0.62344075 -1.08214564
## 103  0.08918610 -0.91459156 -0.60806071 -0.85805346 -0.57772207 -0.93409710
## 104  0.37779383  0.44707302 -1.66232963  0.39149488 -1.56855670  0.65465430
## 105  0.11476746 -0.87658763 -0.59282318 -0.82184079 -0.56275157 -0.80413364
## 106 -0.91459156 -1.03752256  0.12758531 -0.97421613  0.14042416 -1.17854682
## 107 -0.73567430  0.11476746  0.21802303  0.20501110  0.29695946 -0.19203379
## 108  0.39149488 -0.25729077 -0.03818128 -0.28368767 -0.21802303 -0.07641832
## 109 -0.83980946 -1.01596791  1.28735798 -0.91459156  1.25874673 -1.15343724
```

```
## 110 -1.66232963  0.68651916  0.16617364  0.78667510  0.35060018  0.32366339
## 111 -0.37779383 -0.29695946  0.73567430 -0.33710120  0.73567430 -0.23107198
## 112 -0.93409710  0.40526982 -0.27046566  0.41912210 -0.14042416  0.17908874
## 113  0.06366298 -0.93409710 -0.62344075 -0.89542793 -0.59282318 -0.97421613
## 114  0.02545075 -0.57772207  0.33710120 -0.53318051  0.25729077 -0.53318051
## 115 -1.61367018  0.24416040  0.76945312  0.32366339  0.82184079 -0.12758531
## 116 -0.12758531 -0.46117919  0.27046566 -0.48967276  0.19203379 -0.17908874
## 117  2.42690063 -0.59282318 -0.56275157 -1.34797950 -2.23555842  1.34797950
## 118  0.05091800 -0.95396468  0.01272434 -0.93409710 -0.02545075 -0.82184079
## 119  0.57772207  0.35060018 -1.34797950  0.14042416 -1.28735798  1.44946373
## 120 -0.71909690 -1.61367018  0.05091800 -1.52642702  0.05091800 -1.61367018
## 121 -0.89542793 -2.42690063 -0.20501110 -2.23555842 -0.28368767 -1.91230127
## 122 -0.33710120 -1.91230127 -0.71909690 -1.99828954 -0.68651916 -1.99828954
## 123 -1.20442230 -1.34797950 -0.08918610 -1.28735798 -0.07641832 -1.52642702
## 124  0.27046566 -0.76945312 -1.83849262 -0.87658763 -1.71527720  0.05091800
## 125 -1.77352271 -1.25874673 -0.24416040 -1.23113036 -0.20501110 -0.70271480
## 126 -0.28368767 -1.56855670 -1.05957037 -1.56855670 -0.99487522 -1.56855670
## 127 -1.15343724 -2.80216172 -0.36416334 -2.42690063 -0.36416334 -2.80216172
## 128 -0.25729077 -1.52642702 -1.03752256 -1.48684468 -0.97421613 -1.48684468
## 129  0.20501110 -1.05957037 -0.83980946 -1.15343724 -0.76945312 -0.68651916
## 130 -1.91230127  0.08918610 -0.53318051 -0.11476746 -0.46117919  0.46117919
## 131 -0.51856960 -1.41400510  0.23107198 -1.44946373  0.15328619 -1.31706374
## 132 -0.36416334 -2.23555842 -0.73567430 -2.10223158 -0.70271480 -2.10223158
## 133 -0.27046566 -1.71527720 -0.68651916 -1.66232963 -0.65465430 -1.77352271
## 134  0.28368767 -0.70271480 -1.77352271 -0.83980946 -1.66232963  0.06366298
## 135 -0.23107198 -1.66232963 -0.67050162 -1.61367018 -0.63896971 -1.66232963
## 136 -1.38024023 -2.10223158  0.11476746 -1.91230127  0.12758531 -2.42690063
## 137 -1.10528634 -1.15343724  0.20501110 -1.03752256  0.28368767 -1.25874673
## 138  0.31028376 -1.28735798 -0.05091800 -1.25874673 -0.23107198 -1.12903457
## 139 -1.28735798 -1.99828954  1.25874673 -1.77352271  1.23113036 -2.23555842
## 140 -2.42690063 -0.20501110  0.14042416 -0.08918610  0.32366339 -0.46117919
## 141 -0.60806071 -1.31706374  0.70271480 -1.31706374  0.70271480 -1.34797950
## 142 -1.41400510 -0.75245638 -0.29695946 -0.75245638 -0.16617364 -0.71909690
## 143 -0.29695946 -1.77352271 -0.70271480 -1.71527720 -0.67050162 -1.83849262
## 144 -0.35060018 -1.44946373  0.32366339 -1.41400510  0.24416040 -1.44946373
## 145 -0.50406856 -1.38024023  0.24416040 -1.38024023  0.16617364 -1.23113036
## 146  2.23555842 -1.48684468 -0.57772207 -2.80216172 -2.42690063  1.01596791
## 147 -0.32366339 -1.83849262  0.00000000 -1.83849262 -0.03818128 -1.71527720
## 148  0.76945312  0.87658763  2.23555842  1.01596791  2.23555842  0.41912210
## 149  1.38024023  0.91459156  2.10223158  1.03752256  1.99828954  0.47537773
## 150  0.71909690  0.75245638  1.83849262  0.82184079  1.77352271  0.60806071
## 151  0.99487522  1.03752256  1.91230127  1.12903457  1.91230127  0.62344075
## 152  1.03752256  1.91230127 -0.16617364  1.99828954 -0.25729077  1.31706374
## 153  0.80413364 -0.16617364  1.71527720 -0.05091800  1.83849262 -0.40526982
## 154  1.15343724  1.77352271  0.62344075  1.71527720  0.62344075  1.56855670
## 155  1.28735798  0.51856960  2.42690063  0.59282318  2.42690063  0.23107198
## 156  1.41400510  1.31706374  0.56275157  1.41400510  0.57772207  1.20442230
## 157  1.31706374  0.70271480  1.61367018  0.68651916  1.61367018  0.48967276
## 158  1.10528634  0.78667510  1.56855670  0.91459156  1.52642702  0.50406856
## 159  1.71527720  0.99487522  0.91459156  0.99487522  0.87658763  0.80413364
## 160  1.91230127  1.52642702 -0.33710120  1.52642702 -0.48967276  1.77352271
## 161  1.44946373  1.08214564  0.89542793  1.05957037  0.93409710  0.93409710
## 162  2.10223158  2.80216172 -2.42690063  2.80216172 -1.99828954  2.80216172
## 163  1.77352271  1.66232963 -0.93409710  1.66232963 -0.87658763  1.66232963
## 164  0.95396468  1.99828954  0.87658763  1.83849262  0.91459156  1.71527720
```

```
## 165  1.83849262  0.76945312  0.63896971  0.87658763  0.53318051  0.53318051
## 166  1.08214564  0.48967276  1.05957037  0.48967276  0.99487522  0.51856960
## 167  1.52642702  1.17854682  0.75245638  1.15343724  0.68651916  1.17854682
## 168  0.73567430  1.44946373  1.10528634  1.56855670  1.15343724  0.91459156
## 169  1.05957037  1.48684468  1.03752256  1.38024023  1.01596791  1.38024023
## 170  0.85805346  1.25874673  1.41400510  1.25874673  1.41400510  1.03752256
## 171  1.01596791  1.71527720 -0.31028376  1.77352271 -0.31028376  1.52642702
## 172  0.78667510  2.42690063 -0.46117919  2.42690063 -0.47537773  2.23555842
## 173  1.17854682  1.23113036  1.17854682  1.31706374  1.08214564  0.76945312
## 174  1.61367018  1.28735798  0.53318051  1.23113036  0.50406856  1.25874673
## 175  0.65465430  1.83849262  1.99828954  1.91230127  2.10223158  1.12903457
## 176  0.67050162  0.27046566  2.80216172  0.36416334  2.80216172 -0.14042416
## 177  0.93409710  1.34797950  1.34797950  1.48684468  1.31706374  0.83980946
## 178  0.70271480  1.15343724  1.08214564  1.20442230  1.12903457  0.75245638
## 179  1.99828954  1.61367018 -1.25874673  1.61367018 -1.20442230  1.83849262
## 180  0.89542793  0.36416334  1.77352271  0.40526982  1.71527720  0.39149488
## 181  1.66232963  1.05957037  0.36416334  0.93409710  0.31028376  1.23113036
## 182  0.75245638  2.23555842  1.01596791  2.23555842  1.05957037  2.10223158
## 183  0.62344075  0.21802303  1.44946373  0.31028376  1.56855670 -0.15328619
## 184  1.12903457  1.01596791  1.48684468  0.89542793  1.44946373  0.89542793
## 185  0.63896971  0.89542793  1.23113036  0.95396468  1.34797950  0.59282318
## 186  1.48684468  2.10223158 -0.10196844  2.10223158 -0.11476746  2.42690063
## 187  1.34797950  0.83980946  1.52642702  0.85805346  1.48684468  0.71909690
## 188  0.87658763  0.47537773  1.66232963  0.47537773  1.66232963  0.54790615
## 189  0.97421613  0.06366298  1.38024023  0.06366298  1.38024023  0.07641832
## 190  0.91459156 -0.53318051  1.20442230 -0.60806071  1.17854682 -0.24416040
## 191  1.20442230 -0.43305527  0.97421613 -0.44707302  0.95396468 -0.25729077
## 192  0.82184079  0.62344075  1.31706374  0.67050162  1.28735798  0.33710120
## 193  1.56855670  1.38024023 -0.47537773  1.34797950 -0.53318051  1.48684468
## 194  0.68651916  0.85805346  1.15343724  0.70271480  1.20442230  0.99487522
## 195  1.23113036  0.07641832  0.67050162  0.02545075  0.63896971  0.31028376
## 196  0.83980946 -0.97421613  1.12903457 -0.95396468  1.10528634 -0.87658763
## 197  1.25874673  0.15328619  0.68651916  0.07641832  0.65465430  0.36416334
##     LZHGE.L.PET GLNU_area.L.PET  ZSNU.L.PET   ZSP.L.PET GLNU_norm.L.PET
## 1    0.11476746     -0.51856960 -0.51856960 -0.50406856     -0.29695946
## 2   -0.50406856     -0.65465430 -0.78667510  0.20501110     -0.01272434
## 3    0.25729077     -0.53318051 -0.35060018  0.59282318     -0.50406856
## 4   -0.82184079      1.15343724  1.20442230 -1.03752256     -0.07641832
## 5   -1.77352271     -0.43305527 -0.75245638  0.41912210      0.25729077
## 6    0.14042416     -0.50406856 -0.44707302 -0.27046566     -0.35060018
## 7   -0.05091800     -0.32366339 -0.25729077  0.05091800     -0.20501110
## 8   -0.89542793     -0.75245638 -0.76945312  0.57772207     -0.10196844
## 9    0.89542793     -1.28735798 -1.08214564 -0.83980946     -0.39149488
## 10  -1.25874673     -1.31706374 -1.31706374 -0.08918610      0.05091800
## 11   0.10196844      1.71527720  1.91230127 -0.47537773     -0.40526982
## 12   0.35060018     -0.48967276 -0.39149488 -0.25729077     -0.44707302
## 13   0.75245638      0.27046566  0.37779383 -0.29695946     -0.63896971
## 14  -0.71909690     -2.23555842 -2.42690063  0.37779383      0.73567430
## 15   0.00000000      0.87658763  1.23113036 -0.11476746     -0.27046566
## 16  -0.47537773     -0.93409710 -0.91459156 -0.21802303     -0.11476746
## 17   2.42690063      0.20501110  0.16617364 -2.23555842     -0.25729077
## 18  -1.12903457      1.10528634  0.87658763 -0.89542793     -0.03818128
## 19  -0.21802303     -0.02545075 -0.02545075 -0.17908874     -0.24416040
## 20  -0.11476746     -0.03818128 -0.08918610 -0.33710120     -0.28368767
## 21  -0.67050162     -0.28368767 -0.23107198  0.03818128     -0.17908874
```

```
## 22   0.02545075     -2.10223158 -2.10223158  0.65465430      0.36416334
## 23   0.99487522     -0.27046566  0.05091800 -0.07641832     -0.70271480
## 24  -1.15343724      0.50406856  0.63896971 -0.01272434     -0.15328619
## 25   0.76945312     -1.83849262 -1.44946373  0.33710120     -0.21802303
## 26  -1.91230127      0.46117919  0.03818128 -1.10528634      0.57772207
## 27  -1.03752256     -1.48684468 -1.52642702  0.29695946      0.23107198
## 28  -0.20501110      0.03818128  0.11476746 -0.23107198     -0.32366339
## 29  -0.08918610     -1.15343724 -1.01596791  0.46117919     -0.14042416
## 30   0.54790615      0.06366298  0.21802303 -0.54790615     -0.53318051
## 31   0.46117919     -1.05957037 -1.12903457 -0.43305527     -0.19203379
## 32  -0.10196844      0.10196844  0.07641832 -0.87658763     -0.12758531
## 33   0.17908874      0.29695946  0.40526982  0.24416040     -0.48967276
## 34  -0.70271480     -0.23107198 -0.31028376 -0.31028376      0.00000000
## 35  -1.38024023      0.23107198  0.08918610  0.11476746      0.01272434
## 36  -0.25729077     -1.71527720 -1.77352271  0.54790615      0.03818128
## 37  -0.23107198     -0.33710120 -0.24416040  0.16617364     -0.33710120
## 38  -0.85805346     -1.41400510 -1.38024023  0.39149488      0.02545075
## 39   0.53318051      0.25729077  0.36416334 -0.19203379     -0.59282318
## 40   0.63896971     -0.85805346 -0.70271480 -0.16617364     -0.56275157
## 41  -0.75245638     -0.19203379 -0.19203379  0.25729077     -0.16617364
## 42   0.28368767     -0.59282318 -0.50406856  0.14042416     -0.41912210
## 43  -1.41400510      0.62344075  0.39149488 -1.38024023      0.20501110
## 44   0.44707302     -1.08214564 -1.15343724 -0.44707302     -0.23107198
## 45  -2.10223158     -0.91459156 -1.41400510  0.17908874      0.89542793
## 46  -1.31706374      0.71909690  0.56275157 -1.77352271      0.65465430
## 47   0.73567430     -0.56275157 -0.40526982  0.50406856      0.12758531
## 48  -0.46117919      1.23113036  1.34797950 -0.40526982      0.27046566
## 49   0.70271480     -1.34797950 -0.97421613  0.48967276      0.19203379
## 50   0.87658763     -0.35060018 -0.21802303 -0.12758531      0.06366298
## 51   0.21802303     -0.21802303  0.02545075  0.56275157      0.11476746
## 52   0.59282318     -0.78667510 -0.56275157  0.23107198      0.16617364
## 53  -1.61367018     -0.05091800 -0.41912210  0.01272434      0.76945312
## 54   0.06366298     -0.54790615 -0.73567430  0.35060018      0.50406856
## 55  -1.23113036     -0.16617364 -0.27046566 -0.05091800      0.54790615
## 56   1.25874673     -1.91230127 -1.66232963 -0.15328619      0.35060018
## 57  -1.20442230      0.32366339  0.20501110 -0.32366339      0.44707302
## 58   0.51856960      0.35060018  0.44707302 -0.14042416      0.21802303
## 59   0.37779383     -0.40526982 -0.28368767 -0.06366298      0.17908874
## 60   0.12758531      0.75245638  0.85805346 -0.93409710      0.28368767
## 61  -1.28735798      0.68651916  0.59282318 -1.20442230      0.63896971
## 62  -0.63896971      0.01272434  0.00000000 -0.39149488      0.32366339
## 63  -2.80216172      1.20442230  0.29695946 -1.83849262      1.38024023
## 64  -1.71527720      1.83849262  1.56855670 -1.15343724      0.75245638
## 65  -1.17854682     -0.82184079 -1.03752256  0.21802303      0.67050162
## 66   0.01272434      0.51856960  0.46117919 -1.17854682      0.53318051
## 67  -0.44707302     -0.89542793 -0.83980946  0.00000000      0.39149488
## 68  -0.53318051      1.99828954  1.99828954 -0.48967276      0.37779383
## 69  -0.78667510     -0.62344075 -0.65465430  0.47537773      0.40526982
## 70  -0.48967276     -1.01596791 -1.28735798  0.07641832      0.51856960
## 71  -0.06366298     -0.07641832  0.06366298  0.40526982      0.29695946
## 72  -1.83849262      0.24416040 -0.12758531  0.08918610      0.78667510
## 73  -1.99828954     -0.60806071 -1.05957037  0.51856960      0.85805346
## 74  -0.01272434     -0.36416334 -0.33710120 -0.03818128      0.43305527
## 75  -0.91459156      1.12903457  0.89542793 -0.57772207      0.59282318
## 76   0.20501110     -2.42690063 -2.23555842  0.62344075      0.80413364
```

```
## 77   0.78667510     -1.99828954 -1.91230127  0.60806071      0.46117919
## 78  -0.14042416     -0.68651916 -0.60806071  0.28368767      0.41912210
## 79  -0.80413364     -0.63896971 -0.67050162  0.31028376     -0.05091800
## 80  -2.23555842      0.76945312  0.41912210 -1.71527720      0.60806071
## 81   0.29695946     -0.25729077 -0.07641832  0.12758531     -0.36416334
## 82  -1.10528634      0.39149488  0.17908874 -1.01596791      0.10196844
## 83  -1.01596791     -1.44946373 -1.48684468  0.32366339      0.31028376
## 84  -0.07641832     -1.12903457 -0.99487522  0.53318051     -0.02545075
## 85   0.47537773     -1.03752256 -1.10528634 -0.37779383     -0.06366298
## 86  -0.83980946     -1.38024023 -1.34797950  0.43305527      0.08918610
## 87  -1.66232963     -0.37779383 -0.82184079 -0.76945312      0.62344075
## 88   0.33710120      0.21802303  0.33710120 -0.36416334     -0.37779383
## 89   0.27046566      0.05091800  0.28368767  0.10196844     -0.46117919
## 90   0.05091800      0.44707302  0.51856960 -0.51856960     -1.05957037
## 91  -0.41912210      0.57772207  0.76945312 -0.41912210     -0.99487522
## 92  -0.32366339      1.01596791  1.08214564 -0.71909690     -0.93409710
## 93  -0.15328619     -0.70271480 -0.62344075 -0.20501110     -0.76945312
## 94  -1.48684468      0.82184079  0.65465430 -1.08214564     -0.60806071
## 95  -0.57772207     -0.39149488 -0.36416334 -0.10196844     -0.87658763
## 96  -0.95396468      1.34797950  1.44946373 -0.78667510     -0.91459156
## 97  -0.54790615      0.31028376  0.27046566 -0.24416040     -0.95396468
## 98  -0.93409710      1.38024023  1.48684468 -0.73567430     -0.83980946
## 99  -0.62344075      0.02545075  0.01272434 -0.28368767      0.47537773
## 100 -1.05957037     -1.52642702 -1.56855670  0.02545075     -0.68651916
## 101  0.41912210     -1.20442230 -1.20442230 -0.63896971     -0.89542793
## 102 -0.33710120      0.99487522  1.05957037 -0.80413364     -1.01596791
## 103 -0.29695946      1.05957037  1.12903457 -0.67050162     -0.78667510
## 104 -1.44946373      0.83980946  0.67050162 -1.05957037     -0.54790615
## 105 -0.28368767      1.08214564  1.15343724 -0.62344075     -0.73567430
## 106 -0.02545075     -0.11476746 -0.03818128  0.15328619     -0.51856960
## 107  0.16617364     -0.97421613 -0.85805346  0.27046566      0.24416040
## 108  0.24416040      0.54790615  0.71909690 -0.59282318      0.14042416
## 109  1.15343724     -0.76945312 -0.57772207  0.36416334      0.15328619
## 110 -0.24416040     -1.66232963 -1.71527720  0.63896971      0.56275157
## 111  0.65465430     -0.83980946 -0.68651916  0.06366298      0.07641832
## 112 -0.73567430     -0.17908874 -0.17908874  0.44707302      0.33710120
## 113 -0.31028376      1.03752256  1.10528634 -0.70271480     -0.82184079
## 114  0.32366339      0.19203379  0.32366339 -0.56275157     -1.03752256
## 115  0.19203379     -2.80216172 -2.80216172  0.19203379     -0.31028376
## 116  0.43305527     -1.17854682 -1.17854682 -0.60806071     -0.80413364
## 117  2.23555842      0.16617364  0.15328619 -2.42690063     -0.85805346
## 118  0.08918610      1.66232963  1.83849262 -0.68651916     -0.97421613
## 119 -1.34797950      0.70271480  0.54790615 -2.10223158     -0.67050162
## 120  0.03818128      0.43305527  0.50406856 -1.12903457     -2.80216172
## 121 -0.43305527      0.56275157  0.75245638 -0.99487522     -2.10223158
## 122 -0.39149488      0.91459156  0.97421613 -1.52642702     -1.83849262
## 123 -0.16617364     -0.71909690 -0.63896971 -0.91459156     -1.41400510
## 124 -1.56855670      0.78667510  0.60806071 -1.99828954     -1.31706374
## 125 -0.59282318     -0.41912210 -0.37779383 -0.85805346     -1.66232963
## 126 -0.99487522      1.28735798  1.38024023 -1.61367018     -1.77352271
## 127 -0.56275157      0.28368767  0.25729077 -0.95396468     -1.91230127
## 128 -0.97421613      1.31706374  1.41400510 -1.56855670     -1.56855670
## 129 -0.65465430      0.00000000 -0.01272434 -0.97421613     -1.10528634
## 130 -1.08214564     -1.56855670 -1.61367018 -0.82184079     -1.34797950
## 131  0.39149488     -1.25874673 -1.25874673 -1.34797950     -1.71527720
```

```
## 132 -0.40526982      0.89542793  0.95396468 -1.66232963     -2.23555842
## 133 -0.36416334      0.95396468  1.01596791 -1.41400510     -1.44946373
## 134 -1.52642702      0.80413364  0.62344075 -1.91230127     -1.28735798
## 135 -0.35060018      0.97421613  1.03752256 -1.31706374     -1.38024023
## 136 -0.03818128     -0.12758531 -0.05091800 -0.65465430     -1.25874673
## 137  0.15328619     -0.99487522 -0.87658763 -0.53318051     -1.15343724
## 138  0.23107198      0.53318051  0.70271480 -1.25874673     -1.20442230
## 139  1.12903457     -0.80413364 -0.59282318 -0.46117919     -1.17854682
## 140 -0.27046566     -1.77352271 -1.83849262 -0.02545075     -1.08214564
## 141  0.62344075     -0.87658763 -0.71909690 -0.75245638     -1.23113036
## 142 -0.76945312     -0.20501110 -0.20501110 -0.35060018     -1.12903457
## 143 -0.37779383      0.93409710  0.99487522 -1.48684468     -1.52642702
## 144  0.31028376      0.15328619  0.31028376 -1.23113036     -2.42690063
## 145  0.40526982     -1.23113036 -1.23113036 -1.28735798     -1.48684468
## 146  2.10223158      0.14042416  0.14042416 -2.80216172     -1.61367018
## 147  0.07641832      1.61367018  1.77352271 -1.44946373     -1.99828954
## 148  1.83849262     -0.57772207 -0.43305527  1.91230127      1.03752256
## 149  1.99828954      0.17908874  0.35060018  1.12903457      0.91459156
## 150  1.44946373      0.36416334  0.53318051  2.23555842      0.97421613
## 151  1.77352271     -0.24416040 -0.06366298  1.48684468      0.99487522
## 152 -0.17908874      0.41912210  0.10196844  1.28735798      1.99828954
## 153  1.34797950     -0.01272434 -0.16617364  1.66232963      1.44946373
## 154  0.48967276      0.37779383  0.24416040  1.20442230      1.56855670
## 155  2.80216172     -0.95396468 -0.93409710  1.08214564      1.17854682
## 156  0.50406856      0.65465430  0.73567430  1.01596791      1.34797950
## 157  1.71527720      0.67050162  0.93409710  1.10528634      1.05957037
## 158  1.61367018      0.07641832  0.23107198  1.17854682      1.01596791
## 159  1.38024023      1.44946373  1.61367018  0.78667510      1.08214564
## 160  0.36416334      1.41400510  1.28735798  0.70271480      1.77352271
## 161  0.85805346      0.47537773  0.48967276  0.95396468      1.15343724
## 162 -2.42690063      1.91230127  0.82184079  0.67050162      2.80216172
## 163 -0.51856960      2.42690063  2.42690063  0.73567430      1.91230127
## 164  0.56275157     -0.29695946 -0.47537773  1.44946373      1.83849262
## 165  1.28735798      1.17854682  1.17854682  0.71909690      1.52642702
## 166  1.01596791     -0.31028376 -0.32366339  1.25874673      1.23113036
## 167  0.95396468      2.80216172  2.80216172  0.91459156      1.20442230
## 168  0.83980946     -0.08918610 -0.14042416  1.83849262      1.25874673
## 169  0.97421613     -0.44707302 -0.54790615  1.31706374      1.48684468
## 170  1.20442230      0.40526982  0.57772207  1.71527720      1.10528634
## 171 -0.60806071      0.60806071  0.43305527  1.34797950      2.10223158
## 172 -0.68651916     -0.06366298 -0.48967276  1.99828954      2.42690063
## 173  1.23113036      0.12758531  0.19203379  1.23113036      1.31706374
## 174  0.71909690      1.77352271  1.66232963  0.87658763      1.61367018
## 175  1.41400510     -1.61367018 -1.99828954  2.80216172      2.23555842
## 176  1.91230127     -1.10528634 -0.95396468  2.42690063      1.41400510
## 177  1.10528634     -0.14042416 -0.10196844  1.52642702      1.28735798
## 178  0.82184079     -0.10196844 -0.15328619  1.56855670      0.83980946
## 179 -0.87658763      1.48684468  0.91459156  0.68651916      1.66232963
## 180  1.52642702      0.33710120  0.47537773  1.41400510      0.71909690
## 181  0.57772207      0.73567430  0.68651916  0.76945312      0.95396468
## 182  0.60806071     -0.73567430 -0.89542793  1.61367018      1.12903457
## 183  1.17854682     -0.47537773 -0.46117919  2.10223158      0.87658763
## 184  1.66232963     -0.46117919 -0.53318051  0.97421613      0.82184079
## 185  0.80413364     -0.67050162 -0.80413364  1.77352271      0.93409710
## 186 -0.19203379      0.11476746 -0.29695946  0.82184079      1.71527720
```

```
## 187  1.56855670      0.59282318  0.83980946  0.99487522      0.70271480
## 188  1.48684468      0.48967276  0.80413364  1.38024023      0.68651916
## 189  1.31706374      0.85805346  1.25874673  0.89542793     -0.75245638
## 190  1.03752256      1.25874673  1.52642702  0.93409710     -0.71909690
## 191  1.05957037      1.56855670  1.71527720  0.85805346     -0.62344075
## 192  1.08214564     -0.15328619 -0.11476746  1.05957037     -0.08918610
## 193 -0.12758531      1.52642702  1.31706374  0.75245638      0.48967276
## 194  0.91459156      0.08918610  0.12758531  1.15343724     -0.47537773
## 195  0.67050162      2.10223158  2.10223158  0.80413364     -0.57772207
## 196  0.93409710      0.63896971  0.78667510  1.03752256     -0.65465430
## 197  0.68651916      2.23555842  2.23555842  0.83980946     -0.43305527
##     ZSNU_norm.L.PET GLVAR_area.L.PET ZSVAR.L.PET Entropy_area.L.PET
## 1       -0.60806071       0.06366298  0.23107198         0.16617364
## 2        0.32366339       0.27046566 -0.23107198        -0.93409710
## 3        0.60806071       0.40526982 -1.61367018        -0.32366339
## 4       -1.12903457      -1.44946373  0.91459156         0.23107198
## 5        0.46117919      -0.91459156 -1.31706374        -1.71527720
## 6       -0.32366339      -0.24416040 -0.19203379        -0.05091800
## 7        0.15328619      -0.17908874 -0.41912210        -0.54790615
## 8        0.63896971       0.00000000 -1.38024023        -1.08214564
## 9       -0.99487522       0.02545075  0.39149488        -0.51856960
## 10       0.03818128      -0.10196844 -0.25729077        -1.17854682
## 11      -0.54790615      -0.68651916  0.16617364         0.44707302
## 12      -0.37779383      -0.11476746 -0.24416040         0.27046566
## 13      -0.33710120       0.03818128  0.00000000         0.63896971
## 14       0.35060018       0.93409710 -1.25874673        -2.80216172
## 15      -0.07641832      -0.51856960 -0.36416334         0.00000000
## 16      -0.29695946      -0.73567430 -0.29695946        -0.89542793
## 17      -0.85805346      -0.63896971  1.99828954         0.37779383
## 18      -1.03752256      -0.75245638  0.70271480         0.14042416
## 19      -0.05091800      -0.44707302 -0.02545075        -0.25729077
## 20      -0.35060018      -0.29695946  0.06366298        -0.02545075
## 21       0.00000000      -0.39149488 -0.53318051        -0.62344075
## 22       0.65465430       1.03752256 -2.80216172        -1.91230127
## 23       0.11476746       0.68651916 -0.20501110         0.59282318
## 24      -0.01272434      -0.93409710 -0.48967276        -0.60806071
## 25       0.28368767       0.62344075 -1.12903457        -0.97421613
## 26      -1.17854682      -1.61367018  0.95396468        -1.25874673
## 27       0.37779383       0.37779383 -0.76945312        -1.61367018
## 28      -0.31028376      -0.53318051 -0.27046566         0.11476746
## 29       0.48967276      -0.27046566 -1.44946373        -1.05957037
## 30      -0.57772207      -0.21802303  0.53318051         0.62344075
## 31      -0.48967276       0.82184079 -0.14042416        -0.37779383
## 32      -0.91459156      -0.12758531  0.59282318         0.25729077
## 33       0.24416040      -0.35060018 -1.03752256         0.20501110
## 34      -0.24416040      -0.23107198  0.25729077        -0.78667510
## 35       0.08918610      -0.78667510 -0.60806071        -0.95396468
## 36       0.54790615       0.65465430 -1.48684468        -1.44946373
## 37       0.14042416       0.08918610 -0.87658763        -0.28368767
## 38       0.39149488       0.11476746 -1.28735798        -1.34797950
## 39      -0.10196844      -0.14042416  0.08918610         0.53318051
## 40      -0.23107198       0.56275157 -0.31028376         0.39149488
## 41       0.27046566       0.32366339 -1.01596791        -0.57772207
## 42       0.19203379       0.25729077 -0.43305527        -0.16617364
## 43      -1.77352271      -1.48684468  1.05957037        -0.50406856
```

```
## 44      -0.53318051       0.80413364 -0.15328619        -0.39149488
## 45       0.20501110      -0.95396468  0.24416040        -2.23555842
## 46      -1.91230127      -0.85805346  1.61367018         0.19203379
## 47       0.41912210      -0.02545075 -0.82184079         0.21802303
## 48      -0.43305527      -0.82184079  0.47537773         0.28368767
## 49       0.59282318       0.70271480 -0.50406856        -0.08918610
## 50      -0.08918610       0.53318051  0.37779383         0.56275157
## 51       0.56275157       0.19203379 -0.62344075         0.24416040
## 52       0.29695946       0.29695946  0.17908874         0.15328619
## 53      -0.21802303      -1.41400510 -0.17908874        -1.38024023
## 54       0.25729077       0.07641832 -0.59282318        -0.75245638
## 55      -0.02545075      -0.48967276  0.27046566        -0.85805346
## 56      -0.15328619       0.87658763  0.28368767        -0.73567430
## 57      -0.40526982      -0.89542793  0.41912210        -0.40526982
## 58      -0.16617364      -0.46117919  0.29695946         0.47537773
## 59      -0.20501110       0.43305527 -0.03818128         0.50406856
## 60      -0.93409710      -0.80413364  1.25874673         0.51856960
## 61      -1.28735798      -1.99828954  1.38024023        -0.59282318
## 62      -0.41912210      -0.59282318  0.51856960        -0.06366298
## 63      -2.10223158      -2.80216172  1.56855670        -1.99828954
## 64      -1.71527720      -2.10223158  1.20442230        -0.80413364
## 65       0.05091800      -0.01272434 -0.40526982        -1.23113036
## 66      -1.15343724      -1.91230127  1.34797950        -0.23107198
## 67      -0.17908874      -0.62344075  0.05091800        -0.76945312
## 68      -0.59282318      -0.83980946  0.63896971         0.32366339
## 69       0.43305527      -0.03818128 -0.70271480        -0.83980946
## 70       0.01272434      -0.33710120  0.10196844        -1.15343724
## 71       0.40526982       0.05091800 -0.28368767         0.29695946
## 72      -0.14042416      -1.56855670 -0.11476746        -1.28735798
## 73       0.53318051      -1.52642702 -0.39149488        -1.83849262
## 74      -0.11476746      -0.40526982  0.21802303        -0.24416040
## 75      -0.65465430      -1.25874673  0.76945312         0.02545075
## 76       0.57772207       0.91459156 -0.97421613        -2.10223158
## 77       0.51856960       0.46117919 -0.95396468        -0.87658763
## 78       0.10196844      -0.06366298 -0.44707302        -0.35060018
## 79       0.31028376      -0.05091800 -0.99487522        -0.91459156
## 80      -1.99828954      -2.23555842  1.44946373        -1.20442230
## 81       0.16617364       0.28368767 -0.35060018         0.40526982
## 82      -1.05957037      -1.20442230  1.08214564        -0.33710120
## 83       0.44707302       0.39149488 -0.67050162        -1.56855670
## 84       0.50406856      -0.25729077 -1.34797950        -1.03752256
## 85      -0.44707302       0.83980946 -0.10196844        -0.36416334
## 86       0.47537773       0.12758531 -1.23113036        -1.31706374
## 87      -0.95396468      -0.76945312  0.40526982        -1.48684468
## 88      -0.28368767       0.23107198  0.31028376         0.60806071
## 89       0.12758531       0.10196844 -0.46117919         0.46117919
## 90      -0.47537773      -0.41912210 -0.51856960         0.36416334
## 91      -0.25729077      -0.54790615 -0.56275157         0.06366298
## 92      -0.78667510      -1.03752256 -0.08918610         0.01272434
## 93      -0.27046566      -0.07641832 -0.93409710        -0.41912210
## 94      -1.23113036      -1.71527720  0.46117919        -1.01596791
## 95       0.02545075       0.15328619 -1.17854682        -0.70271480
## 96      -0.82184079      -1.31706374 -0.06366298        -0.29695946
## 97      -0.06366298      -0.31028376 -0.73567430        -0.31028376
## 98      -0.80413364      -1.28735798 -0.01272434        -0.27046566
```

```
## 99      -0.39149488      -0.57772207  0.54790615        -0.03818128
## 100      0.23107198       0.36416334 -1.08214564        -1.66232963
## 101     -0.73567430       0.76945312 -0.37779383        -0.47537773
## 102     -0.83980946      -1.05957037 -0.12758531        -0.01272434
## 103     -0.70271480      -0.99487522  0.01272434         0.05091800
## 104     -1.20442230      -1.66232963  0.48967276        -0.99487522
## 105     -0.63896971      -0.97421613  0.02545075         0.07641832
## 106      0.07641832       0.17908874 -1.05957037        -0.07641832
## 107      0.06366298      -0.19203379 -0.63896971        -0.48967276
## 108     -0.76945312      -0.36416334  0.67050162         0.65465430
## 109      0.33710120      -0.15328619 -0.54790615         0.10196844
## 110      0.62344075       0.67050162 -1.15343724        -1.41400510
## 111     -0.03818128       0.57772207 -0.16617364         0.43305527
## 112      0.36416334       0.33710120 -0.68651916        -0.56275157
## 113     -0.75245638      -1.01596791 -0.05091800         0.03818128
## 114     -0.46117919       0.21802303  0.12758531         0.54790615
## 115      0.21802303       0.89542793 -1.71527720        -2.42690063
## 116     -0.67050162       0.78667510 -0.33710120        -0.46117919
## 117     -1.01596791      -0.65465430  1.91230127         0.31028376
## 118     -0.71909690      -0.70271480 -0.07641832         0.41912210
## 119     -2.80216172      -0.87658763  1.52642702         0.08918610
## 120     -1.10528634      -0.43305527 -1.41400510         0.17908874
## 121     -0.87658763      -0.56275157 -1.56855670        -0.12758531
## 122     -1.52642702      -1.15343724 -0.85805346        -0.17908874
## 123     -0.89542793      -0.08918610 -1.91230127        -0.63896971
## 124     -2.42690063      -1.83849262  0.03818128        -1.12903457
## 125     -0.56275157       0.14042416 -2.42690063        -0.82184079
## 126     -1.61367018      -1.38024023 -0.80413364        -0.44707302
## 127     -0.68651916      -0.32366339 -1.83849262        -0.53318051
## 128     -1.56855670      -1.34797950 -0.75245638        -0.43305527
## 129     -0.97421613      -0.60806071  0.15328619        -0.20501110
## 130     -0.36416334       0.35060018 -2.10223158        -1.77352271
## 131     -1.41400510       0.73567430 -1.20442230        -0.67050162
## 132     -1.66232963      -1.17854682 -0.89542793        -0.19203379
## 133     -1.34797950      -1.10528634 -0.71909690        -0.14042416
## 134     -2.23555842      -1.77352271  0.07641832        -1.10528634
## 135     -1.25874673      -1.08214564 -0.65465430        -0.11476746
## 136     -0.50406856       0.16617364 -1.99828954        -0.21802303
## 137     -0.51856960      -0.20501110 -1.66232963        -0.68651916
## 138     -1.48684468      -0.37779383  0.32366339         0.57772207
## 139     -0.19203379      -0.16617364 -1.52642702        -0.10196844
## 140      0.17908874       0.63896971 -2.23555842        -1.52642702
## 141     -0.62344075       0.54790615 -0.91459156         0.35060018
## 142     -0.12758531       0.31028376 -1.77352271        -0.71909690
## 143     -1.44946373      -1.12903457 -0.78667510        -0.15328619
## 144     -1.08214564       0.20501110 -0.57772207         0.48967276
## 145     -1.31706374       0.75245638 -1.10528634        -0.65465430
## 146     -1.83849262      -0.67050162  1.83849262         0.12758531
## 147     -1.38024023      -0.71909690 -0.83980946         0.33710120
## 148      2.80216172       2.10223158  0.57772207         1.38024023
## 149      1.23113036       1.99828954  1.15343724         2.42690063
## 150      2.23555842       1.56855670  0.43305527         1.61367018
## 151      1.56855670       1.71527720  0.97421613         1.56855670
## 152      1.05957037       0.44707302  0.75245638         0.75245638
## 153      1.52642702       1.41400510  0.44707302         1.01596791
```

```
## 154      1.28735798       1.05957037  1.01596791         0.93409710
## 155      1.15343724       2.42690063  1.03752256         1.03752256
## 156      0.97421613       0.60806071  1.23113036         1.12903457
## 157      1.12903457       1.08214564  1.10528634         1.99828954
## 158      1.08214564       1.83849262  0.85805346         2.10223158
## 159      0.80413364       0.85805346  1.77352271         2.23555842
## 160      0.71909690      -0.47537773  2.23555842         1.08214564
## 161      0.95396468       0.99487522  1.31706374         1.41400510
## 162      0.67050162      -2.42690063  2.80216172         0.68651916
## 163      0.70271480      -0.50406856  1.71527720         0.97421613
## 164      1.38024023       1.34797950  0.65465430         0.80413364
## 165      0.75245638      -0.28368767  2.10223158         1.34797950
## 166      1.10528634       0.97421613  0.89542793         0.99487522
## 167      0.89542793       0.71909690  1.41400510         1.71527720
## 168      1.71527720       1.31706374  0.35060018         0.95396468
## 169      1.31706374       1.15343724  0.93409710         0.83980946
## 170      1.66232963       1.38024023  0.73567430         1.66232963
## 171      1.17854682       0.24416040  0.78667510         0.78667510
## 172      2.10223158       0.41912210  0.68651916         0.70271480
## 173      1.20442230       1.12903457  0.99487522         1.31706374
## 174      0.87658763       0.50406856  1.48684468         1.48684468
## 175      2.42690063       2.80216172  0.14042416         0.67050162
## 176      1.99828954       1.91230127  0.19203379         0.91459156
## 177      1.41400510       1.25874673  0.62344075         1.17854682
## 178      1.61367018       1.28735798  0.11476746         0.89542793
## 179      0.68651916      -1.23113036  2.42690063         0.82184079
## 180      1.48684468       1.66232963  0.71909690         1.83849262
## 181      0.76945312       0.51856960  1.66232963         1.20442230
## 182      1.77352271       1.77352271  0.36416334         0.71909690
## 183      1.91230127       1.20442230 -0.47537773         0.85805346
## 184      0.93409710       2.23555842  0.80413364         1.15343724
## 185      1.83849262       1.48684468 -0.32366339         0.76945312
## 186      0.78667510       0.95396468  1.17854682         0.73567430
## 187      0.99487522       1.61367018  1.12903457         2.80216172
## 188      1.44946373       1.44946373  0.60806071         1.91230127
## 189      0.91459156       1.10528634  0.56275157         1.77352271
## 190      1.03752256       1.01596791  0.50406856         1.52642702
## 191      0.85805346       0.59282318  0.82184079         1.44946373
## 192      1.01596791       1.23113036  0.20501110         1.10528634
## 193      0.73567430       0.01272434  1.28735798         0.87658763
## 194      1.34797950       1.52642702 -0.21802303         1.05957037
## 195      0.82184079       0.47537773  0.83980946         1.25874673
## 196      1.25874673       1.17854682  0.33710120         1.23113036
## 197      0.83980946       0.48967276  0.87658763         1.28735798
##     Max_cooc.H.PET Average_cooc.H.PET Variance_cooc.H.PET Entropy_cooc.H.PET
## 1      -0.62344075        -0.29695946         -0.43305527        -0.47537773
## 2      -0.33710120        -0.48967276         -0.39149488         0.08918610
## 3       0.83980946         0.33710120         -0.67050162        -1.44946373
## 4      -0.37779383        -0.87658763          0.00000000        -0.50406856
## 5       1.99828954         0.63896971         -2.42690063        -1.99828954
## 6       1.25874673         0.41912210         -1.20442230        -1.91230127
## 7      -0.93409710        -0.82184079          0.10196844         0.47537773
## 8       0.47537773         0.06366298         -0.91459156        -0.10196844
## 9      -0.25729077        -0.53318051         -0.29695946        -0.71909690
## 10     -0.06366298        -0.20501110         -0.68651916        -0.60806071
```

```
## 11     -0.03818128        -0.44707302         0.23107198        -0.80413364
## 12      0.73567430         0.36416334        -0.85805346        -1.61367018
## 13     -0.91459156        -1.34797950         0.68651916         0.19203379
## 14      0.70271480         0.31028376        -1.44946373        -1.01596791
## 15     -1.03752256        -1.28735798         0.57772207        -1.25874673
## 16      0.46117919         0.05091800        -0.48967276         0.32366339
## 17     -0.05091800        -0.31028376        -0.24416040        -0.73567430
## 18     -0.54790615        -1.08214564        -0.32366339        -0.31028376
## 19     -0.76945312        -0.57772207         0.07641832        -0.23107198
## 20     -0.73567430        -0.56275157        -0.20501110        -0.25729077
## 21     -0.14042416        -0.27046566        -0.51856960        -0.63896971
## 22      0.33710120         0.24416040        -1.01596791        -0.17908874
## 23     -0.83980946        -0.76945312         0.67050162        -0.11476746
## 24     -0.71909690        -0.80413364         0.06366298        -0.43305527
## 25      0.27046566         0.08918610        -0.31028376        -1.12903457
## 26      1.41400510         0.35060018        -1.91230127        -1.34797950
## 27      0.06366298        -0.10196844        -0.59282318        -0.36416334
## 28     -0.01272434        -0.32366339        -0.12758531        -0.85805346
## 29      0.82184079         0.39149488        -0.83980946        -1.71527720
## 30     -0.82184079        -1.10528634         0.29695946         0.11476746
## 31      1.17854682         0.50406856        -1.56855670        -1.48684468
## 32     -0.02545075        -0.17908874        -0.65465430        -0.57772207
## 33     -0.70271480        -0.68651916         0.14042416        -0.29695946
## 34      0.12758531        -0.37779383        -0.54790615        -0.33710120
## 35     -0.75245638        -0.67050162        -0.17908874        -0.01272434
## 36      0.80413364         0.56275157        -1.38024023        -0.15328619
## 37      0.59282318         0.20501110        -1.17854682        -1.20442230
## 38     -0.24416040        -0.16617364        -0.47537773        -0.46117919
## 39     -0.27046566        -0.51856960         0.15328619        -0.62344075
## 40     -0.97421613        -0.99487522         0.33710120         0.35060018
## 41     -0.80413364        -0.75245638         0.02545075         0.57772207
## 42     -0.78667510        -0.60806071         0.08918610        -0.08918610
## 43      1.08214564         0.21802303        -1.31706374        -1.28735798
## 44      1.15343724         0.48967276        -1.61367018        -1.52642702
## 45      2.80216172         0.65465430        -2.80216172         0.10196844
## 46     -0.60806071        -2.23555842        -0.06366298         0.71909690
## 47      1.56855670         0.62344075        -0.75245638        -2.10223158
## 48     -0.44707302        -1.03752256         0.25729077        -0.12758531
## 49     -0.39149488        -0.39149488         0.11476746        -0.06366298
## 50      0.08918610        -0.28368767         0.31028376        -0.67050162
## 51     -0.36416334        -0.43305527        -0.08918610        -0.48967276
## 52     -0.40526982        -0.73567430         0.05091800        -0.19203379
## 53      1.38024023         0.53318051        -1.99828954        -1.56855670
## 54     -0.29695946        -0.24416040        -0.23107198         0.12758531
## 55      0.43305527        -0.05091800        -0.80413364         0.16617364
## 56      0.54790615         0.32366339        -0.40526982        -1.31706374
## 57     -0.11476746        -0.14042416        -0.41912210        -0.65465430
## 58     -0.51856960        -1.31706374         0.62344075         0.24416040
## 59      0.87658763         0.29695946        -1.05957037         0.39149488
## 60     -0.63896971        -2.80216172         0.41912210         0.68651916
## 61      0.02545075        -0.59282318        -0.16617364        -0.76945312
## 62      0.51856960         0.17908874        -0.95396468        -1.17854682
## 63      0.50406856         0.07641832        -0.99487522         0.29695946
## 64     -0.35060018        -1.41400510        -0.15328619        -0.27046566
## 65     -0.16617364        -0.41912210        -0.44707302         0.20501110
```

```
## 66     -0.23107198        -1.05957037         0.70271480        -0.21802303
## 67      0.37779383         0.03818128        -0.53318051        -0.95396468
## 68     -0.65465430        -1.48684468         0.40526982        -0.70271480
## 69      0.35060018        -0.02545075        -0.71909690        -0.89542793
## 70     -0.43305527        -0.50406856        -0.14042416         0.00000000
## 71     -0.41912210        -0.70271480         0.12758531        -0.32366339
## 72      0.20501110        -0.36416334        -0.60806071        -0.68651916
## 73      1.01596791         0.27046566        -1.28735798         0.14042416
## 74      0.89542793         0.28368767        -0.70271480        -0.20501110
## 75     -0.15328619        -0.93409710        -0.28368767        -0.14042416
## 76      0.75245638         0.11476746        -0.87658763         0.07641832
## 77      1.77352271         0.37779383        -1.03752256        -2.23555842
## 78     -0.47537773        -0.85805346         0.39149488         0.06366298
## 79      0.21802303        -0.03818128        -0.73567430        -0.91459156
## 80      0.07641832        -0.19203379        -0.56275157        -0.87658763
## 81     -0.50406856        -0.54790615        -0.19203379         0.33710120
## 82     -0.32366339        -0.65465430        -0.33710120        -0.51856960
## 83      0.11476746        -0.08918610        -0.57772207        -0.35060018
## 84      0.85805346         0.40526982        -0.82184079        -1.66232963
## 85      1.20442230         0.51856960        -1.52642702         0.28368767
## 86     -0.17908874        -0.15328619        -0.46117919        -0.44707302
## 87      1.23113036         0.16617364        -1.48684468         0.40526982
## 88     -0.57772207        -0.21802303        -0.35060018        -0.53318051
## 89     -0.56275157        -0.40526982        -0.21802303        -0.59282318
## 90     -1.01596791        -0.62344075        -0.10196844        -0.24416040
## 91     -1.05957037        -1.38024023         0.24416040        -0.39149488
## 92     -1.23113036        -1.66232963         0.51856960         0.60806071
## 93     -1.08214564        -0.89542793         0.37779383         0.01272434
## 94      0.31028376         0.01272434        -1.10528634        -0.99487522
## 95      0.44707302         0.25729077        -1.23113036         0.46117919
## 96     -0.87658763        -1.15343724        -0.02545075         0.03818128
## 97     -1.28735798        -1.23113036         0.17908874         0.17908874
## 98     -0.85805346        -1.12903457        -0.01272434         0.05091800
## 99      0.53318051         0.19203379        -0.93409710        -1.15343724
## 100    -0.12758531        -0.11476746        -0.62344075        -0.37779383
## 101     0.99487522         0.46117919        -1.71527720         0.25729077
## 102    -1.38024023        -1.71527720         0.50406856         0.59282318
## 103    -1.15343724        -1.56855670         0.54790615         0.65465430
## 104     0.36416334         0.02545075        -1.08214564        -0.97421613
## 105    -1.12903457        -1.52642702         0.56275157         0.67050162
## 106     1.83849262         0.60806071        -2.10223158        -2.42690063
## 107    -0.59282318        -0.83980946         0.60806071         0.44707302
## 108     0.93409710         0.14042416        -0.76945312        -1.77352271
## 109     0.32366339        -0.06366298         0.28368767        -1.08214564
## 110     0.91459156         0.57772207        -1.34797950        -1.38024023
## 111    -0.68651916        -0.97421613         0.35060018         0.37779383
## 112    -0.53318051        -0.71909690         0.03818128         0.62344075
## 113    -1.20442230        -1.61367018         0.53318051         0.63896971
## 114    -0.99487522        -0.23107198        -0.36416334        -0.54790615
## 115     0.56275157         0.10196844        -0.89542793         0.02545075
## 116     1.03752256         0.47537773        -1.66232963         0.27046566
## 117    -0.31028376        -0.33710120        -0.25729077        -0.75245638
## 118    -0.28368767        -0.46117919         0.21802303        -0.82184079
## 119    -1.17854682        -2.42690063        -0.07641832         0.70271480
## 120    -1.71527720        -0.63896971        -0.11476746        -0.28368767
```

```
## 121    -1.77352271        -1.44946373         0.20501110        -0.41912210
## 122    -2.23555842        -1.99828954         0.44707302         0.50406856
## 123    -1.83849262        -0.95396468         0.36416334        -0.05091800
## 124    -0.21802303        -0.01272434        -1.15343724        -1.05957037
## 125    -0.10196844         0.23107198        -1.25874673         0.43305527
## 126    -1.61367018        -1.20442230        -0.05091800        -0.03818128
## 127    -2.42690063        -1.25874673         0.16617364         0.15328619
## 128    -1.56855670        -1.17854682        -0.03818128        -0.02545075
## 129     0.19203379         0.15328619        -0.97421613        -1.23113036
## 130    -1.10528634        -0.12758531        -0.63896971        -0.40526982
## 131     0.65465430         0.43305527        -1.83849262         0.21802303
## 132    -2.80216172        -2.10223158         0.43305527         0.48967276
## 133    -1.99828954        -1.83849262         0.47537773         0.54790615
## 134    -0.19203379         0.00000000        -1.12903457        -1.03752256
## 135    -1.91230127        -1.77352271         0.48967276         0.56275157
## 136     1.61367018         0.59282318        -2.23555842        -2.80216172
## 137    -1.48684468        -0.91459156         0.59282318         0.36416334
## 138     0.60806071         0.12758531        -0.78667510        -1.83849262
## 139    -0.20501110        -0.07641832         0.27046566        -1.10528634
## 140     0.57772207         0.54790615        -1.41400510        -1.41400510
## 141    -1.52642702        -1.01596791         0.32366339         0.31028376
## 142    -1.44946373        -0.78667510         0.01272434         0.51856960
## 143    -2.10223158        -1.91230127         0.46117919         0.53318051
## 144    -1.66232963        -0.25729077        -0.37779383        -0.56275157
## 145     0.68651916         0.44707302        -1.77352271         0.23107198
## 146    -1.41400510        -0.35060018        -0.27046566        -0.78667510
## 147    -1.31706374        -0.47537773         0.19203379        -0.83980946
## 148     0.17908874         1.10528634         1.56855670         1.25874673
## 149     0.67050162         1.15343724         1.77352271         0.89542793
## 150     0.23107198         1.03752256         1.41400510         0.99487522
## 151     0.16617364         0.89542793         1.52642702         1.20442230
## 152     2.23555842         2.80216172        -0.50406856        -0.07641832
## 153     0.28368767         1.17854682         1.20442230         1.48684468
## 154     1.10528634         1.34797950         0.87658763         1.56855670
## 155     1.34797950         1.99828954         1.10528634         0.41912210
## 156     0.48967276         1.28735798         1.08214564         0.91459156
## 157     0.03818128         0.75245638         2.42690063         1.71527720
## 158     1.52642702         1.91230127         0.76945312         1.99828954
## 159    -0.07641832         0.67050162         2.10223158         2.80216172
## 160     0.62344075         0.97421613         1.28735798         0.83980946
## 161     1.31706374         1.66232963         0.82184079         0.73567430
## 162     1.28735798         1.52642702         0.80413364         1.83849262
## 163     0.24416040         0.71909690         1.31706374         1.10528634
## 164     0.40526982         1.05957037         1.05957037         1.66232963
## 165     0.29695946         0.82184079         2.80216172         1.15343724
## 166     1.05957037         1.48684468         1.01596791         0.76945312
## 167    -0.08918610         0.70271480         1.99828954         0.85805346
## 168     0.97421613         1.41400510         0.91459156         0.80413364
## 169     0.14042416         1.01596791         1.34797950         1.28735798
## 170     0.15328619         0.91459156         1.61367018         1.08214564
## 171     0.76945312         1.12903457         0.95396468         0.87658763
## 172     1.71527720         1.77352271         0.71909690         1.52642702
## 173     1.66232963         1.83849262         0.93409710         1.17854682
## 174     0.41912210         0.83980946         1.17854682         1.23113036
## 175     1.44946373         1.56855670         0.83980946         1.44946373
```

```
## 176     2.42690063         2.10223158          0.78667510        -0.93409710
## 177     0.10196844         0.87658763          1.91230127         1.41400510
## 178     0.78667510         1.38024023          0.89542793         0.78667510
## 179     0.63896971         1.23113036          0.99487522         0.82184079
## 180     0.05091800         0.99487522          1.25874673         1.91230127
## 181     0.25729077         0.93409710          1.15343724         0.97421613
## 182     0.71909690         1.31706374          0.97421613         1.05957037
## 183     1.48684468         2.23555842          0.85805346        -0.16617364
## 184     1.91230127         2.42690063          0.63896971         1.77352271
## 185     0.39149488         1.25874673          1.03752256         1.01596791
## 186     2.10223158         1.61367018          0.65465430         2.10223158
## 187     0.00000000         1.20442230          1.12903457         0.95396468
## 188     0.01272434         1.08214564          1.23113036         0.93409710
## 189    -0.67050162         0.95396468          1.38024023         1.12903457
## 190    -0.89542793         0.73567430          1.71527720         1.03752256
## 191    -1.25874673         0.68651916          2.23555842         2.42690063
## 192    -0.95396468         0.85805346          1.83849262         1.31706374
## 193     0.95396468         1.44946373          0.75245638         0.75245638
## 194     1.12903457         1.71527720          0.73567430         2.23555842
## 195    -0.48967276         0.78667510          1.44946373         1.34797950
## 196    -1.34797950         0.76945312          1.66232963         1.61367018
## 197    -0.46117919         0.80413364          1.48684468         1.38024023
##     DAVE_cooc.H.PET DVAR_cooc.H.PET DENT_cooc.H.PET SAVE_cooc.H.PET
## 1       -0.31028376     -0.48967276      0.28368767     -0.05091800
## 2        0.28368767     -0.10196844     -0.95396468     -1.15343724
## 3       -0.76945312     -0.17908874      0.16617364      0.48967276
## 4       -0.44707302     -0.51856960      0.03818128     -0.73567430
## 5       -2.10223158     -2.42690063     -0.08918610      0.65465430
## 6       -1.25874673     -0.37779383     -1.77352271      0.56275157
## 7        0.41912210      0.40526982     -0.65465430     -0.68651916
## 8       -0.23107198     -0.50406856     -0.25729077      0.27046566
## 9       -0.91459156     -1.38024023      0.29695946     -0.24416040
## 10       0.14042416     -0.19203379      0.12758531      0.03818128
## 11      -0.75245638     -0.68651916     -0.11476746     -0.19203379
## 12      -0.93409710     -0.24416040     -1.66232963      0.51856960
## 13       0.37779383      0.43305527     -0.14042416     -1.23113036
## 14      -0.25729077     -0.75245638      0.17908874      0.46117919
## 15       0.27046566      0.16617364      0.75245638      0.28368767
## 16      -0.05091800      0.37779383     -0.48967276     -1.41400510
## 17      -0.65465430     -0.53318051     -0.17908874     -0.06366298
## 18      -0.67050162     -0.63896971      0.23107198      0.31028376
## 19       0.39149488      0.24416040      0.39149488     -0.28368767
## 20      -0.35060018     -0.62344075      0.35060018     -0.27046566
## 21      -0.21802303     -0.25729077      0.00000000     -0.02545075
## 22       0.32366339     -0.23107198     -0.62344075     -0.83980946
## 23       0.47537773      0.39149488     -1.23113036     -0.63896971
## 24       0.48967276      0.53318051      0.31028376      0.35060018
## 25      -0.39149488     -0.47537773     -0.59282318      0.29695946
## 26      -1.77352271     -1.83849262      0.25729077      0.50406856
## 27      -0.47537773     -0.78667510     -1.20442230      0.14042416
## 28       0.15328619      0.33710120     -0.28368767     -0.07641832
## 29      -0.82184079      0.21802303      0.73567430      0.53318051
## 30       0.33710120      0.44707302     -1.99828954     -0.95396468
## 31      -1.44946373     -1.52642702     -1.38024023      0.59282318
## 32      -1.15343724     -1.28735798     -0.06366298      0.06366298
```

```
## 33       0.17908874     -0.07641832      0.32366339      0.36416334
## 34      -0.43305527     -0.73567430     -2.10223158     -0.11476746
## 35       0.21802303      0.17908874      0.50406856     -0.41912210
## 36      -0.62344075     -0.93409710     -1.31706374     -0.37779383
## 37      -0.40526982     -0.57772207     -0.05091800      0.39149488
## 38       0.35060018      0.01272434     -0.39149488      0.07641832
## 39      -0.28368767     -0.01272434      0.02545075     -0.23107198
## 40       0.51856960      0.48967276     -0.68651916     -0.87658763
## 41       0.24416040     -0.12758531      0.54790615     -0.60806071
## 42       0.29695946      0.25729077      0.40526982     -0.31028376
## 43      -1.83849262     -1.91230127      0.37779383      0.40526982
## 44      -1.48684468     -1.56855670     -1.41400510      0.57772207
## 45      -2.80216172     -2.80216172     -2.80216172     -0.40526982
## 46      -1.28735798     -1.41400510     -1.83849262     -2.23555842
## 47      -1.17854682      0.67050162     -2.42690063     -0.39149488
## 48      -0.41912210     -0.29695946      0.07641832     -0.91459156
## 49       0.65465430      0.51856960     -0.31028376     -0.14042416
## 50       0.20501110      0.27046566     -0.03818128     -0.03818128
## 51       0.46117919      0.54790615      0.10196844     -0.17908874
## 52       0.40526982      0.46117919     -0.29695946     -0.59282318
## 53      -1.71527720     -1.99828954      0.06366298      0.60806071
## 54       0.16617364      0.32366339     -0.80413364     -0.01272434
## 55      -0.73567430     -0.83980946     -0.21802303      0.19203379
## 56      -0.06366298      0.28368767     -1.15343724      0.47537773
## 57      -0.33710120     -0.20501110     -0.01272434      0.10196844
## 58       0.31028376      0.41912210     -0.73567430     -1.20442230
## 59      -1.38024023     -1.03752256     -1.28735798      0.44707302
## 60      -0.57772207     -0.43305527     -0.83980946     -2.80216172
## 61      -0.97421613     -1.05957037     -0.27046566     -0.29695946
## 62      -0.53318051     -0.33710120     -0.89542793     -0.44707302
## 63      -0.37779383     -0.35060018     -0.56275157     -1.17854682
## 64      -0.71909690     -0.85805346     -0.33710120     -1.28735798
## 65      -0.36416334     -0.59282318     -0.99487522     -0.16617364
## 66       0.12758531      0.19203379     -1.10528634     -0.93409710
## 67      -0.20501110      0.20501110     -0.40526982      0.25729077
## 68      -0.56275157     -0.60806071      0.41912210     -1.34797950
## 69      -0.16617364     -0.44707302     -0.20501110     -0.65465430
## 70       0.67050162      0.68651916     -0.91459156     -0.36416334
## 71       0.60806071      0.62344075     -1.03752256     -0.56275157
## 72      -0.19203379     -0.31028376     -0.02545075     -0.12758531
## 73      -1.01596791     -0.89542793     -0.82184079     -0.70271480
## 74      -0.59282318     -0.08918610     -1.17854682     -0.46117919
## 75      -0.99487522     -1.20442230     -0.75245638     -0.82184079
## 76       0.44707302      0.36416334     -0.76945312     -0.97421613
## 77      -1.34797950      0.29695946     -2.23555842     -1.38024023
## 78       0.57772207      0.60806071     -0.87658763     -0.75245638
## 79      -0.17908874     -0.46117919     -0.23107198     -0.67050162
## 80      -0.95396468     -0.87658763     -0.15328619      0.05091800
## 81       0.19203379      0.00000000     -1.05957037     -0.25729077
## 82      -0.85805346     -1.01596791      0.08918610     -0.35060018
## 83      -0.46117919     -0.76945312     -0.32366339      0.15328619
## 84      -0.80413364      0.23107198     -1.71527720      0.54790615
## 85      -1.41400510     -1.48684468     -1.34797950     -0.48967276
## 86       0.36416334      0.02545075      0.21802303      0.08918610
## 87      -1.08214564     -1.17854682     -0.57772207      0.37779383
```

```
## 88      -0.10196844     -0.39149488      0.20501110      0.02545075
## 89      -0.01272434     -0.21802303      0.01272434     -0.15328619
## 90      -0.29695946     -0.27046566     -1.08214564     -0.32366339
## 91      -0.02545075     -0.15328619      0.27046566     -1.25874673
## 92       0.07641832      0.11476746      0.59282318     -1.56855670
## 93       0.56275157      0.59282318     -0.93409710     -0.76945312
## 94      -1.05957037     -1.10528634     -0.44707302      0.23107198
## 95      -0.87658763     -0.97421613     -0.37779383      0.43305527
## 96      -0.08918610     -0.03818128     -0.47537773     -1.01596791
## 97       0.63896971      0.65465430      0.68651916     -1.10528634
## 98      -0.07641832     -0.02545075     -0.46117919     -0.99487522
## 99      -0.51856960     -0.32366339     -0.85805346     -0.43305527
## 100     -0.48967276     -0.80413364     -0.35060018      0.12758531
## 101     -1.56855670     -1.66232963     -1.48684468     -0.51856960
## 102      0.06366298      0.10196844      0.57772207     -1.61367018
## 103      0.10196844      0.14042416      0.62344075     -1.48684468
## 104     -1.03752256     -1.08214564     -0.43305527      0.24416040
## 105      0.11476746      0.15328619      0.63896971     -1.44946373
## 106     -2.23555842     -2.10223158      0.11476746      0.63896971
## 107     -0.24416040     -0.65465430      0.65465430     -0.71909690
## 108     -1.91230127     -1.31706374     -0.07641832      0.33710120
## 109     -1.20442230     -1.23113036     -0.60806071      0.17908874
## 110     -0.60806071     -0.91459156     -1.25874673     -1.99828954
## 111      0.53318051      0.50406856     -0.67050162     -0.85805346
## 112      0.25729077     -0.11476746      0.56275157     -0.57772207
## 113      0.08918610      0.12758531      0.60806071     -1.52642702
## 114     -0.11476746     -0.40526982      0.19203379      0.01272434
## 115      0.43305527      0.35060018     -0.78667510     -1.03752256
## 116     -1.52642702     -1.61367018     -1.44946373     -0.50406856
## 117     -0.68651916     -0.54790615     -0.19203379     -0.08918610
## 118     -0.78667510     -0.70271480     -0.12758531     -0.20501110
## 119     -1.31706374     -1.44946373     -1.91230127     -2.42690063
## 120     -0.32366339     -0.28368767     -1.12903457     -0.33710120
## 121     -0.03818128     -0.16617364      0.24416040     -1.31706374
## 122      0.01272434      0.05091800      0.46117919     -1.83849262
## 123      0.54790615      0.57772207     -1.01596791     -0.80413364
## 124     -1.12903457     -1.15343724     -0.51856960      0.20501110
## 125     -0.89542793     -0.99487522     -0.41912210      0.41912210
## 126     -0.14042416     -0.06366298     -0.54790615     -1.08214564
## 127      0.62344075      0.63896971      0.67050162     -1.12903457
## 128     -0.12758531     -0.05091800     -0.53318051     -1.05957037
## 129     -0.54790615     -0.36416334     -0.97421613     -0.47537773
## 130     -0.50406856     -0.82184079     -0.36416334      0.11476746
## 131     -1.66232963     -1.77352271     -1.61367018     -0.54790615
## 132      0.00000000      0.03818128      0.44707302     -1.91230127
## 133      0.03818128      0.07641832      0.48967276     -1.71527720
## 134     -1.10528634     -1.12903457     -0.50406856      0.21802303
## 135      0.05091800      0.08918610      0.51856960     -1.66232963
## 136     -2.42690063     -2.23555842      0.05091800      0.62344075
## 137     -0.27046566     -0.67050162      0.53318051     -0.78667510
## 138     -1.99828954     -1.34797950     -0.10196844      0.32366339
## 139     -1.23113036     -1.25874673     -0.63896971      0.16617364
## 140     -0.63896971     -0.95396468     -1.52642702     -2.10223158
## 141      0.50406856      0.47537773     -0.71909690     -0.89542793
## 142      0.23107198     -0.14042416      0.43305527     -0.62344075
```

```
## 143      0.02545075      0.06366298      0.47537773     -1.77352271
## 144     -0.15328619     -0.41912210      0.14042416      0.00000000
## 145     -1.61367018     -1.71527720     -1.56855670     -0.53318051
## 146     -0.70271480     -0.56275157     -0.24416040     -0.10196844
## 147     -0.83980946     -0.71909690     -0.16617364     -0.21802303
## 148      2.42690063      1.83849262      1.28735798      1.34797950
## 149      1.56855670      1.48684468      1.52642702      1.41400510
## 150      1.83849262      1.91230127      1.83849262      1.25874673
## 151      1.71527720      1.77352271      1.31706374      1.01596791
## 152      0.59282318      0.31028376      1.71527720      2.80216172
## 153      1.48684468      1.61367018      0.97421613      1.44946373
## 154      0.89542793      0.87658763      1.41400510      1.71527720
## 155      1.31706374      1.52642702      0.71909690      2.23555842
## 156      1.08214564      1.15343724      1.61367018      1.61367018
## 157      1.61367018      1.71527720      1.03752256      0.76945312
## 158      0.70271480      0.76945312      0.36416334      2.10223158
## 159      0.95396468      0.99487522      0.93409710      0.67050162
## 160      0.80413364      0.75245638      1.34797950      1.20442230
## 161      0.99487522      1.05957037      0.89542793      1.10528634
## 162      1.03752256      1.03752256      1.08214564      0.78667510
## 163      0.91459156      0.85805346      1.23113036      0.73567430
## 164      1.05957037      0.93409710      0.83980946      1.28735798
## 165      1.44946373      1.38024023      0.76945312      0.87658763
## 166      1.12903457      1.41400510      1.17854682      1.83849262
## 167      0.97421613      0.91459156      2.23555842      0.71909690
## 168      1.20442230      0.97421613      1.44946373      0.99487522
## 169      2.80216172      2.80216172      0.87658763      1.12903457
## 170      2.10223158      2.23555842      0.82184079      1.03752256
## 171      1.15343724      1.08214564      1.56855670      1.38024023
## 172      0.76945312      0.82184079      0.95396468      0.95396468
## 173      0.93409710      1.20442230      0.70271480      1.08214564
## 174      0.78667510      0.70271480      1.01596791      0.89542793
## 175      1.77352271      1.66232963      0.99487522      0.85805346
## 176      0.71909690      1.56855670     -0.70271480      0.70271480
## 177      1.99828954      2.10223158      0.91459156      0.93409710
## 178      1.17854682      0.95396468      1.38024023      0.97421613
## 179      0.82184079      0.83980946      1.48684468      1.52642702
## 180      1.52642702      1.28735798      0.80413364      1.23113036
## 181      0.85805346      0.78667510      1.77352271      1.15343724
## 182      1.01596791      0.89542793      1.25874673      1.66232963
## 183      0.87658763      1.44946373      0.15328619      2.42690063
## 184      0.68651916      0.56275157      0.33710120      1.05957037
## 185      1.66232963      1.31706374      1.99828954      1.56855670
## 186      0.73567430      0.71909690      1.05957037      1.91230127
## 187      1.23113036      1.01596791      1.91230127      1.48684468
## 188      1.38024023      1.12903457      1.66232963      1.31706374
## 189      1.10528634      1.10528634      0.78667510      1.17854682
## 190      1.34797950      1.17854682      2.10223158      0.75245638
## 191      1.41400510      1.34797950      2.42690063      0.68651916
## 192      1.91230127      1.99828954      0.85805346      0.91459156
## 193      0.75245638      0.73567430      1.15343724      1.77352271
## 194      0.83980946      0.80413364      1.20442230      1.99828954
## 195      1.25874673      1.23113036      1.10528634      0.82184079
## 196      2.23555842      2.42690063      2.80216172      0.80413364
## 197      1.28735798      1.25874673      1.12903457      0.83980946
```

```
##     SVAR_cooc.H.PET SENT_cooc.H.PET ASM_cooc.H.PET Contrast_cooc.H.PET
## 1        0.11476746      0.25729077    -0.48967276         -0.28368767
## 2       -0.54790615      0.50406856    -0.65465430          0.28368767
## 3        0.47537773     -0.63896971     0.91459156         -0.56275157
## 4        0.32366339      0.16617364    -0.43305527         -0.53318051
## 5        0.10196844     -1.05957037     2.10223158         -2.42690063
## 6       -1.25874673     -0.93409710     1.34797950         -0.97421613
## 7       -0.27046566      0.75245638    -0.75245638          0.44707302
## 8       -1.20442230     -0.25729077     0.19203379         -0.25729077
## 9        0.50406856     -0.17908874    -0.11476746         -1.08214564
## 10      -1.15343724      0.00000000    -0.20501110         -0.01272434
## 11       0.65465430     -0.10196844    -0.05091800         -0.75245638
## 12       0.19203379     -0.85805346     1.10528634         -0.73567430
## 13      -0.80413364      0.54790615    -0.71909690          0.43305527
## 14      -2.42690063     -0.32366339     0.44707302         -0.43305527
## 15       0.25729077      0.87658763    -0.78667510          0.32366339
## 16      -0.71909690     -0.31028376     0.39149488          0.17908874
## 17       0.24416040     -0.07641832    -0.07641832         -0.60806071
## 18       0.15328619      0.27046566    -0.51856960         -0.71909690
## 19      -0.17908874      0.33710120    -0.60806071          0.40526982
## 20       0.12758531      0.39149488    -0.59282318         -0.46117919
## 21       0.56275157     -0.03818128    -0.16617364         -0.14042416
## 22      -1.41400510     -0.40526982     0.31028376          0.27046566
## 23       0.05091800      0.12758531    -0.62344075          0.53318051
## 24      -0.51856960      0.21802303    -0.53318051          0.57772207
## 25       0.06366298     -0.37779383     0.35060018         -0.35060018
## 26      -0.03818128     -0.59282318     1.25874673         -1.71527720
## 27      -0.63896971      0.23107198    -0.44707302         -0.67050162
## 28      -0.21802303     -0.20501110     0.02545075          0.25729077
## 29      -0.87658763     -0.91459156     1.15343724         -0.41912210
## 30      -0.37779383      0.53318051    -0.70271480          0.41912210
## 31      -1.56855670     -0.67050162     1.01596791         -1.44946373
## 32       0.17908874      0.01272434    -0.23107198         -1.23113036
## 33      -0.19203379      0.31028376    -0.56275157          0.15328619
## 34      -0.48967276      0.29695946    -0.47537773         -0.57772207
## 35      -0.32366339      0.51856960    -0.68651916          0.29695946
## 36      -2.10223158     -0.82184079     0.85805346         -0.82184079
## 37      -1.31706374     -0.48967276     0.57772207         -0.51856960
## 38      -0.73567430      0.10196844    -0.46117919          0.35060018
## 39       0.29695946      0.03818128    -0.28368767         -0.12758531
## 40      -0.24416040      0.71909690    -0.76945312          0.60806071
## 41      -0.06366298      0.60806071    -0.73567430          0.20501110
## 42      -0.08918610      0.43305527    -0.67050162          0.33710120
## 43       0.31028376     -0.50406856     0.87658763         -1.99828954
## 44      -1.61367018     -0.68651916     0.97421613         -1.48684468
## 45      -2.80216172     -1.77352271     2.80216172         -2.80216172
## 46      -0.29695946      0.83980946    -0.36416334         -1.34797950
## 47      -0.82184079     -1.23113036     1.77352271         -0.39149488
## 48       0.51856960      0.37779383    -0.17908874         -0.37779383
## 49      -0.68651916      0.15328619    -0.08918610          0.78667510
## 50       0.14042416     -0.05091800     0.07641832          0.31028376
## 51      -0.60806071      0.06366298    -0.06366298          0.54790615
## 52      -0.47537773      0.32366339    -0.15328619          0.46117919
## 53       0.07641832     -0.75245638     1.28735798         -1.77352271
## 54      -0.43305527      0.56275157    -0.19203379          0.24416040
```

```
## 55      -0.76945312     -0.19203379     0.33710120         -0.87658763
## 56      -0.53318051     -0.60806071     0.83980946          0.14042416
## 57       0.28368767     -0.01272434     0.08918610         -0.27046566
## 58       0.16617364      0.70271480    -0.27046566          0.39149488
## 59      -0.83980946     -0.62344075     1.12903457         -1.31706374
## 60      -0.50406856      0.85805346    -0.37779383         -0.54790615
## 61       0.54790615     -0.12758531     0.20501110         -1.01596791
## 62      -1.10528634     -0.46117919     0.70271480         -0.48967276
## 63      -1.23113036     -0.33710120     0.60806071         -0.33710120
## 64      -0.15328619      0.35060018    -0.10196844         -0.85805346
## 65      -0.20501110      0.62344075    -0.24416040         -0.44707302
## 66       0.57772207      0.46117919    -0.12758531          0.16617364
## 67      -0.75245638     -0.29695946     0.51856960         -0.07641832
## 68       0.68651916      0.68651916    -0.31028376         -0.59282318
## 69      -1.01596791     -0.21802303     0.37779383         -0.20501110
## 70      -1.05957037      0.41912210    -0.21802303          0.89542793
## 71      -0.59282318      0.28368767    -0.03818128          0.73567430
## 72       0.23107198     -0.06366298     0.29695946         -0.19203379
## 73      -1.28735798     -0.44707302     0.89542793         -1.03752256
## 74      -0.78667510     -0.57772207     0.93409710         -0.36416334
## 75      -0.70271480      0.19203379     0.00000000         -1.05957037
## 76      -1.44946373     -0.51856960     0.78667510          0.50406856
## 77      -1.17854682     -1.25874673     1.99828954         -0.89542793
## 78      -0.39149488      0.48967276    -0.14042416          0.70271480
## 79      -1.03752256     -0.23107198     0.12758531         -0.21802303
## 80      -0.16617364     -0.15328619     0.06366298         -0.99487522
## 81      -0.28368767      0.36416334    -0.50406856          0.23107198
## 82       0.27046566      0.14042416    -0.25729077         -0.95396468
## 83      -0.62344075      0.24416040    -0.32366339         -0.65465430
## 84      -0.85805346     -0.89542793     1.17854682         -0.40526982
## 85      -1.52642702     -0.65465430     1.05957037         -1.41400510
## 86      -0.14042416      0.11476746    -0.40526982          0.36416334
## 87      -1.91230127     -0.36416334     0.71909690         -1.20442230
## 88      -0.33710120      0.08918610    -0.33710120         -0.15328619
## 89      -0.12758531      0.02545075    -0.29695946         -0.11476746
## 90      -0.89542793     -1.34797950    -0.99487522         -0.23107198
## 91      -0.44707302     -1.41400510    -0.95396468         -0.08918610
## 92       0.41912210     -1.01596791    -1.15343724          0.08918610
## 93      -0.40526982      0.44707302    -0.91459156          0.68651916
## 94      -0.95396468     -1.91230127     0.01272434         -1.12903457
## 95      -1.34797950     -2.42690063    -0.02545075         -0.91459156
## 96       0.00000000     -1.56855670    -0.89542793         -0.03818128
## 97      -0.56275157     -1.31706374    -1.10528634          0.76945312
## 98       0.01272434     -1.52642702    -0.85805346         -0.02545075
## 99      -1.08214564     -0.43305527     0.73567430         -0.47537773
## 100     -0.65465430      0.20501110    -0.87658763         -0.68651916
## 101     -1.71527720     -0.71909690     0.76945312         -1.56855670
## 102      0.40526982     -1.03752256    -1.20442230          0.07641832
## 103      0.44707302     -0.97421613    -1.03752256          0.11476746
## 104     -0.93409710     -1.83849262     0.05091800         -1.10528634
## 105      0.46117919     -0.95396468    -0.97421613          0.12758531
## 106      0.03818128     -1.20442230     1.83849262         -2.10223158
## 107      0.60806071      0.78667510    -0.39149488         -0.29695946
## 108     -0.10196844     -0.73567430     1.23113036         -1.83849262
## 109      0.73567430     -0.27046566     0.50406856         -1.25874673
```

```
## 110     -1.99828954     -0.76945312     0.99487522         -0.80413364
## 111     -0.23107198      0.73567430    -0.41912210          0.62344075
## 112     -0.05091800      0.63896971    -0.35060018          0.21802303
## 113      0.43305527     -0.99487522    -1.08214564          0.10196844
## 114     -0.35060018      0.07641832    -0.82184079         -0.16617364
## 115     -1.48684468     -0.53318051     0.40526982          0.48967276
## 116     -1.66232963     -0.70271480     0.82184079         -1.52642702
## 117      0.21802303     -0.08918610    -0.57772207         -0.62344075
## 118      0.63896971     -0.11476746    -0.54790615         -0.76945312
## 119     -0.31028376      0.82184079    -1.12903457         -1.38024023
## 120     -0.91459156     -1.44946373    -1.91230127         -0.24416040
## 121     -0.46117919     -1.48684468    -1.77352271         -0.10196844
## 122      0.35060018     -1.15343724    -2.42690063          0.02545075
## 123     -0.41912210      0.40526982    -1.71527720          0.67050162
## 124     -0.99487522     -2.10223158    -1.23113036         -1.17854682
## 125     -1.38024023     -2.80216172    -1.25874673         -0.93409710
## 126     -0.02545075     -1.66232963    -1.66232963         -0.06366298
## 127     -0.57772207     -1.38024023    -2.23555842          0.75245638
## 128     -0.01272434     -1.61367018    -1.56855670         -0.05091800
## 129     -1.12903457     -0.47537773     0.03818128         -0.50406856
## 130     -0.67050162      0.17908874    -1.61367018         -0.70271480
## 131     -1.83849262     -0.80413364     0.10196844         -1.66232963
## 132      0.33710120     -1.17854682    -2.80216172          0.01272434
## 133      0.37779383     -1.10528634    -1.99828954          0.05091800
## 134     -0.97421613     -1.99828954    -1.17854682         -1.15343724
## 135      0.39149488     -1.08214564    -1.83849262          0.06366298
## 136      0.02545075     -1.28735798     1.52642702         -2.23555842
## 137      0.59282318      0.76945312    -1.38024023         -0.31028376
## 138     -0.11476746     -0.83980946     0.63896971         -1.91230127
## 139      0.71909690     -0.28368767    -0.63896971         -1.28735798
## 140     -2.23555842     -0.87658763     0.46117919         -0.83980946
## 141     -0.25729077      0.67050162    -1.41400510          0.59282318
## 142     -0.07641832      0.57772207    -1.34797950          0.19203379
## 143      0.36416334     -1.12903457    -2.10223158          0.03818128
## 144     -0.36416334      0.05091800    -1.52642702         -0.17908874
## 145     -1.77352271     -0.78667510     0.15328619         -1.61367018
## 146      0.20501110     -0.14042416    -1.48684468         -0.63896971
## 147      0.62344075     -0.16617364    -1.44946373         -0.78667510
## 148      1.01596791      1.41400510     0.48967276          2.42690063
## 149      1.71527720      1.20442230     0.67050162          1.56855670
## 150      1.05957037      1.28735798     0.53318051          1.83849262
## 151      1.17854682      1.56855670     0.36416334          1.71527720
## 152      1.66232963      0.59282318     2.23555842         -0.32366339
## 153      1.23113036      1.99828954     0.32366339          1.52642702
## 154      0.95396468      1.10528634     1.03752256          0.85805346
## 155      1.12903457      0.89542793     1.48684468          1.41400510
## 156      1.99828954      1.23113036     0.68651916          1.08214564
## 157      1.77352271      2.42690063     0.24416040          1.66232963
## 158      0.91459156      0.80413364     1.71527720          0.37779383
## 159      1.15343724      2.80216172     0.14042416          0.95396468
## 160      2.23555842      1.15343724     0.80413364          0.65465430
## 161      0.78667510      0.95396468     1.38024023          0.97421613
## 162      0.75245638      1.01596791     1.31706374          1.05957037
## 163      1.44946373      1.61367018     0.47537773          0.87658763
## 164      1.38024023      2.10223158     0.27046566          0.99487522
```

```
## 165      2.42690063      1.83849262     0.43305527          1.44946373
## 166      0.97421613      1.03752256     1.20442230          1.28735798
## 167      2.80216172      2.23555842     0.21802303          0.93409710
## 168      0.83980946      1.08214564     1.08214564          1.15343724
## 169      0.80413364      1.71527720     0.28368767          2.80216172
## 170      1.08214564      1.52642702     0.54790615          2.10223158
## 171      1.83849262      1.17854682     0.95396468          1.17854682
## 172      0.70271480      0.97421613     1.56855670          0.63896971
## 173      0.93409710      0.91459156     1.61367018          1.03752256
## 174      0.99487522      1.44946373     0.59282318          0.56275157
## 175      0.53318051      0.93409710     1.44946373          1.77352271
## 176      0.76945312     -0.24416040     2.42690063          0.83980946
## 177      1.28735798      1.91230127     0.41912210          1.99828954
## 178      0.82184079      1.05957037     0.75245638          1.12903457
## 179      1.41400510      1.12903457     0.65465430          0.71909690
## 180      1.34797950      1.66232963    -0.01272434          1.48684468
## 181      1.91230127      1.38024023     0.25729077          0.80413364
## 182      1.03752256      1.48684468     0.17908874          0.91459156
## 183      0.89542793      0.47537773     1.91230127          1.01596791
## 184      0.48967276      0.65465430     1.66232963          0.00000000
## 185      1.48684468      1.34797950     0.11476746          1.61367018
## 186      0.08918610      0.99487522     1.41400510          0.47537773
## 187      1.31706374      1.31706374     0.16617364          1.20442230
## 188      1.52642702      1.25874673     0.23107198          1.23113036
## 189      0.87658763     -0.39149488    -1.05957037          1.10528634
## 190      1.20442230     -0.41912210    -1.01596791          1.25874673
## 191      2.10223158     -0.02545075    -1.31706374          1.38024023
## 192      1.25874673      1.77352271    -0.93409710          1.91230127
## 193      0.85805346     -1.71527720     0.62344075          0.51856960
## 194      0.67050162     -2.23555842     0.56275157          0.82184079
## 195      1.56855670     -0.56275157    -0.83980946          1.31706374
## 196      1.10528634     -0.35060018    -1.28735798          2.23555842
## 197      1.61367018     -0.54790615    -0.80413364          1.34797950
##     Dissimilarity_cooc.H.PET Inv_diff_cooc.H.PET Inv_diff_norm_cooc.H.PET
## 1                -0.31028376         -0.47537773              -0.28368767
## 2                 0.28368767         -1.01596791              -0.63896971
## 3                -0.76945312          0.53318051               0.10196844
## 4                -0.44707302         -0.25729077              -0.08918610
## 5                -2.10223158          1.03752256               0.62344075
## 6                -1.25874673          0.93409710               0.40526982
## 7                 0.41912210         -1.23113036              -0.95396468
## 8                -0.23107198         -0.19203379              -0.37779383
## 9                -0.91459156         -0.15328619               0.12758531
## 10                0.14042416         -0.40526982              -0.47537773
## 11               -0.75245638          0.02545075               0.05091800
## 12               -0.93409710          0.70271480               0.28368767
## 13                0.37779383         -0.99487522              -0.75245638
## 14               -0.25729077         -0.20501110              -0.35060018
## 15                0.27046566         -1.15343724              -0.59282318
## 16               -0.05091800          0.06366298              -0.39149488
## 17               -0.65465430          0.07641832               0.02545075
## 18               -0.67050162         -0.32366339               0.01272434
## 19                0.39149488         -0.89542793              -0.80413364
## 20               -0.35060018         -0.59282318              -0.20501110
## 21               -0.21802303         -0.29695946              -0.36416334
```

```
## 22                0.32366339         -0.27046566               -0.65465430
## 23                0.47537773         -0.95396468               -1.10528634
## 24                0.48967276         -0.75245638               -1.08214564
## 25               -0.39149488          0.08918610               -0.16617364
## 26               -1.77352271          0.87658763                0.51856960
## 27               -0.47537773         -0.57772207               -0.12758531
## 28                0.15328619         -0.12758531               -0.44707302
## 29               -0.82184079          0.60806071                0.15328619
## 30                0.33710120         -0.87658763               -0.62344075
## 31               -1.44946373          0.57772207                0.44707302
## 32               -1.15343724         -0.03818128                0.33710120
## 33                0.17908874         -0.63896971               -0.48967276
## 34               -0.43305527         -0.37779383               -0.15328619
## 35                0.21802303         -0.71909690               -0.54790615
## 36               -0.62344075          0.23107198               -0.01272434
## 37               -0.40526982          0.21802303               -0.14042416
## 38                0.35060018         -0.83980946               -0.76945312
## 39               -0.28368767         -0.24416040               -0.23107198
## 40                0.51856960         -1.48684468               -1.12903457
## 41                0.24416040         -1.10528634               -0.56275157
## 42                0.29695946         -0.91459156               -0.57772207
## 43               -1.83849262          0.82184079                0.54790615
## 44               -1.48684468          0.54790615                0.41912210
## 45               -2.80216172          1.91230127                0.65465430
## 46               -1.28735798         -0.39149488                0.50406856
## 47               -1.17854682          1.20442230                0.56275157
## 48               -0.41912210         -0.35060018                0.14042416
## 49                0.65465430         -1.03752256               -1.03752256
## 50                0.20501110         -0.23107198               -0.21802303
## 51                0.46117919         -0.51856960               -0.53318051
## 52                0.40526982         -0.70271480               -0.46117919
## 53               -1.71527720          0.89542793                0.57772207
## 54                0.16617364         -0.54790615               -0.19203379
## 55               -0.73567430          0.05091800                0.31028376
## 56               -0.06366298          0.24416040               -0.06366298
## 57               -0.33710120         -0.11476746                0.06366298
## 58                0.31028376         -0.80413364               -0.29695946
## 59               -1.38024023          0.78667510                0.53318051
## 60               -0.57772207         -0.53318051                0.20501110
## 61               -0.97421613          0.12758531                0.37779383
## 62               -0.53318051          0.35060018                0.25729077
## 63               -0.37779383          0.20501110                0.11476746
## 64               -0.71909690         -0.28368767                0.27046566
## 65               -0.36416334         -0.67050162                0.03818128
## 66                0.12758531         -0.43305527               -0.17908874
## 67               -0.20501110          0.10196844               -0.03818128
## 68               -0.56275157         -0.46117919                0.16617364
## 69               -0.16617364         -0.10196844               -0.11476746
## 70                0.67050162         -1.17854682               -1.15343724
## 71                0.60806071         -0.82184079               -0.71909690
## 72               -0.19203379         -0.14042416                0.00000000
## 73               -1.01596791          0.46117919                0.48967276
## 74               -0.59282318          0.50406856                0.36416334
## 75               -0.99487522         -0.08918610                0.43305527
## 76                0.44707302          0.00000000               -0.43305527
```

```
## 77              -1.34797950          1.23113036              0.59282318
## 78               0.57772207         -0.97421613             -0.60806071
## 79              -0.17908874         -0.16617364             -0.32366339
## 80              -0.95396468          0.14042416              0.23107198
## 81               0.19203379         -0.65465430             -0.50406856
## 82              -0.85805346         -0.21802303              0.07641832
## 83              -0.46117919         -0.56275157             -0.07641832
## 84              -0.80413364          0.63896971              0.19203379
## 85              -1.41400510          0.59282318              0.46117919
## 86               0.36416334         -0.78667510             -0.67050162
## 87              -1.08214564          0.32366339              0.35060018
## 88              -0.10196844         -0.44707302             -0.40526982
## 89              -0.01272434         -0.41912210             -0.41912210
## 90              -0.29695946         -0.68651916             -0.73567430
## 91              -0.02545075         -0.76945312             -0.99487522
## 92               0.07641832         -1.28735798             -1.01596791
## 93               0.56275157         -1.44946373             -1.28735798
## 94              -1.05957037          0.17908874             -0.05091800
## 95              -0.87658763         -0.02545075             -0.25729077
## 96              -0.08918610         -0.50406856             -0.97421613
## 97               0.63896971         -1.66232963             -1.44946373
## 98              -0.07641832         -0.48967276             -0.89542793
## 99              -0.51856960          0.36416334              0.32366339
## 100             -0.48967276         -0.73567430             -0.51856960
## 101             -1.56855670          0.44707302              0.17908874
## 102              0.06366298         -1.38024023             -1.05957037
## 103              0.10196844         -1.20442230             -0.83980946
## 104             -1.03752256          0.19203379             -0.02545075
## 105              0.11476746         -1.12903457             -0.78667510
## 106             -2.23555842          1.41400510              0.63896971
## 107             -0.24416040         -0.85805346             -0.10196844
## 108             -1.91230127          1.08214564              0.60806071
## 109             -1.20442230          0.37779383              0.47537773
## 110             -0.60806071          0.27046566              0.21802303
## 111              0.53318051         -1.34797950             -0.68651916
## 112              0.25729077         -0.93409710             -0.31028376
## 113              0.08918610         -1.25874673             -0.93409710
## 114             -0.11476746         -0.60806071             -0.85805346
## 115              0.43305527         -0.17908874             -1.25874673
## 116             -1.52642702          0.48967276              0.24416040
## 117             -0.68651916         -0.01272434             -0.27046566
## 118             -0.78667510         -0.05091800             -0.24416040
## 119             -1.31706374         -0.62344075              0.08918610
## 120             -0.32366339         -1.41400510             -1.56855670
## 121             -0.03818128         -1.56855670             -1.99828954
## 122              0.01272434         -1.99828954             -2.10223158
## 123              0.54790615         -2.42690063             -2.42690063
## 124             -1.12903457         -0.07641832             -1.20442230
## 125             -0.89542793         -0.33710120             -1.34797950
## 126             -0.14042416         -1.08214564             -1.91230127
## 127              0.62344075         -2.80216172             -2.80216172
## 128             -0.12758531         -1.05957037             -1.77352271
## 129             -0.54790615          0.15328619             -0.70271480
## 130             -0.50406856         -1.52642702             -1.48684468
## 131             -1.66232963          0.29695946             -0.91459156
```

```
## 132              0.00000000         -2.23555842              -2.23555842
## 133              0.03818128         -1.83849262              -1.66232963
## 134             -1.10528634         -0.06366298              -1.17854682
## 135              0.05091800         -1.77352271              -1.61367018
## 136             -2.42690063          1.28735798               0.39149488
## 137             -0.27046566         -1.61367018              -1.23113036
## 138             -1.99828954          0.95396468               0.29695946
## 139             -1.23113036          0.16617364              -0.33710120
## 140             -0.63896971          0.03818128              -0.87658763
## 141              0.50406856         -2.10223158              -1.52642702
## 142              0.23107198         -1.71527720              -1.41400510
## 143              0.02545075         -1.91230127              -1.83849262
## 144             -0.15328619         -1.31706374              -1.71527720
## 145             -1.61367018          0.31028376              -0.82184079
## 146             -0.70271480         -0.31028376              -1.38024023
## 147             -0.83980946         -0.36416334              -1.31706374
## 148              2.42690063          0.33710120               0.71909690
## 149              1.56855670          0.99487522               1.05957037
## 150              1.83849262          0.73567430               0.87658763
## 151              1.71527720          0.51856960               0.91459156
## 152              0.59282318          2.42690063               2.42690063
## 153              1.48684468          0.68651916               1.08214564
## 154              0.89542793          1.34797950               1.66232963
## 155              1.31706374          1.61367018               1.17854682
## 156              1.08214564          1.12903457               1.31706374
## 157              1.61367018          0.41912210               1.01596791
## 158              0.70271480          2.23555842               2.23555842
## 159              0.95396468          0.71909690               1.48684468
## 160              0.80413364          1.44946373               1.83849262
## 161              0.99487522          1.71527720               1.56855670
## 162              1.03752256          1.56855670               1.38024023
## 163              0.91459156          0.97421613               1.61367018
## 164              1.05957037          0.62344075               1.28735798
## 165              1.44946373          0.85805346               1.10528634
## 166              1.12903457          1.38024023               1.23113036
## 167              0.97421613          0.80413364               1.41400510
## 168              1.20442230          1.15343724               1.12903457
## 169              2.80216172          0.28368767               0.70271480
## 170              2.10223158          0.40526982               0.82184079
## 171              1.15343724          1.10528634               1.25874673
## 172              0.76945312          1.77352271               2.10223158
## 173              0.93409710          1.83849262               1.77352271
## 174              0.78667510          1.17854682               1.91230127
## 175              1.77352271          1.31706374               0.93409710
## 176              0.71909690          2.80216172               2.80216172
## 177              1.99828954          0.39149488               0.85805346
## 178              1.17854682          1.05957037               0.99487522
## 179              0.82184079          1.48684468               1.52642702
## 180              1.52642702          0.65465430               0.89542793
## 181              0.85805346          1.01596791               1.34797950
## 182              1.01596791          0.67050162               1.15343724
## 183              0.87658763          2.10223158               1.44946373
## 184              0.68651916          1.99828954               1.99828954
## 185              1.66232963          0.43305527               0.83980946
## 186              0.73567430          1.66232963               1.71527720
```

```
## 187               1.23113036          0.83980946                0.97421613
## 188               1.38024023          0.91459156                0.95396468
## 189               1.10528634          0.56275157                0.80413364
## 190               1.34797950          0.47537773                0.75245638
## 191               1.41400510          0.25729077                0.73567430
## 192               1.91230127          0.11476746                0.68651916
## 193               0.75245638          1.52642702                1.20442230
## 194               0.83980946          1.25874673                1.03752256
## 195               1.25874673          0.75245638                0.76945312
## 196               2.23555842          0.01272434                0.67050162
## 197               1.28735798          0.76945312                0.78667510
##     IDM_cooc.H.PET IDM_norm_cooc.H.PET Inv_var_cooc_.H.PET
## 1      -0.48967276         -0.23107198          0.17908874
## 2      -1.05957037         -0.60806071          0.27046566
## 3       0.76945312         -0.10196844         -0.57772207
## 4      -0.25729077         -0.06366298          0.28368767
## 5       1.17854682          0.60806071         -0.28368767
## 6       1.01596791          0.16617364         -0.62344075
## 7      -1.17854682         -0.80413364          0.23107198
## 8      -0.14042416         -0.29695946         -0.51856960
## 9      -0.15328619          0.21802303         -0.36416334
## 10     -0.37779383         -0.43305527          0.00000000
## 11      0.05091800          0.10196844         -0.19203379
## 12      0.85805346          0.03818128         -0.44707302
## 13     -1.01596791         -0.71909690         -0.11476746
## 14     -0.16617364         -0.21802303         -0.54790615
## 15     -1.23113036         -0.63896971          0.53318051
## 16      0.14042416         -0.48967276         -0.31028376
## 17      0.10196844          0.00000000         -0.25729077
## 18     -0.33710120          0.08918610          0.43305527
## 19     -0.87658763         -0.75245638          0.11476746
## 20     -0.60806071         -0.12758531          0.19203379
## 21     -0.28368767         -0.32366339          0.01272434
## 22     -0.23107198         -0.67050162         -0.56275157
## 23     -0.89542793         -0.87658763         -0.17908874
## 24     -0.68651916         -0.93409710         -0.23107198
## 25      0.12758531         -0.17908874         -0.48967276
## 26      0.93409710          0.47537773          0.35060018
## 27     -0.62344075          0.02545075          0.24416040
## 28     -0.06366298         -0.54790615         -0.05091800
## 29      0.80413364         -0.16617364         -0.67050162
## 30     -0.83980946         -0.70271480          0.06366298
## 31      0.75245638          0.43305527         -0.71909690
## 32     -0.05091800          0.35060018          0.48967276
## 33     -0.56275157         -0.44707302          0.08918610
## 34     -0.39149488         -0.05091800          0.14042416
## 35     -0.75245638         -0.59282318          0.33710120
## 36      0.33710120          0.05091800         -0.65465430
## 37      0.35060018         -0.14042416         -0.12758531
## 38     -0.78667510         -0.68651916          0.37779383
## 39     -0.21802303         -0.28368767         -0.41912210
## 40     -1.52642702         -0.91459156         -0.10196844
## 41     -1.12903457         -0.50406856          0.67050162
## 42     -0.91459156         -0.65465430          0.32366339
## 43      0.87658763          0.50406856         -0.02545075
```

```
## 44      0.73567430          0.39149488         -0.75245638
## 45      2.10223158          0.65465430          0.41912210
## 46     -0.50406856          0.57772207          1.44946373
## 47      1.31706374          0.24416040         -0.29695946
## 48     -0.35060018          0.28368767          0.63896971
## 49     -0.97421613         -0.76945312         -0.03818128
## 50     -0.17908874         -0.15328619          0.15328619
## 51     -0.46117919         -0.41912210         -0.01272434
## 52     -0.65465430         -0.33710120          0.36416334
## 53      0.95396468          0.63896971          0.03818128
## 54     -0.53318051         -0.03818128          0.78667510
## 55      0.06366298          0.40526982          0.73567430
## 56      0.39149488         -0.07641832         -0.32366339
## 57     -0.08918610          0.14042416          0.62344075
## 58     -0.85805346         -0.19203379          0.60806071
## 59      0.89542793          0.56275157          0.16617364
## 60     -0.63896971          0.33710120          1.17854682
## 61      0.17908874          0.48967276          0.07641832
## 62      0.53318051          0.25729077          0.02545075
## 63      0.29695946          0.19203379          0.50406856
## 64     -0.32366339          0.41912210          0.68651916
## 65     -0.70271480          0.27046566          0.91459156
## 66     -0.43305527         -0.02545075          0.59282318
## 67      0.16617364          0.01272434          0.05091800
## 68     -0.51856960          0.37779383          0.93409710
## 69     -0.03818128          0.12758531          0.40526982
## 70     -1.10528634         -0.99487522          0.39149488
## 71     -0.71909690         -0.57772207          0.54790615
## 72     -0.10196844          0.17908874          0.71909690
## 73      0.67050162          0.53318051          0.57772207
## 74      0.71909690          0.29695946         -0.08918610
## 75     -0.11476746          0.54790615          1.01596791
## 76      0.07641832         -0.35060018         -0.06366298
## 77      1.34797950          0.46117919         -0.15328619
## 78     -0.93409710         -0.47537773          0.65465430
## 79     -0.12758531         -0.27046566         -0.14042416
## 80      0.20501110          0.23107198          0.25729077
## 81     -0.57772207         -0.40526982          0.10196844
## 82     -0.24416040          0.20501110          0.51856960
## 83     -0.59282318          0.11476746          0.31028376
## 84      0.82184079         -0.08918610         -0.59282318
## 85      0.78667510          0.44707302         -0.60806071
## 86     -0.73567430         -0.62344075          0.47537773
## 87      0.48967276          0.31028376          0.12758531
## 88     -0.41912210         -0.25729077         -0.37779383
## 89     -0.40526982         -0.31028376         -0.07641832
## 90     -0.67050162         -0.82184079         -0.68651916
## 91     -0.76945312         -0.95396468         -0.99487522
## 92     -1.34797950         -1.01596791         -0.46117919
## 93     -1.38024023         -1.17854682         -0.47537773
## 94      0.21802303         -0.24416040         -0.91459156
## 95      0.02545075         -0.39149488         -1.01596791
## 96     -0.47537773         -1.03752256         -0.93409710
## 97     -1.61367018         -1.28735798         -0.70271480
## 98     -0.44707302         -0.97421613         -0.89542793
```

```
## 99      0.56275157          0.32366339          0.21802303
## 100    -0.82184079         -0.56275157         -0.53318051
## 101     0.65465430         -0.01272434         -1.10528634
## 102    -1.41400510         -1.05957037         -0.50406856
## 103    -1.25874673         -0.85805346         -0.33710120
## 104     0.24416040         -0.20501110         -0.87658763
## 105    -1.20442230         -0.78667510         -0.20501110
## 106     1.61367018          0.59282318         -0.82184079
## 107    -0.95396468          0.15328619          0.85805346
## 108     1.23113036          0.62344075         -0.35060018
## 109     0.51856960          0.51856960         -0.16617364
## 110     0.40526982          0.36416334         -0.24416040
## 111    -1.31706374         -0.53318051          0.44707302
## 112    -0.99487522         -0.11476746          0.99487522
## 113    -1.28735798         -0.89542793         -0.39149488
## 114    -0.54790615         -0.83980946         -0.95396468
## 115    -0.07641832         -1.15343724         -1.05957037
## 116     0.68651916          0.06366298         -1.08214564
## 117     0.03818128         -0.46117919         -0.76945312
## 118     0.00000000         -0.37779383         -0.73567430
## 119    -0.80413364          0.07641832          0.76945312
## 120    -1.44946373         -1.61367018         -1.48684468
## 121    -1.48684468         -1.83849262         -2.10223158
## 122    -2.10223158         -1.99828954         -1.34797950
## 123    -2.23555842         -2.42690063         -1.38024023
## 124    -0.02545075         -1.34797950         -1.83849262
## 125    -0.29695946         -1.41400510         -2.23555842
## 126    -1.08214564         -2.10223158         -1.91230127
## 127    -2.80216172         -2.80216172         -1.52642702
## 128    -1.03752256         -1.91230127         -1.77352271
## 129     0.25729077         -1.10528634         -1.15343724
## 130    -1.56855670         -1.52642702         -1.44946373
## 131     0.44707302         -1.23113036         -2.80216172
## 132    -2.42690063         -2.23555842         -1.41400510
## 133    -1.83849262         -1.71527720         -1.25874673
## 134    -0.01272434         -1.31706374         -1.71527720
## 135    -1.77352271         -1.56855670         -1.20442230
## 136     1.48684468         -0.51856960         -1.66232963
## 137    -1.66232963         -1.12903457         -0.80413364
## 138     1.12903457         -0.36416334         -1.28735798
## 139     0.23107198         -0.73567430         -1.17854682
## 140     0.11476746         -1.08214564         -1.23113036
## 141    -1.99828954         -1.48684468         -1.12903457
## 142    -1.71527720         -1.25874673         -0.63896971
## 143    -1.91230127         -1.77352271         -1.31706374
## 144    -1.15343724         -1.66232963         -1.99828954
## 145     0.47537773         -1.20442230         -2.42690063
## 146    -0.27046566         -1.44946373         -1.61367018
## 147    -0.31028376         -1.38024023         -1.56855670
## 148     0.08918610          0.80413364          0.87658763
## 149     0.97421613          1.08214564          1.12903457
## 150     0.59282318          0.87658763          0.89542793
## 151     0.37779383          0.95396468          1.25874673
## 152     2.42690063          2.80216172          0.97421613
## 153     0.50406856          1.15343724          1.99828954
```

```
## 154     1.20442230          1.71527720          1.91230127
## 155     1.56855670          1.12903457          0.56275157
## 156     1.08214564          1.28735798          1.66232963
## 157     0.19203379          1.05957037          1.61367018
## 158     2.23555842          2.42690063          1.15343724
## 159     0.41912210          1.61367018          2.80216172
## 160     1.38024023          1.99828954          1.05957037
## 161     1.71527720          1.44946373          0.95396468
## 162     1.52642702          1.34797950          1.38024023
## 163     0.83980946          1.77352271          1.77352271
## 164     0.32366339          1.48684468          2.10223158
## 165     0.62344075          1.17854682          1.56855670
## 166     1.28735798          1.20442230          1.03752256
## 167     0.54790615          1.66232963          2.23555842
## 168     1.10528634          1.25874673          1.31706374
## 169     0.01272434          0.73567430          1.28735798
## 170     0.31028376          0.83980946          1.48684468
## 171     1.05957037          1.31706374          1.83849262
## 172     1.77352271          2.10223158          1.52642702
## 173     1.83849262          1.52642702          0.80413364
## 174     1.03752256          2.23555842          2.42690063
## 175     1.25874673          0.93409710          0.83980946
## 176     2.80216172          1.91230127          0.70271480
## 177     0.15328619          0.85805346          1.71527720
## 178     0.99487522          0.99487522          0.75245638
## 179     1.41400510          1.41400510          1.20442230
## 180     0.46117919          0.89542793          1.08214564
## 181     0.91459156          1.38024023          1.41400510
## 182     0.43305527          1.23113036          1.23113036
## 183     1.99828954          1.10528634         -0.21802303
## 184     1.91230127          1.83849262         -0.27046566
## 185     0.28368767          0.82184079          1.34797950
## 186     1.66232963          1.56855670          1.10528634
## 187     0.63896971          1.01596791          0.46117919
## 188     0.70271480          0.97421613          0.82184079
## 189     0.36416334          0.78667510         -0.40526982
## 190     0.27046566          0.76945312         -0.97421613
## 191    -0.19203379          0.71909690          0.29695946
## 192    -0.20501110          0.68651916          0.20501110
## 193     1.44946373          1.03752256         -0.83980946
## 194     1.15343724          0.91459156         -1.03752256
## 195     0.57772207          0.70271480         -0.85805346
## 196    -0.36416334          0.67050162         -0.43305527
## 197     0.60806071          0.75245638         -0.78667510
##     Correlation_cooc.H.PET Autocorrelation_cooc.H.PET Tendency_cooc.H.PET
## 1               0.01272434                -0.35060018         -0.25729077
## 2              -0.83980946                -0.59282318         -0.44707302
## 3              -0.12758531                 0.35060018         -0.68651916
## 4               0.40526982                -0.70271480          0.29695946
## 5              -0.99487522                 0.63896971         -2.42690063
## 6              -0.54790615                 0.43305527         -1.12903457
## 7              -1.01596791                -1.03752256         -0.21802303
## 8              -1.10528634                -0.01272434         -1.05957037
## 9               0.75245638                -0.33710120          0.47537773
## 10             -1.28735798                -0.46117919         -1.01596791
```

```
## 11          0.62344075          -0.21802303          0.62344075
## 12         -0.02545075           0.36416334         -0.73567430
## 13         -0.48967276          -1.48684468          0.21802303
## 14         -2.23555842           0.25729077         -2.23555842
## 15         -0.21802303          -1.15343724          0.23107198
## 16         -0.89542793           0.01272434         -0.60806071
## 17          0.41912210          -0.17908874          0.20501110
## 18          0.44707302          -0.75245638          0.15328619
## 19         -0.80413364          -0.62344075         -0.12758531
## 20          0.35060018          -0.50406856          0.12758531
## 21         -0.44707302          -0.44707302         -0.51856960
## 22         -1.91230127           0.19203379         -1.25874673
## 23         -0.91459156          -0.87658763          0.05091800
## 24         -1.34797950          -1.08214564         -0.41912210
## 25          0.25729077           0.14042416          0.06366298
## 26          0.00000000           0.31028376         -1.99828954
## 27          0.19203379          -0.10196844         -0.54790615
## 28         -0.56275157          -0.40526982         -0.15328619
## 29         -0.62344075           0.39149488         -0.80413364
## 30         -0.67050162          -1.05957037          0.03818128
## 31          0.15328619           0.54790615         -1.38024023
## 32          0.70271480          -0.14042416         -0.20501110
## 33         -0.14042416          -0.71909690          0.11476746
## 34          0.24416040          -0.36416334         -0.39149488
## 35         -0.68651916          -0.78667510         -0.24416040
## 36         -1.52642702           0.44707302         -1.71527720
## 37         -1.25874673           0.12758531         -1.17854682
## 38         -1.15343724          -0.27046566         -0.63896971
## 39          0.17908874          -0.47537773          0.28368767
## 40         -1.17854682          -1.20442230         -0.17908874
## 41         -0.32366339          -0.82184079         -0.03818128
## 42         -0.57772207          -0.63896971         -0.06366298
## 43          0.67050162           0.28368767         -1.08214564
## 44          0.14042416           0.53318051         -1.41400510
## 45         -1.05957037           1.31706374         -2.80216172
## 46          1.05957037          -1.38024023          0.70271480
## 47         -0.35060018           0.62344075         -0.75245638
## 48          0.46117919          -0.73567430          0.48967276
## 49         -1.56855670          -0.56275157         -0.59282318
## 50         -0.16617364          -0.32366339          0.14042416
## 51         -1.31706374          -0.65465430         -0.50406856
## 52         -0.97421613          -1.01596791         -0.37779383
## 53          0.11476746           0.57772207         -2.10223158
## 54         -0.53318051          -0.39149488         -0.36416334
## 55          0.31028376          -0.05091800         -0.67050162
## 56         -0.63896971           0.32366339         -0.43305527
## 57          0.06366298          -0.16617364         -0.31028376
## 58         -0.25729077          -1.44946373          0.16617364
## 59          0.50406856           0.33710120         -0.76945312
## 60          0.54790615          -1.52642702          0.63896971
## 61          0.78667510          -0.37779383          0.53318051
## 62         -0.51856960           0.16617364         -0.97421613
## 63         -1.03752256           0.07641832         -1.10528634
## 64          0.63896971          -0.85805346          0.44707302
## 65          0.28368767          -0.41912210         -0.14042416
```

```
## 66          0.23107198          -0.76945312          0.54790615
## 67         -0.71909690           0.00000000         -0.65465430
## 68          0.60806071          -0.89542793          0.67050162
## 69         -0.87658763          -0.06366298         -0.89542793
## 70         -2.10223158          -0.91459156         -0.93409710
## 71         -1.44946373          -1.34797950         -0.48967276
## 72         -0.70271480          -0.48967276         -0.71909690
## 73         -0.17908874           0.27046566         -1.15343724
## 74         -0.24416040           0.29695946         -0.70271480
## 75          0.80413364          -0.60806071          0.50406856
## 76         -2.42690063          -0.02545075         -1.28735798
## 77         -0.06366298           0.37779383         -1.03752256
## 78         -1.23113036          -1.25874673         -0.32366339
## 79         -0.95396468          -0.07641832         -0.91459156
## 80          0.51856960          -0.15328619         -0.11476746
## 81         -0.59282318          -0.57772207         -0.23107198
## 82          0.57772207          -0.51856960          0.27046566
## 83          0.20501110          -0.08918610         -0.53318051
## 84         -0.60806071           0.40526982         -0.78667510
## 85          0.16617364           0.56275157         -1.34797950
## 86         -1.12903457          -0.25729077         -0.62344075
## 87         -0.82184079           0.11476746         -1.61367018
## 88         -0.15328619          -0.28368767         -0.27046566
## 89         -0.19203379          -0.43305527         -0.10196844
## 90          0.08918610          -0.53318051          0.10196844
## 91         -0.08918610          -1.10528634          0.25729077
## 92         -0.10196844          -1.83849262          0.39149488
## 93         -1.41400510          -1.28735798         -0.33710120
## 94          0.27046566           0.05091800         -0.83980946
## 95         -0.93409710           0.21802303         -1.20442230
## 96         -0.29695946          -0.95396468          0.01272434
## 97         -1.66232963          -1.56855670         -0.46117919
## 98         -0.27046566          -0.93409710          0.02545075
## 99         -0.47537773           0.17908874         -0.95396468
## 100         0.12758531          -0.11476746         -0.56275157
## 101         0.03818128           0.50406856         -1.48684468
## 102        -0.11476746          -1.91230127          0.37779383
## 103        -0.03818128          -1.71527720          0.41912210
## 104         0.29695946           0.06366298         -0.82184079
## 105        -0.01272434          -1.66232963          0.43305527
## 106         0.71909690           0.60806071         -1.83849262
## 107         0.47537773          -0.67050162          0.57772207
## 108         1.03752256           0.24416040         -0.07641832
## 109         1.01596791           0.10196844          0.75245638
## 110        -1.48684468           0.46117919         -1.66232963
## 111        -1.08214564          -1.17854682         -0.16617364
## 112        -0.20501110          -0.80413364         -0.02545075
## 113        -0.07641832          -1.77352271          0.40526982
## 114        -0.28368767          -0.29695946         -0.28368767
## 115        -2.80216172          -0.03818128         -1.31706374
## 116         0.07641832           0.51856960         -1.44946373
## 117         0.37779383          -0.19203379          0.19203379
## 118         0.56275157          -0.23107198          0.60806071
## 119         0.93409710          -1.41400510          0.68651916
## 120        -0.31028376          -0.54790615          0.08918610
```

```
## 121          -0.43305527              -1.12903457          0.24416040
## 122          -0.46117919              -2.42690063          0.32366339
## 123          -1.61367018              -1.31706374         -0.35060018
## 124           0.02545075               0.02545075         -0.87658763
## 125          -1.20442230               0.20501110         -1.23113036
## 126          -0.76945312              -0.99487522         -0.01272434
## 127          -1.77352271              -1.61367018         -0.47537773
## 128          -0.73567430              -0.97421613          0.00000000
## 129          -0.85805346               0.15328619         -0.99487522
## 130          -0.23107198              -0.12758531         -0.57772207
## 131          -0.36416334               0.47537773         -1.56855670
## 132          -0.50406856              -2.80216172          0.31028376
## 133          -0.40526982              -2.10223158          0.35060018
## 134           0.05091800               0.03818128         -0.85805346
## 135          -0.39149488              -1.99828954          0.36416334
## 136           0.48967276               0.59282318         -1.91230127
## 137           0.33710120              -0.68651916          0.56275157
## 138           0.85805346               0.23107198         -0.08918610
## 139           0.83980946               0.08918610          0.73567430
## 140          -1.71527720               0.41912210         -1.77352271
## 141          -1.38024023              -1.23113036         -0.19203379
## 142          -0.65465430              -0.83980946         -0.05091800
## 143          -0.41912210              -2.23555842          0.33710120
## 144          -0.75245638              -0.31028376         -0.29695946
## 145          -0.33710120               0.48967276         -1.52642702
## 146           0.21802303              -0.20501110          0.17908874
## 147           0.39149488              -0.24416040          0.59282318
## 148          -0.37779383               0.97421613          1.03752256
## 149           1.23113036               1.15343724          1.61367018
## 150           0.32366339               0.91459156          1.08214564
## 151           0.59282318               0.78667510          1.17854682
## 152           1.44946373               2.80216172         -0.40526982
## 153           0.97421613               1.10528634          1.20442230
## 154           1.71527720               1.41400510          0.97421613
## 155           0.89542793               1.91230127          1.15343724
## 156           1.38024023               1.23113036          1.28735798
## 157           1.12903457               0.70271480          1.66232963
## 158           1.77352271               1.99828954          0.91459156
## 159           1.91230127               0.68651916          2.42690063
## 160           2.42690063               1.12903457          2.10223158
## 161           0.99487522               1.66232963          0.80413364
## 162           0.53318051               1.56855670          0.76945312
## 163           2.23555842               0.87658763          1.91230127
## 164           1.66232963               1.08214564          1.38024023
## 165           1.56855670               0.89542793          2.23555842
## 166           0.82184079               1.48684468          0.99487522
## 167           2.10223158               0.85805346          2.80216172
## 168           0.73567430               1.38024023          0.85805346
## 169          -1.83849262               0.83980946          0.82184079
## 170          -0.05091800               0.71909690          1.10528634
## 171           0.87658763               1.03752256          0.93409710
## 172           1.20442230               1.77352271          0.71909690
## 173           1.15343724               1.83849262          0.95396468
## 174           2.80216172               0.93409710          1.99828954
## 175          -1.99828954               1.44946373          0.51856960
```

```
## 176             1.34797950                 2.10223158          0.78667510
## 177             0.36416334                 0.75245638          1.25874673
## 178             0.65465430                 1.34797950          0.83980946
## 179             1.83849262                 1.25874673          1.41400510
## 180             0.95396468                 0.95396468          1.34797950
## 181             1.99828954                 1.01596791          1.77352271
## 182             1.52642702                 1.28735798          1.05957037
## 183             0.91459156                 2.23555842          0.89542793
## 184             1.48684468                 2.42690063          0.46117919
## 185             0.43305527                 1.20442230          1.01596791
## 186             0.76945312                 1.61367018          0.07641832
## 187             1.25874673                 1.17854682          1.31706374
## 188             1.17854682                 1.05957037          1.44946373
## 189             1.41400510                 0.99487522          1.56855670
## 190             1.31706374                 0.76945312          1.71527720
## 191             1.28735798                 0.65465430          1.83849262
## 192             0.10196844                 0.73567430          1.23113036
## 193             1.61367018                 1.52642702          0.87658763
## 194             0.68651916                 1.71527720          0.65465430
## 195             1.08214564                 0.80413364          1.48684468
## 196            -0.78667510                 0.67050162          1.12903457
## 197             1.10528634                 0.82184079          1.52642702
##     Shade_cooc.H.PET Prominence_cooc.H.PET IC1_d.H.PET IC2_d.H.PET
## 1         0.56275157           -0.27046566  0.36416334 -0.08918610
## 2        -0.03818128           -0.39149488  0.89542793 -0.73567430
## 3        -0.24416040           -0.67050162 -0.19203379 -0.31028376
## 4        -0.59282318            0.50406856 -0.27046566  0.33710120
## 5         1.83849262           -2.42690063  0.32366339 -1.23113036
## 6         0.53318051           -1.28735798 -0.03818128 -0.75245638
## 7         0.01272434           -0.07641832  0.95396468 -0.70271480
## 8         1.15343724           -1.01596791  1.10528634 -1.41400510
## 9        -0.54790615            0.36416334 -1.20442230  0.70271480
## 10        0.75245638           -0.70271480  0.37779383 -0.19203379
## 11       -1.10528634            0.83980946 -0.48967276  0.43305527
## 12       -0.48967276           -0.68651916 -0.17908874 -0.46117919
## 13       -0.37779383            0.47537773  0.78667510 -0.60806071
## 14        1.34797950           -1.91230127  1.38024023 -2.23555842
## 15        0.12758531            0.43305527  0.65465430 -0.20501110
## 16       -1.01596791           -0.36416334  0.62344075 -0.99487522
## 17       -0.68651916            0.29695946 -0.39149488  0.32366339
## 18        0.82184079            0.17908874 -0.33710120  0.44707302
## 19       -0.27046566           -0.02545075  0.83980946 -0.80413364
## 20       -0.50406856            0.15328619 -0.10196844  0.29695946
## 21        0.39149488           -0.43305527  0.44707302 -0.41912210
## 22        1.08214564           -1.20442230  1.41400510 -2.42690063
## 23        0.19203379            0.14042416  1.05957037 -1.05957037
## 24        0.65465430           -0.25729077  1.25874673 -1.31706374
## 25       -1.52642702            0.35060018 -0.32366339  0.11476746
## 26        1.91230127           -1.83849262 -0.53318051  0.15328619
## 27        0.47537773           -0.54790615  0.02545075  0.19203379
## 28       -0.10196844           -0.10196844  0.39149488 -0.39149488
## 29       -0.62344075           -0.80413364  0.24416040 -0.91459156
## 30        0.20501110            0.20501110  0.59282318 -0.33710120
## 31        1.56855670           -1.38024023 -0.44707302  0.03818128
## 32        0.70271480           -0.33710120 -0.83980946  0.63896971
```

```
## 33       -0.76945312            0.44707302  0.47537773 -0.24416040
## 34        0.10196844           -0.35060018  0.14042416  0.14042416
## 35        0.28368767           -0.08918610  0.60806071 -0.36416334
## 36        1.25874673           -1.71527720  1.20442230 -1.91230127
## 37        1.17854682           -1.10528634  1.08214564 -1.48684468
## 38        0.32366339           -0.47537773  0.80413364 -0.83980946
## 39       -0.82184079            0.46117919  0.11476746  0.05091800
## 40       -0.06366298            0.00000000  1.17854682 -1.12903457
## 41        0.62344075            0.03818128  0.50406856 -0.07641832
## 42        0.02545075            0.06366298  0.51856960 -0.21802303
## 43        0.91459156           -1.05957037 -1.28735798  0.57772207
## 44        1.52642702           -1.41400510 -0.46117919  0.02545075
## 45        1.20442230           -2.80216172  0.41912210 -1.77352271
## 46        0.37779383            0.78667510 -0.54790615  0.89542793
## 47       -0.93409710           -0.91459156 -0.14042416 -0.59282318
## 48       -0.51856960            0.54790615  0.19203379  0.41912210
## 49       -0.73567430           -0.28368767  1.83849262 -1.52642702
## 50       -0.99487522            0.19203379  1.03752256 -0.57772207
## 51       -0.28368767           -0.32366339  1.61367018 -1.44946373
## 52        0.06366298           -0.05091800  1.44946373 -0.93409710
## 53        1.31706374           -1.99828954 -0.16617364 -0.06366298
## 54       -0.44707302           -0.11476746  0.82184079 -0.01272434
## 55        0.59282318           -0.60806071  0.06366298  0.24416040
## 56       -0.85805346           -0.44707302  0.93409710 -0.97421613
## 57       -0.41912210           -0.23107198  0.54790615 -0.05091800
## 58       -0.83980946            0.48967276  1.15343724 -0.23107198
## 59        0.31028376           -0.73567430 -1.15343724  0.50406856
## 60        0.68651916            0.87658763 -0.12758531  0.62344075
## 61       -0.91459156            0.51856960 -0.57772207  0.60806071
## 62        0.41912210           -0.95396468  0.85805346 -0.78667510
## 63        0.93409710           -1.03752256  1.28735798 -1.03752256
## 64        0.50406856            0.41912210 -0.20501110  0.53318051
## 65        0.76945312           -0.24416040  0.33710120  0.37779383
## 66       -1.17854682            0.93409710  0.73567430  0.01272434
## 67       -0.53318051           -0.48967276  1.12903457 -0.89542793
## 68        0.27046566            0.85805346 -0.05091800  0.56275157
## 69        0.89542793           -0.75245638  1.34797950 -1.08214564
## 70        0.29695946           -0.62344075  1.66232963 -1.34797950
## 71        0.51856960           -0.37779383  2.42690063 -1.61367018
## 72        1.10528634           -0.65465430  1.23113036 -0.62344075
## 73        1.12903457           -1.31706374  0.53318051 -0.28368767
## 74        0.11476746           -0.71909690  0.71909690 -0.68651916
## 75       -0.43305527            0.53318051 -0.41912210  0.68651916
## 76        0.80413364           -1.15343724  1.71527720 -1.66232963
## 77        1.99828954           -1.08214564 -0.11476746 -0.54790615
## 78       -0.29695946           -0.12758531  1.56855670 -1.17854682
## 79        0.87658763           -0.76945312  0.97421613 -1.20442230
## 80       -0.56275157           -0.06366298 -0.50406856  0.46117919
## 81        0.35060018           -0.16617364  0.68651916 -0.51856960
## 82       -0.25729077            0.23107198 -0.40526982  0.48967276
## 83        0.48967276           -0.53318051  0.10196844  0.21802303
## 84       -0.60806071           -0.78667510  0.29695946 -0.87658763
## 85        1.61367018           -1.34797950 -0.43305527  0.06366298
## 86        0.33710120           -0.46117919  0.87658763 -0.76945312
## 87        1.77352271           -1.61367018  0.43305527 -0.65465430
```

```
## 88       -0.33710120           -0.17908874  0.57772207 -0.50406856
## 89        0.05091800           -0.03818128  0.48967276 -0.35060018
## 90       -0.87658763            0.33710120 -0.15328619 -0.10196844
## 91       -0.01272434            0.40526982 -0.06366298 -0.25729077
## 92       -0.15328619            0.65465430  0.08918610 -0.16617364
## 93       -0.31028376           -0.14042416  0.76945312 -1.25874673
## 94        1.03752256           -0.83980946 -0.87658763  0.27046566
## 95        0.97421613           -1.23113036  0.25729077 -1.15343724
## 96        0.16617364            0.10196844 -0.07641832 -0.44707302
## 97        0.73567430           -0.29695946  0.75245638 -1.71527720
## 98        0.17908874            0.11476746 -0.01272434 -0.43305527
## 99        0.43305527           -0.93409710  0.99487522 -0.71909690
## 100       0.46117919           -0.56275157 -0.31028376  0.12758531
## 101       1.44946373           -1.48684468 -0.80413364 -0.03818128
## 102      -0.16617364            0.63896971  0.01272434 -0.17908874
## 103      -0.12758531            0.68651916  0.16617364 -0.14042416
## 104       1.05957037           -0.82184079 -0.85805346  0.28368767
## 105      -0.11476746            0.70271480  0.28368767 -0.11476746
## 106       2.23555842           -2.10223158 -1.99828954  0.54790615
## 107      -0.78667510            0.91459156  0.07641832  0.51856960
## 108       0.25729077           -0.40526982 -2.10223158  0.85805346
## 109      -1.99828954            1.08214564 -1.38024023  0.82184079
## 110       1.28735798           -1.66232963  1.52642702 -1.83849262
## 111      -0.05091800            0.01272434  1.48684468 -1.01596791
## 112       0.63896971            0.05091800  0.91459156  0.00000000
## 113      -0.14042416            0.67050162  0.12758531 -0.15328619
## 114      -0.35060018           -0.19203379  0.20501110 -0.63896971
## 115       0.78667510           -1.17854682  0.67050162 -1.99828954
## 116       1.48684468           -1.44946373 -0.71909690 -0.02545075
## 117      -0.70271480            0.28368767 -0.51856960  0.25729077
## 118      -1.12903457            0.82184079 -0.82184079  0.39149488
## 119       0.36416334            0.76945312 -1.12903457  0.80413364
## 120      -0.89542793            0.32366339 -0.95396468 -0.37779383
## 121      -0.02545075            0.39149488 -0.76945312 -0.67050162
## 122      -0.21802303            0.57772207 -0.68651916 -0.53318051
## 123      -0.32366339           -0.15328619 -0.35060018 -1.56855670
## 124       0.99487522           -0.87658763 -1.52642702  0.08918610
## 125       0.95396468           -1.25874673 -0.60806071 -1.38024023
## 126       0.14042416            0.07641832 -0.78667510 -0.85805346
## 127       0.71909690           -0.31028376 -0.36416334 -2.10223158
## 128       0.15328619            0.08918610 -0.75245638 -0.82184079
## 129       0.40526982           -0.97421613 -0.24416040 -1.10528634
## 130       0.44707302           -0.57772207 -1.10528634 -0.12758531
## 131       1.38024023           -1.56855670 -1.41400510 -0.32366339
## 132      -0.23107198            0.56275157 -0.73567430 -0.56275157
## 133      -0.19203379            0.60806071 -0.65465430 -0.47537773
## 134       1.01596791           -0.85805346 -1.48684468  0.10196844
## 135      -0.17908874            0.62344075 -0.59282318 -0.40526982
## 136       2.10223158           -2.23555842 -2.42690063  0.40526982
## 137      -0.80413364            0.89542793 -0.70271480  0.35060018
## 138       0.24416040           -0.41912210 -2.80216172  0.75245638
## 139      -2.10223158            1.05957037 -1.83849262  0.65465430
## 140       1.23113036           -1.77352271  0.17908874 -2.80216172
## 141      -0.07641832           -0.01272434  0.15328619 -1.28735798
## 142       0.60806071            0.02545075 -0.28368767 -0.27046566
```

```
## 143      -0.20501110            0.59282318 -0.67050162 -0.48967276
## 144      -0.36416334           -0.20501110 -0.63896971 -0.95396468
## 145       1.41400510           -1.52642702 -1.34797950 -0.29695946
## 146      -0.71909690            0.27046566 -1.31706374  0.07641832
## 147      -1.15343724            0.80413364 -1.44946373  0.23107198
## 148      -1.71527720            1.15343724  2.23555842  0.31028376
## 149      -2.42690063            1.56855670  0.40526982  1.05957037
## 150      -1.28735798            1.10528634  1.91230127  0.36416334
## 151      -1.05957037            1.41400510  1.31706374  0.87658763
## 152       1.66232963           -1.12903457 -1.23113036  1.38024023
## 153      -1.48684468            1.34797950  0.21802303  1.44946373
## 154      -0.08918610            0.75245638 -0.93409710  1.61367018
## 155      -1.83849262            1.01596791  0.31028376  0.83980946
## 156      -1.41400510            1.20442230 -0.23107198  1.41400510
## 157      -1.77352271            1.83849262  0.56275157  1.28735798
## 158      -0.65465430            0.31028376 -2.23555842  1.91230127
## 159       0.00000000            2.42690063 -1.08214564  2.42690063
## 160      -2.23555842            1.91230127 -1.77352271  2.23555842
## 161      -0.47537773            0.12758531  0.23107198  0.95396468
## 162       0.54790615           -0.21802303  0.70271480  0.78667510
## 163      -0.40526982            1.77352271 -1.25874673  1.99828954
## 164       0.07641832            1.17854682 -0.47537773  1.71527720
## 165      -2.80216172            2.80216172  0.00000000  1.48684468
## 166      -1.56855670            0.97421613  0.46117919  0.91459156
## 167      -0.75245638            2.23555842 -0.99487522  2.10223158
## 168       0.23107198            0.25729077  1.01596791  0.76945312
## 169      -0.67050162            0.73567430  1.99828954  0.47537773
## 170      -0.39149488            1.03752256  2.80216172  0.20501110
## 171       0.83980946            0.71909690  0.63896971  1.03752256
## 172       0.85805346           -0.63896971 -0.25729077  1.23113036
## 173      -1.03752256            0.37779383 -0.02545075  0.99487522
## 174      -1.44946373            1.99828954 -1.61367018  2.80216172
## 175       0.08918610           -0.51856960  2.10223158  0.17908874
## 176       2.80216172           -0.50406856 -1.05957037  1.08214564
## 177      -1.31706374            1.31706374  1.77352271  0.71909690
## 178       0.21802303            0.24416040  0.35060018  0.67050162
## 179      -1.61367018            1.38024023 -1.71527720  1.77352271
## 180      -0.57772207            1.25874673 -0.08918610  1.10528634
## 181      -1.25874673            1.61367018 -1.56855670  1.83849262
## 182      -0.46117919            0.95396468 -0.89542793  1.56855670
## 183      -1.66232963            0.21802303 -0.56275157  0.93409710
## 184       1.71527720           -0.89542793 -1.66232963  1.52642702
## 185      -0.63896971            0.99487522  0.27046566  0.97421613
## 186       2.42690063           -0.99487522 -0.37779383  1.01596791
## 187      -1.38024023            1.23113036 -0.21802303  1.12903457
## 188      -1.08214564            1.44946373 -0.29695946  1.20442230
## 189      -1.91230127            1.66232963 -1.17854682  1.34797950
## 190      -1.20442230            1.71527720 -1.01596791  1.25874673
## 191      -1.23113036            2.10223158 -0.91459156  1.31706374
## 192      -1.34797950            1.28735798  0.05091800  0.59282318
## 193       0.67050162            0.16617364 -1.91230127  1.66232963
## 194       0.57772207           -0.59282318 -0.62344075  0.73567430
## 195      -0.97421613            1.48684468 -1.03752256  1.15343724
## 196       0.03818128            1.12903457  0.03818128  0.16617364
## 197      -0.95396468            1.52642702 -0.97421613  1.17854682
```

```
##     Coarseness_vdif.H.PET Contrast_vdif.H.PET Busyness_vdif.H.PET
## 1             -0.11476746         -0.37779383         -0.60806071
## 2             -0.03818128         -0.97421613         -0.89542793
## 3             -0.29695946          1.23113036         -0.27046566
## 4             -0.48967276         -0.57772207          0.67050162
## 5             -0.19203379         -0.87658763         -0.68651916
## 6             -0.36416334          1.48684468         -0.10196844
## 7             -0.07641832         -1.20442230         -0.63896971
## 8             -0.17908874          0.51856960         -0.56275157
## 9              0.11476746         -0.08918610         -1.25874673
## 10             0.06366298         -0.35060018         -1.20442230
## 11            -0.50406856          0.17908874          0.89542793
## 12            -0.32366339          1.20442230         -0.17908874
## 13            -0.27046566         -0.71909690         -0.05091800
## 14             0.19203379          0.08918610         -1.91230127
## 15            -0.40526982         -1.99828954          0.44707302
## 16            -0.08918610          0.82184079         -0.71909690
## 17            -0.45411481          0.12758531          0.53318051
## 18            -0.45411481         -1.03752256          0.59282318
## 19            -0.20501110         -0.47537773         -0.33710120
## 20            -0.16617364         -0.76945312         -0.41912210
## 21            -0.23107198         -0.05091800         -0.31028376
## 22             0.15328619          0.85805346         -1.77352271
## 23            -0.25729077         -0.16617364         -0.21802303
## 24            -0.41912210         -0.24416040          0.43305527
## 25             0.14042416          0.89542793         -1.52642702
## 26            -0.43305527         -0.50406856          0.29695946
## 27             0.16617364         -1.12903457         -1.71527720
## 28            -0.39149488          0.35060018          0.16617364
## 29            -0.14042416          1.66232963         -0.70271480
## 30            -0.24416040         -0.73567430         -0.12758531
## 31            -0.10196844          1.08214564         -0.83980946
## 32            -0.28368767         -0.78667510         -0.08918610
## 33            -0.31028376         -0.48967276          0.00000000
## 34            -0.15328619         -0.93409710         -0.50406856
## 35            -0.21802303         -0.91459156         -0.19203379
## 36            -0.02545075          1.31706374         -1.23113036
## 37            -0.37779383          0.65465430          0.03818128
## 38             0.12758531         -0.46117919         -1.38024023
## 39            -0.35060018          0.14042416          0.12758531
## 40             0.03818128         -0.82184079         -1.10528634
## 41            -0.12758531         -1.77352271         -0.46117919
## 42            -0.06366298         -0.68651916         -0.82184079
## 43            -0.47537773         -0.32366339          0.47537773
## 44            -0.33710120          1.05957037         -0.85805346
## 45             2.23555842         -2.80216172         -2.10223158
## 46             0.57022085         -2.23555842          0.08918610
## 47             0.43305527          2.23555842          0.10196844
## 48             0.39149488         -0.85805346          0.68651916
## 49             0.75245638          0.33710120         -0.99487522
## 50             0.59282318          0.40526982         -0.23107198
## 51             0.53318051          0.23107198         -0.06366298
## 52             0.68651916         -0.36416334         -0.73567430
## 53             0.51856960          0.27046566         -0.24416040
## 54             0.70271480         -1.05957037         -0.78667510
```

```
## 55          0.57022085        -0.27046566        -0.25729077
## 56          0.71909690         1.83849262        -1.05957037
## 57          0.46117919        -0.06366298         0.19203379
## 58          0.54790615        -0.99487522        -0.07641832
## 59          0.50406856         0.83980946        -0.14042416
## 60          0.47537773        -2.10223158         0.24416040
## 61          0.40526982        -0.03818128         0.35060018
## 62          0.41912210         0.76945312         0.25729077
## 63          0.37779383         0.44707302         0.70271480
## 64          0.36416334        -1.08214564         0.78667510
## 65          0.85805346        -1.83849262        -1.17854682
## 66          0.48967276        -0.63896971         0.15328619
## 67          0.65465430         0.68651916        -0.62344075
## 68          0.35060018        -1.56855670         0.82184079
## 69          0.60806071         0.32366339        -0.44707302
## 70          0.76945312        -0.41912210        -1.08214564
## 71          0.87658763        -0.07641832         0.01272434
## 72          0.83980946        -0.43305527         0.05091800
## 73          0.89542793         0.02545075        -0.75245638
## 74          0.82184079         1.25874673        -0.01272434
## 75          0.80413364        -0.95396468         0.51856960
## 76          0.99487522         1.41400510        -1.48684468
## 77          0.97421613         1.99828954        -1.12903457
## 78          0.93409710        -0.51856960        -0.65465430
## 79          0.01272434         0.31028376        -0.51856960
## 80         -0.05091800        -0.10196844         0.36416334
## 81          0.05091800        -0.33710120        -0.36416334
## 82          0.02545075        -0.75245638        -0.02545075
## 83          0.24416040        -1.10528634        -1.61367018
## 84          0.08918610         1.71527720        -0.67050162
## 85          0.10196844         1.10528634        -0.80413364
## 86          0.17908874        -0.44707302        -1.28735798
## 87          0.07641832        -0.89542793        -0.57772207
## 88         -0.01272434         0.00000000         0.20501110
## 89          0.00000000         0.03818128         0.11476746
## 90         -0.76945312        -0.60806071         1.25874673
## 91         -0.80413364        -0.39149488         1.44946373
## 92         -0.78667510        -1.31706374         1.08214564
## 93         -0.54790615        -0.53318051        -0.91459156
## 94         -0.85805346        -0.12758531         1.66232963
## 95         -0.73567430         0.07641832         1.31706374
## 96         -0.87658763        -0.20501110         1.99828954
## 97         -0.75245638        -0.65465430         1.20442230
## 98         -0.83980946        -0.19203379         2.10223158
## 99          0.78667510         0.78667510         0.27046566
## 100        -0.57772207        -1.15343724        -1.99828954
## 101        -0.70271480         1.01596791        -1.01596791
## 102        -0.89542793        -1.34797950         1.05957037
## 103        -0.59282318        -1.25874673         1.12903457
## 104        -0.82184079        -0.11476746         1.71527720
## 105        -0.56275157        -1.23113036         1.15343724
## 106        -0.51856960         0.29695946        -0.16617364
## 107         0.91459156        -1.61367018        -1.34797950
## 108         0.33710120         0.73567430         0.62344075
## 109         0.62344075         0.48967276        -0.87658763
```

```
## 110            0.63896971          1.34797950         -1.15343724
## 111            0.67050162         -0.80413364         -0.95396468
## 112            0.44707302         -1.71527720         -0.40526982
## 113           -0.65465430         -1.28735798          1.10528634
## 114           -0.63896971         -0.01272434          0.17908874
## 115           -0.53318051          1.38024023         -2.23555842
## 116           -0.60806071          1.03752256         -0.97421613
## 117           -0.67050162          0.11476746          0.50406856
## 118           -0.68651916          0.16617364          0.87658763
## 119           -0.62344075         -2.42690063          0.02545075
## 120           -1.77352271         -0.62344075          1.23113036
## 121           -1.91230127         -0.40526982          1.41400510
## 122           -1.83849262         -1.48684468          0.97421613
## 123           -1.28735798         -0.54790615         -1.41400510
## 124           -2.23555842         -0.15328619          1.56855670
## 125           -1.66232963          0.06366298          1.28735798
## 126           -2.42690063         -0.23107198          1.83849262
## 127           -1.71527720         -0.67050162          1.17854682
## 128           -2.10223158         -0.21802303          1.91230127
## 129           -0.93409710          0.75245638          0.21802303
## 130           -1.34797950         -1.17854682         -2.80216172
## 131           -1.61367018          0.97421613         -1.66232963
## 132           -2.80216172         -1.52642702          0.95396468
## 133           -1.38024023         -1.41400510          1.01596791
## 134           -1.99828954         -0.14042416          1.61367018
## 135           -1.31706374         -1.38024023          1.03752256
## 136           -1.25874673          0.28368767         -0.37779383
## 137           -0.91459156         -1.66232963         -2.42690063
## 138           -1.23113036          0.71909690          0.57772207
## 139           -1.12903457          0.47537773         -1.31706374
## 140           -1.10528634          1.28735798         -1.83849262
## 141           -1.05957037         -0.83980946         -1.44946373
## 142           -1.15343724         -1.91230127         -0.59282318
## 143           -1.48684468         -1.44946373          0.99487522
## 144           -1.44946373         -0.02545075          0.07641832
## 145           -1.41400510          0.99487522         -1.56855670
## 146           -1.52642702          0.10196844          0.40526982
## 147           -1.56855670          0.15328619          0.83980946
## 148            1.56855670          1.12903457         -0.43305527
## 149            1.34797950          1.15343724          0.32366339
## 150            1.25874673          0.87658763          0.39149488
## 151            1.44946373          0.43305527         -0.28368767
## 152            1.23113036          0.91459156          0.31028376
## 153            1.48684468         -0.28368767         -0.32366339
## 154            1.31706374          0.50406856          0.28368767
## 155            1.52642702          2.42690063         -0.47537773
## 156            1.12903457          0.60806071          0.63896971
## 157            1.28735798         -0.25729077          0.37779383
## 158            1.20442230          1.56855670          0.33710120
## 159            1.15343724         -1.01596791          0.71909690
## 160            1.08214564          0.62344075          0.75245638
## 161            1.10528634          1.52642702          0.73567430
## 162            1.05957037          1.17854682          0.85805346
## 163            1.03752256         -0.29695946          0.91459156
## 164            1.83849262         -0.70271480         -0.54790615
```

```
## 165            1.17854682          0.20501110          0.60806071
## 166            1.41400510          1.44946373         -0.11476746
## 167            1.01596791         -0.59282318          0.93409710
## 168            1.38024023          0.95396468          0.14042416
## 169            1.61367018          0.39149488         -0.48967276
## 170            1.91230127          0.59282318          0.48967276
## 171            1.77352271          0.37779383          0.54790615
## 172            1.99828954          0.67050162         -0.29695946
## 173            1.71527720          1.77352271          0.46117919
## 174            1.66232963         -0.17908874          0.80413364
## 175            2.80216172          1.91230127         -0.93409710
## 176            2.42690063          2.80216172         -0.53318051
## 177            2.10223158          0.25729077         -0.15328619
## 178            0.25729077          0.93409710          0.06366298
## 179            0.20501110          0.57772207          0.76945312
## 180            0.28368767          0.46117919          0.23107198
## 181            0.27046566          0.05091800          0.41912210
## 182            0.95396468         -0.31028376         -1.03752256
## 183            0.31028376          2.10223158         -0.20501110
## 184            0.32366339          1.61367018         -0.35060018
## 185            0.73567430          0.36416334         -0.76945312
## 186            0.29695946          0.01272434         -0.03818128
## 187            0.21802303          0.63896971          0.65465430
## 188            0.23107198          0.70271480          0.56275157
## 189           -0.99487522          0.21802303          1.48684468
## 190           -1.03752256          0.41912210          1.77352271
## 191           -1.01596791         -0.56275157          1.34797950
## 192           -0.71909690          0.24416040         -0.39149488
## 193           -1.17854682          0.56275157          2.23555842
## 194           -0.95396468          0.80413364          1.52642702
## 195           -1.20442230          0.53318051          2.42690063
## 196           -0.97421613          0.19203379          1.38024023
## 197           -1.08214564          0.54790615          2.80216172
##     Complexity_vdif.H.PET Strength_vdif.H.PET SRE_align.H.PET LRE_align.H.PET
## 1              0.00000000          0.15328619      0.03818128     -0.53318051
## 2              0.29695946          0.44707302      0.48967276     -1.44946373
## 3             -0.12758531          0.32366339     -1.20442230      0.62344075
## 4             -0.24416040         -0.82184079     -0.35060018     -0.10196844
## 5             -0.82184079          1.01596791     -1.56855670      0.80413364
## 6             -0.27046566          0.31028376     -1.71527720      1.15343724
## 7              0.54790615         -0.02545075      0.47537773     -1.52642702
## 8              0.12758531          0.46117919     -0.19203379     -0.27046566
## 9             -0.56275157          0.85805346     -0.31028376     -0.15328619
## 10             0.35060018          0.71909690     -0.05091800     -0.48967276
## 11            -0.33710120         -1.01596791     -0.75245638      0.17908874
## 12            -0.14042416          0.25729077     -1.52642702      0.75245638
## 13             0.51856960         -0.54790615      0.24416040     -0.78667510
## 14             0.11476746          1.99828954     -0.02545075     -0.70271480
## 15             0.23107198         -0.83980946      0.46117919     -1.41400510
## 16             0.50406856          0.53318051     -0.56275157     -0.02545075
## 17            -0.17908874         -0.65465430     -0.91459156      0.63896971
## 18            -0.31028376         -0.76945312     -0.16617364     -0.28368767
## 19             0.44707302         -0.21802303      0.27046566     -0.83980946
## 20            -0.15328619         -0.08918610      0.07641832     -0.60806071
## 21             0.14042416          0.00000000     -0.17908874     -0.31028376
```

```
## 22          0.39149488          1.71527720     -0.11476746     -0.59282318
## 23          0.60806071         -0.31028376      0.23107198     -0.75245638
## 24          0.70271480         -0.70271480      0.20501110     -0.67050162
## 25         -0.16617364          1.44946373     -0.57772207     -0.11476746
## 26         -0.62344075         -0.15328619     -1.28735798      0.78667510
## 27         -0.40526982          1.34797950      0.33710120     -0.99487522
## 28          0.46117919         -0.32366339     -0.54790615      0.02545075
## 29         -0.02545075          0.73567430     -1.17854682      0.43305527
## 30          0.53318051         -0.41912210      0.21802303     -0.71909690
## 31         -0.65465430          0.97421613     -1.12903457      0.40526982
## 32         -0.57772207         -0.11476746     -0.37779383     -0.17908874
## 33          0.28368767         -0.48967276      0.00000000     -0.56275157
## 34         -0.25729077          0.07641832      0.01272434     -0.51856960
## 35          0.31028376         -0.27046566      0.36416334     -0.95396468
## 36         -0.05091800          1.23113036     -0.59282318     -0.14042416
## 37          0.01272434          0.01272434     -0.73567430      0.08918610
## 38          0.47537773          1.03752256      0.37779383     -1.15343724
## 39          0.15328619         -0.40526982     -0.43305527     -0.05091800
## 40          0.57772207          0.23107198      0.51856960     -1.91230127
## 41          0.25729077         -0.05091800      0.54790615     -1.99828954
## 42          0.40526982          0.19203379      0.29695946     -0.85805346
## 43         -0.83980946         -0.37779383     -1.61367018      1.12903457
## 44         -0.67050162          0.95396468     -1.15343724      0.39149488
## 45         -2.80216172          2.80216172     -2.10223158      1.61367018
## 46         -0.78667510         -0.56275157      0.39149488     -0.68651916
## 47          0.10196844          0.33710120     -1.99828954      1.66232963
## 48         -0.11476746         -0.87658763      0.02545075     -0.39149488
## 49          0.82184079          0.51856960      0.57772207     -1.08214564
## 50          0.43305527         -0.07641832     -0.12758531     -0.12758531
## 51          0.68651916         -0.28368767      0.25729077     -0.54790615
## 52          0.62344075          0.17908874      0.43305527     -0.80413364
## 53         -0.76945312          0.40526982     -1.25874673      0.85805346
## 54          0.32366339          0.37779383      0.50406856     -0.89542793
## 55         -0.47537773          0.08918610     -0.33710120      0.01272434
## 56          0.36416334          1.17854682     -0.65465430      0.03818128
## 57          0.02545075         -0.35060018     -0.15328619     -0.16617364
## 58          0.37779383         -0.60806071      0.44707302     -0.82184079
## 59         -0.75245638          0.27046566     -1.48684468      0.93409710
## 60         -0.32366339         -0.78667510      0.40526982     -0.73567430
## 61         -0.53318051         -0.59282318     -0.62344075      0.16617364
## 62         -0.08918610         -0.20501110     -0.82184079      0.27046566
## 63          0.05091800         -0.63896971     -0.39149488      0.00000000
## 64         -0.46117919         -0.93409710     -0.08918610     -0.29695946
## 65         -0.21802303          0.68651916      0.56275157     -1.17854682
## 66          0.21802303         -0.62344075      0.15328619     -0.44707302
## 67          0.33710120          0.47537773     -0.46117919     -0.03818128
## 68         -0.37779383         -1.17854682      0.31028376     -0.65465430
## 69          0.20501110          0.36416334     -0.10196844     -0.21802303
## 70          0.85805346          0.48967276      0.65465430     -1.61367018
## 71          0.76945312         -0.33710120      0.53318051     -0.87658763
## 72          0.17908874         -0.17908874     -0.06366298     -0.32366339
## 73         -0.48967276          0.82184079     -0.71909690      0.10196844
## 74          0.03818128          0.06366298     -0.99487522      0.59282318
## 75         -0.54790615         -0.71909690     -0.25729077     -0.06366298
## 76          0.73567430          1.91230127      0.06366298     -0.36416334
```

```
## 77          -0.23107198          1.61367018     -1.66232963      0.70271480
## 78           0.67050162          0.16617364      0.60806071     -1.20442230
## 79           0.19203379          0.35060018     -0.20501110     -0.23107198
## 80          -0.50406856         -0.53318051     -0.76945312      0.19203379
## 81           0.41912210         -0.16617364      0.14042416     -0.62344075
## 82          -0.44707302         -0.29695946     -0.27046566     -0.20501110
## 83          -0.39149488          1.38024023      0.35060018     -0.93409710
## 84          -0.01272434          0.75245638     -1.10528634      0.44707302
## 85          -0.63896971          0.99487522     -1.08214564      0.41912210
## 86           0.48967276          1.05957037      0.41912210     -1.10528634
## 87          -0.51856960          0.50406856     -0.63896971      0.05091800
## 88           0.08918610         -0.43305527     -0.07641832     -0.40526982
## 89           0.16617364         -0.36416334     -0.14042416     -0.37779383
## 90          -1.41400510         -1.12903457     -0.21802303     -0.50406856
## 91          -1.48684468         -1.56855670     -0.23107198     -0.47537773
## 92          -1.17854682         -1.31706374      0.08918610     -1.03752256
## 93           0.65465430          0.14042416      0.32366339     -1.56855670
## 94          -1.91230127         -1.83849262     -0.97421613      0.20501110
## 95          -2.23555842         -0.95396468     -0.60806071     -0.01272434
## 96          -1.61367018         -2.23555842     -0.50406856     -0.25729077
## 97          -1.05957037         -1.05957037      0.28368767     -1.66232963
## 98          -1.56855670         -2.10223158     -0.47537773     -0.24416040
## 99          -0.07641832         -0.19203379     -0.78667510      0.28368767
## 100         -0.41912210          1.31706374      0.10196844     -1.12903457
## 101         -0.70271480          0.91459156     -1.38024023      0.33710120
## 102         -1.20442230         -1.34797950      0.05091800     -1.05957037
## 103         -1.12903457         -1.25874673      0.16617364     -0.97421613
## 104         -1.83849262         -1.77352271     -0.95396468      0.21802303
## 105         -1.10528634         -1.23113036      0.19203379     -0.91459156
## 106         -0.91459156          0.43305527     -2.42690063      2.80216172
## 107         -0.28368767          0.67050162      0.59282318     -1.25874673
## 108         -0.85805346         -0.50406856     -1.91230127      0.15328619
## 109         -0.59282318          0.59282318     -0.80413364      0.24416040
## 110         -0.03818128          1.25874673     -0.53318051     -0.08918610
## 111          0.59282318          0.24416040      0.62344075     -1.71527720
## 112          0.27046566         -0.03818128      0.63896971     -1.77352271
## 113         -1.15343724         -1.28735798      0.12758531     -1.01596791
## 114          0.07641832         -0.44707302     -0.28368767     -0.43305527
## 115          0.71909690          1.83849262     -0.32366339     -0.41912210
## 116         -0.68651916          0.93409710     -1.31706374      0.36416334
## 117         -0.19203379         -0.67050162     -1.01596791      0.60806071
## 118         -0.35060018         -1.03752256     -0.89542793      0.12758531
## 119         -0.80413364         -0.57772207     -0.03818128     -0.76945312
## 120         -1.44946373         -1.15343724     -0.67050162     -0.63896971
## 121         -1.52642702         -1.61367018     -0.68651916     -0.57772207
## 122         -1.31706374         -1.48684468     -0.48967276     -1.34797950
## 123          0.63896971          0.12758531     -0.24416040     -2.10223158
## 124         -2.10223158         -1.99828954     -1.41400510      0.11476746
## 125         -2.42690063         -0.97421613     -0.93409710     -0.07641832
## 126         -1.71527720         -2.80216172     -0.85805346     -0.35060018
## 127         -1.08214564         -1.10528634     -0.29695946     -2.23555842
## 128         -1.66232963         -2.42690063     -0.83980946     -0.33710120
## 129         -0.10196844         -0.23107198     -1.03752256      0.25729077
## 130         -0.43305527          1.28735798     -0.44707302     -1.48684468
## 131         -0.73567430          0.87658763     -1.83849262      0.29695946
```

```
## 132          -1.34797950         -1.52642702     -0.51856960     -1.38024023
## 133          -1.25874673         -1.41400510     -0.40526982     -1.28735798
## 134          -1.99828954         -1.91230127     -1.34797950      0.14042416
## 135          -1.23113036         -1.38024023     -0.36416334     -1.23113036
## 136          -0.93409710          0.41912210     -2.80216172      2.42690063
## 137          -0.29695946          0.65465430     -0.01272434     -1.83849262
## 138          -0.87658763         -0.51856960     -2.23555842      0.07641832
## 139          -0.60806071          0.57772207     -1.05957037      0.23107198
## 140          -0.06366298          1.20442230     -0.87658763     -0.19203379
## 141           0.56275157          0.21802303      0.11476746     -2.42690063
## 142           0.24416040         -0.06366298      0.17908874     -2.80216172
## 143          -1.28735798         -1.44946373     -0.41912210     -1.31706374
## 144           0.06366298         -0.46117919     -0.70271480     -0.46117919
## 145          -0.71909690          0.89542793     -1.77352271      0.31028376
## 146          -0.20501110         -0.68651916     -1.44946373      0.54790615
## 147          -0.36416334         -1.08214564     -1.23113036      0.06366298
## 148           2.42690063          1.15343724      2.23555842      0.50406856
## 149           1.66232963          0.39149488      1.17854682      1.20442230
## 150           1.99828954          0.11476746      1.44946373      0.76945312
## 151           1.77352271          0.63896971      1.77352271      0.67050162
## 152           0.75245638          0.83980946      0.70271480      2.10223158
## 153           1.44946373          0.80413364      1.91230127      0.56275157
## 154           0.95396468          0.56275157      0.99487522      1.34797950
## 155           1.52642702          1.77352271      0.83980946      1.38024023
## 156           1.17854682          0.03818128      1.12903457      1.17854682
## 157           1.56855670         -0.14042416      1.83849262      0.65465430
## 158           0.78667510          0.70271480      0.68651916      2.23555842
## 159           1.05957037         -0.47537773      1.66232963      0.68651916
## 160           0.87658763         -0.12758531      0.87658763      1.48684468
## 161           1.12903457          0.20501110      0.78667510      1.71527720
## 162           1.23113036         -0.25729077      0.97421613      1.31706374
## 163           0.97421613         -0.73567430      1.23113036      0.99487522
## 164           1.10528634          1.41400510      2.10223158      0.47537773
## 165           1.41400510         -0.24416040      1.41400510      0.87658763
## 166           1.48684468          1.08214564      0.95396468      1.25874673
## 167           1.03752256         -0.89542793      1.52642702      0.71909690
## 168           1.38024023          0.78667510      1.20442230      1.08214564
## 169           2.80216172          1.10528634      2.80216172      0.35060018
## 170           2.23555842          0.05091800      1.99828954      0.57772207
## 171           1.31706374          0.28368767      1.28735798      0.97421613
## 172           0.93409710          1.52642702      0.82184079      1.44946373
## 173           1.20442230          0.54790615      0.75245638      1.91230127
## 174           0.83980946         -0.39149488      1.03752256      1.23113036
## 175           2.10223158          2.42690063      1.31706374      0.95396468
## 176           1.08214564          2.23555842      0.67050162      1.99828954
## 177           1.91230127          0.62344075      2.42690063      0.46117919
## 178           1.34797950          0.76945312      1.10528634      1.05957037
## 179           0.91459156         -0.10196844      0.80413364      1.52642702
## 180           1.61367018          0.29695946      1.38024023      0.73567430
## 181           0.99487522          0.10196844      1.01596791      1.10528634
## 182           1.01596791          2.10223158      1.61367018      0.53318051
## 183           1.15343724          1.48684468      0.71909690      1.83849262
## 184           0.80413364          1.56855670      0.73567430      1.77352271
## 185           1.71527720          1.66232963      1.71527720      0.48967276
## 186           0.89542793          1.12903457      0.85805346      1.41400510
```

```
## 187            1.25874673         -0.01272434      1.25874673      0.89542793
## 188            1.28735798          0.02545075      1.15343724      0.91459156
## 189           -0.97421613         -0.85805346      1.08214564      0.82184079
## 190           -0.99487522         -0.99487522      1.05957037      0.83980946
## 191           -0.95396468         -0.91459156      1.34797950      0.51856960
## 192            1.83849262          0.60806071      1.56855670      0.37779383
## 193           -1.38024023         -1.20442230      0.76945312      1.56855670
## 194           -1.77352271         -0.75245638      0.89542793      1.28735798
## 195           -1.03752256         -1.71527720      0.91459156      1.01596791
## 196           -0.89542793         -0.80413364      1.48684468      0.32366339
## 197           -1.01596791         -1.66232963      0.93409710      1.03752256
##     RLNU_align.H.PET RP_align.H.PET LGRE_align.H.PET HGRE_align.H.PET
## 1        -0.32366339     0.01272434      -0.24416040      -0.47537773
## 2        -0.50406856     0.48967276      -0.21802303      -0.78667510
## 3        -0.70271480    -1.34797950      -0.32366339       0.12758531
## 4         0.93409710    -0.44707302      -0.02545075      -0.41912210
## 5        -1.05957037    -1.61367018      -0.48967276       0.63896971
## 6        -0.89542793    -1.83849262      -0.43305527       0.54790615
## 7        -0.08918610     0.50406856       0.20501110      -1.25874673
## 8        -0.63896971    -0.21802303      -0.33710120       0.00000000
## 9        -0.87658763    -0.37779383      -0.17908874      -0.29695946
## 10       -0.99487522    -0.06366298      -0.29695946      -0.14042416
## 11        1.66232963    -0.83980946      -0.05091800      -0.31028376
## 12       -0.71909690    -1.56855670      -0.35060018       0.35060018
## 13        0.48967276     0.24416040       0.16617364      -1.31706374
## 14       -2.23555842     0.05091800      -0.41912210       0.27046566
## 15        1.31706374     0.47537773       0.19203379      -2.42690063
## 16       -0.91459156    -0.57772207      -0.20501110       0.07641832
## 17        0.62344075    -0.76945312      -0.15328619      -0.23107198
## 18        0.87658763    -0.23107198      -0.14042416      -0.62344075
## 19        0.14042416     0.28368767      -0.06366298      -0.68651916
## 20        0.08918610     0.03818128      -0.07641832      -1.03752256
## 21       -0.20501110    -0.19203379      -0.25729077      -0.15328619
## 22       -1.91230127    -0.03818128      -0.36416334       0.14042416
## 23        0.16617364     0.21802303      -0.08918610      -0.82184079
## 24        0.67050162     0.16617364      -0.11476746      -0.60806071
## 25       -1.56855670    -0.54790615      -0.23107198       0.08918610
## 26       -0.21802303    -1.48684468      -0.47537773       0.53318051
## 27       -1.23113036     0.35060018      -0.31028376      -0.17908874
## 28        0.06366298    -0.60806071      -0.19203379      -0.07641832
## 29       -1.48684468    -1.10528634      -0.37779383       0.50406856
## 30        0.28368767     0.17908874       0.15328619      -0.97421613
## 31       -1.15343724    -1.12903457      -0.44707302       0.43305527
## 32        0.15328619    -0.47537773      -0.28368767      -0.35060018
## 33        0.37779383    -0.01272434       0.08918610      -0.75245638
## 34       -0.19203379     0.00000000      -0.27046566      -0.44707302
## 35        0.19203379     0.36416334      -0.12758531      -0.80413364
## 36       -1.77352271    -0.56275157      -0.46117919       0.47537773
## 37       -0.35060018    -0.73567430      -0.39149488       0.25729077
## 38       -1.03752256     0.41912210      -0.16617364      -0.28368767
## 39        0.25729077    -0.53318051       0.03818128      -0.54790615
## 40       -0.37779383     0.53318051       0.06366298      -1.20442230
## 41       -0.03818128     0.57772207      -0.10196844      -1.12903457
## 42       -0.33710120     0.29695946       0.02545075      -1.08214564
## 43        0.12758531    -1.77352271      -0.40526982       0.32366339
```

```
## 44       -1.20442230    -1.17854682      -0.50406856       0.41912210
## 45       -2.10223158    -1.91230127       0.39149488       1.44946373
## 46        0.78667510     0.31028376       0.70271480      -2.10223158
## 47       -1.08214564    -1.99828954       0.41912210       0.57772207
## 48        1.34797950    -0.05091800       0.71909690      -1.28735798
## 49       -0.75245638     0.54790615       0.67050162      -0.59282318
## 50       -0.10196844    -0.24416040       0.60806071      -0.56275157
## 51        0.05091800     0.19203379       0.57772207      -0.46117919
## 52       -0.44707302     0.40526982       0.73567430      -0.95396468
## 53       -0.65465430    -1.25874673       0.40526982       0.56275157
## 54       -0.48967276     0.46117919       1.01596791      -0.70271480
## 55       -0.27046566    -0.46117919       0.50406856      -0.05091800
## 56       -1.61367018    -0.59282318       0.48967276       0.23107198
## 57        0.21802303    -0.28368767       0.54790615      -0.12758531
## 58        0.54790615     0.44707302       0.99487522      -1.91230127
## 59       -0.60806071    -1.52642702       0.43305527       0.28368767
## 60        0.95396468     0.33710120       0.95396468      -2.80216172
## 61        0.53318051    -0.70271480       0.59282318      -0.21802303
## 62       -0.15328619    -0.91459156       0.46117919       0.20501110
## 63        0.40526982    -0.48967276       0.44707302       0.15328619
## 64        1.71527720    -0.11476746       0.65465430      -0.73567430
## 65       -0.73567430     0.56275157       0.56275157      -0.93409710
## 66        0.63896971     0.02545075       0.97421613      -1.05957037
## 67       -0.85805346    -0.41912210       0.51856960      -0.01272434
## 68        2.23555842     0.27046566       0.78667510      -1.99828954
## 69       -0.54790615    -0.14042416       0.47537773      -0.02545075
## 70       -0.82184079     0.63896971       0.62344075      -0.76945312
## 71        0.17908874     0.51856960       0.89542793      -0.53318051
## 72       -0.06366298    -0.07641832       0.87658763      -0.06366298
## 73       -1.10528634    -0.71909690       0.80413364       0.24416040
## 74       -0.51856960    -1.01596791       0.85805346       0.06366298
## 75        0.89542793    -0.39149488       0.91459156      -0.67050162
## 76       -2.42690063     0.11476746       0.82184079       0.31028376
## 77       -1.99828954    -1.44946373       0.76945312       0.62344075
## 78       -0.40526982     0.60806071       0.93409710      -0.83980946
## 79       -0.56275157    -0.29695946      -0.03818128      -0.03818128
## 80        0.39149488    -0.82184079       0.07641832      -0.08918610
## 81        0.00000000     0.06366298       0.17908874      -0.71909690
## 82        0.24416040    -0.33710120       0.12758531      -0.43305527
## 83       -1.17854682     0.37779383       0.05091800      -0.16617364
## 84       -1.44946373    -1.03752256       0.01272434       0.51856960
## 85       -1.12903457    -1.08214564      -0.01272434       0.44707302
## 86       -1.01596791     0.43305527       0.11476746      -0.27046566
## 87       -0.83980946    -0.68651916       0.00000000       0.33710120
## 88        0.33710120    -0.08918610       0.10196844      -0.48967276
## 89        0.23107198    -0.16617364       0.14042416      -0.57772207
## 90        0.57772207    -0.17908874      -0.71909690      -0.99487522
## 91        0.75245638    -0.20501110      -0.70271480      -0.63896971
## 92        1.17854682     0.10196844      -0.59282318      -1.52642702
## 93       -0.41912210     0.39149488      -0.56275157      -0.85805346
## 94        0.46117919    -0.99487522      -0.89542793       0.03818128
## 95       -0.46117919    -0.62344075      -0.85805346       0.17908874
## 96        1.44946373    -0.51856960      -0.80413364      -0.37779383
## 97        0.36416334     0.32366339      -0.68651916      -0.89542793
## 98        1.48684468    -0.50406856      -0.76945312      -0.36416334
```

```
## 99       -0.14042416    -0.87658763       0.83980946       0.21802303
## 100      -1.31706374     0.14042416      -0.82184079      -0.19203379
## 101      -1.28735798    -1.31706374      -0.87658763       0.39149488
## 102       1.15343724     0.07641832      -0.65465430      -1.56855670
## 103       1.23113036     0.15328619      -0.54790615      -1.44946373
## 104       0.47537773    -0.97421613      -0.83980946       0.05091800
## 105       1.25874673     0.20501110      -0.53318051      -1.41400510
## 106      -0.95396468    -2.42690063      -0.51856960       0.60806071
## 107      -0.57772207     0.59282318       0.68651916      -1.34797950
## 108       0.03818128    -2.10223158       0.37779383       0.11476746
## 109      -0.76945312    -0.85805346       0.75245638      -0.10196844
## 110      -1.71527720    -0.43305527       0.36416334       0.48967276
## 111      -0.36416334     0.62344075       0.63896971      -1.17854682
## 112      -0.02545075     0.65465430       0.53318051      -1.10528634
## 113       1.20442230     0.12758531      -0.57772207      -1.48684468
## 114       0.32366339    -0.25729077      -0.67050162      -0.50406856
## 115      -2.80216172    -0.15328619      -0.73567430       0.29695946
## 116      -1.25874673    -1.28735798      -0.75245638       0.40526982
## 117       0.60806071    -0.89542793      -0.63896971      -0.24416040
## 118       1.61367018    -0.95396468      -0.62344075      -0.32366339
## 119       0.76945312    -0.02545075      -0.60806071      -2.23555842
## 120       0.56275157    -0.63896971      -1.71527720      -1.01596791
## 121       0.73567430    -0.65465430      -1.66232963      -0.65465430
## 122       1.05957037    -0.36416334      -1.41400510      -1.77352271
## 123      -0.43305527    -0.10196844      -1.34797950      -0.87658763
## 124       0.43305527    -1.41400510      -2.80216172       0.01272434
## 125      -0.47537773    -0.93409710      -2.23555842       0.16617364
## 126       1.38024023    -0.80413364      -1.91230127      -0.40526982
## 127       0.35060018    -0.12758531      -1.61367018      -0.91459156
## 128       1.41400510    -0.78667510      -1.83849262      -0.39149488
## 129      -0.16617364    -1.15343724      -1.01596791       0.19203379
## 130      -1.41400510    -0.32366339      -1.99828954      -0.20501110
## 131      -1.38024023    -1.71527720      -2.42690063       0.36416334
## 132       1.03752256    -0.40526982      -1.52642702      -1.83849262
## 133       1.10528634    -0.31028376      -1.31706374      -1.66232963
## 134       0.44707302    -1.38024023      -2.10223158       0.02545075
## 135       1.12903457    -0.27046566      -1.28735798      -1.61367018
## 136      -0.97421613    -2.80216172      -1.25874673       0.59282318
## 137      -0.59282318     0.08918610      -1.10528634      -1.38024023
## 138       0.02545075    -2.23555842      -1.20442230       0.10196844
## 139      -0.78667510    -1.05957037      -1.05957037      -0.11476746
## 140      -1.83849262    -0.75245638      -1.23113036       0.46117919
## 141      -0.39149488     0.23107198      -1.12903457      -1.23113036
## 142      -0.05091800     0.25729077      -1.15343724      -1.15343724
## 143       1.08214564    -0.35060018      -1.38024023      -1.71527720
## 144       0.31028376    -0.67050162      -1.56855670      -0.51856960
## 145      -1.34797950    -1.66232963      -1.77352271       0.37779383
## 146       0.59282318    -1.20442230      -1.48684468      -0.25729077
## 147       1.56855670    -1.23113036      -1.44946373      -0.33710120
## 148      -0.25729077     2.10223158       1.44946373       0.95396468
## 149       0.29695946     1.10528634       1.34797950       0.99487522
## 150       0.51856960     1.44946373       1.28735798       1.05957037
## 151       0.07641832     1.71527720       1.48684468       0.75245638
## 152      -0.23107198     0.70271480       1.03752256       2.42690063
## 153      -0.01272434     1.91230127       2.80216172       0.89542793
```

```
## 154       0.20501110     0.97421613       1.17854682       1.31706374
## 155      -0.93409710     0.89542793       1.15343724       1.71527720
## 156       0.68651916     1.08214564       1.23113036       1.23113036
## 157       0.99487522     1.83849262       2.42690063       0.68651916
## 158      -0.17908874     0.67050162       1.05957037       1.83849262
## 159       1.83849262     1.56855670       2.10223158       0.65465430
## 160       0.97421613     0.83980946       1.31706374       1.17854682
## 161       0.27046566     0.78667510       1.10528634       1.66232963
## 162       0.85805346     0.95396468       1.08214564       1.56855670
## 163       2.42690063     1.23113036       1.41400510       0.85805346
## 164      -0.24416040     2.23555842       1.25874673       0.76945312
## 165       1.28735798     1.31706374       2.23555842       0.71909690
## 166      -0.31028376     0.99487522       1.20442230       1.41400510
## 167       2.80216172     1.48684468       1.56855670       0.67050162
## 168      -0.11476746     1.20442230       1.12903457       1.38024023
## 169      -0.28368767     2.80216172       1.38024023       0.83980946
## 170       0.65465430     1.99828954       1.83849262       1.01596791
## 171       0.41912210     1.28735798       1.77352271       1.28735798
## 172      -0.62344075     0.82184079       1.61367018       1.77352271
## 173      -0.07641832     0.75245638       1.71527720       1.52642702
## 174       1.77352271     1.01596791       1.91230127       0.91459156
## 175      -1.66232963     1.41400510       1.66232963       1.91230127
## 176      -1.52642702     0.68651916       1.52642702       2.80216172
## 177       0.11476746     2.42690063       1.99828954       0.82184079
## 178      -0.12758531     1.05957037       0.21802303       1.34797950
## 179       0.83980946     0.80413364       0.28368767       1.25874673
## 180       0.50406856     1.34797950       0.35060018       0.87658763
## 181       0.71909690     1.03752256       0.32366339       1.08214564
## 182      -0.68651916     1.61367018       0.27046566       1.20442230
## 183      -0.80413364     0.73567430       0.25729077       2.23555842
## 184      -0.67050162     0.71909690       0.23107198       2.10223158
## 185      -0.53318051     1.77352271       0.31028376       1.15343724
## 186      -0.29695946     0.85805346       0.24416040       1.99828954
## 187       0.80413364     1.25874673       0.29695946       1.03752256
## 188       0.70271480     1.17854682       0.33710120       0.97421613
## 189       1.01596791     1.15343724      -0.97421613       0.73567430
## 190       1.52642702     1.12903457      -0.95396468       0.93409710
## 191       1.91230127     1.38024023      -0.91459156       0.70271480
## 192       0.10196844     1.66232963      -0.78667510       0.80413364
## 193       0.91459156     0.76945312      -1.17854682       1.48684468
## 194       0.01272434     0.87658763      -1.08214564       1.61367018
## 195       1.99828954     0.91459156      -1.03752256       1.10528634
## 196       0.82184079     1.52642702      -0.93409710       0.78667510
## 197       2.10223158     0.93409710      -0.99487522       1.12903457
##     LGSRE_align.H.PET HGSRE_align.H.PET LGHRE_align.H.PET HGLRE_align.H.PET
## 1         -0.21802303       -0.32366339       -0.23107198       -0.59282318
## 2         -0.19203379       -0.05091800       -0.28368767       -1.77352271
## 3         -0.33710120       -1.41400510       -0.33710120        0.99487522
## 4         -0.06366298       -0.67050162        0.03818128       -0.19203379
## 5         -0.48967276        0.63896971       -0.44707302        1.25874673
## 6         -0.46117919        0.10196844       -0.32366339        1.38024023
## 7          0.20501110       -0.51856960        0.20501110       -1.66232963
## 8         -0.32366339        0.43305527       -0.41912210       -0.23107198
## 9         -0.17908874       -0.41912210       -0.12758531       -0.14042416
## 10        -0.29695946        0.06366298       -0.36416334       -0.56275157
```

```
## 11        -0.11476746       -1.52642702        0.06366298        0.15328619
## 12        -0.37779383       -0.19203379       -0.29695946        1.05957037
## 13         0.15328619       -1.12903457        0.17908874       -0.73567430
## 14        -0.40526982        0.57772207       -0.50406856       -0.37779383
## 15         0.19203379       -1.08214564        0.19203379       -1.41400510
## 16        -0.23107198        0.14042416       -0.21802303       -0.01272434
## 17        -0.16617364       -1.66232963        0.10196844        0.50406856
## 18        -0.14042416       -0.60806071       -0.03181537       -0.47537773
## 19        -0.03818128       -0.23107198       -0.08918610       -0.76945312
## 20        -0.05091800       -1.05957037       -0.07641832       -0.62344075
## 21        -0.25729077       -0.11476746       -0.27046566       -0.28368767
## 22        -0.35060018        0.48967276       -0.47537773       -0.31028376
## 23        -0.07641832       -0.54790615       -0.11476746       -0.65465430
## 24        -0.10196844       -0.20501110       -0.14042416       -0.67050162
## 25        -0.24416040        0.11476746       -0.19203379       -0.03818128
## 26        -0.47537773        0.50406856       -0.37779383        0.87658763
## 27        -0.31028376        0.32366339       -0.39149488       -1.20442230
## 28        -0.20501110       -0.29695946       -0.15328619       -0.05091800
## 29        -0.39149488        0.37779383       -0.35060018        0.75245638
## 30         0.16617364       -0.68651916        0.16617364       -0.68651916
## 31        -0.44707302        0.24416040       -0.43305527        0.67050162
## 32        -0.28368767       -0.63896971       -0.25729077       -0.24416040
## 33         0.08918610       -0.65465430        0.07641832       -0.60806071
## 34        -0.27046566       -0.07641832       -0.31028376       -0.70271480
## 35        -0.12758531       -0.17908874       -0.17908874       -1.12903457
## 36        -0.43305527        0.54790615       -0.48967276        0.05091800
## 37        -0.36416334        0.40526982       -0.40526982        0.17908874
## 38        -0.15328619        0.15328619       -0.24416040       -0.89542793
## 39         0.02545075       -1.31706374        0.05091800       -0.11476746
## 40         0.06366298       -0.46117919        0.00000000       -1.99828954
## 41        -0.08918610       -0.25729077       -0.16617364       -2.42690063
## 42         0.03818128       -0.75245638       -0.05091800       -0.78667510
## 43        -0.41912210       -0.12758531       -0.20501110        1.10528634
## 44        -0.50406856        0.23107198       -0.51856960        0.65465430
## 45         0.39149488        0.65465430        0.36416334        2.80216172
## 46         0.70271480       -1.01596791        0.73567430       -1.28735798
## 47         0.41912210       -1.99828954        0.53318051        1.83849262
## 48         0.73567430       -1.48684468        0.76945312       -0.46117919
## 49         0.67050162       -0.08918610        0.60806071       -0.80413364
## 50         0.60806071       -1.25874673        0.63118620       -0.10196844
## 51         0.59282318       -0.21802303        0.57772207       -0.57772207
## 52         0.75245638       -0.70271480        0.68651916       -0.75245638
## 53         0.40526982        0.44707302        0.40526982        1.03752256
## 54         1.01596791       -0.10196844        1.01596791       -1.15343724
## 55         0.50406856        0.12758531        0.46117919       -0.12758531
## 56         0.47537773        0.07641832        0.43305527        0.19203379
## 57         0.54790615       -0.31028376        0.56275157       -0.15328619
## 58         0.99487522       -1.15343724        0.97421613       -0.82184079
## 59         0.43305527       -0.99487522        0.51856960        1.15343724
## 60         0.95396468       -1.38024023        0.93409710       -0.83980946
## 61         0.57772207       -1.23113036        0.70271480        0.02545075
## 62         0.44707302       -0.01272434        0.47537773        0.44707302
## 63         0.46117919        0.41912210        0.39149488       -0.02545075
## 64         0.62344075       -0.76945312        0.67050162       -0.48967276
## 65         0.56275157       -0.28368767        0.50406856       -1.83849262
```

```
## 66          0.97421613       -1.34797950        0.95396468       -0.44707302
## 67          0.51856960        0.08918610        0.48967276       -0.08918610
## 68          0.78667510       -1.28735798        0.80413364       -0.71909690
## 69          0.48967276        0.36416334        0.41912210       -0.16617364
## 70          0.65465430       -0.06366298        0.54790615       -1.71527720
## 71          0.89542793       -0.03818128        0.87658763       -0.85805346
## 72          0.87658763        0.27046566        0.82184079       -0.43305527
## 73          0.80413364        0.28368767        0.75245638        0.21802303
## 74          0.85805346       -1.44946373        0.85805346        0.89542793
## 75          0.91459156       -1.10528634        0.99487522       -0.25729077
## 76          0.83980946        0.60806071        0.71909690       -0.20501110
## 77          0.76945312        0.62344075        0.78667510        1.01596791
## 78          0.93409710       -0.14042416        0.89542793       -1.44946373
## 79         -0.02545075        0.35060018       -0.10196844       -0.17908874
## 80          0.07641832       -0.62344075        0.12758531        0.01272434
## 81          0.17908874       -0.53318051        0.14042416       -0.63896971
## 82          0.12758531       -0.43305527        0.15328619       -0.29695946
## 83          0.05091800        0.33710120       -0.01272434       -1.17854682
## 84          0.01272434        0.39149488        0.01272434        0.76945312
## 85         -0.01272434        0.25729077       -0.03181537        0.68651916
## 86          0.11476746        0.16617364        0.02545075       -0.87658763
## 87          0.00000000        0.51856960       -0.06366298        0.00000000
## 88          0.10196844       -0.56275157        0.08918610       -0.39149488
## 89          0.14042416       -0.97421613        0.11476746       -0.27046566
## 90         -0.73567430       -1.17854682       -0.71909690       -0.50406856
## 91         -0.70271480       -0.48967276       -0.68651916       -0.53318051
## 92         -0.59282318       -0.83980946       -0.60806071       -0.97421613
## 93         -0.56275157       -0.15328619       -0.57772207       -1.48684468
## 94         -0.89542793        0.03818128       -0.89542793        0.10196844
## 95         -0.85805346        0.47537773       -0.87658763       -0.06366298
## 96         -0.82184079       -0.37779383       -0.80413364       -0.33710120
## 97         -0.68651916       -0.33710120       -0.73567430       -1.34797950
## 98         -0.76945312       -0.36416334       -0.70271480       -0.32366339
## 99          0.82184079        0.00000000        0.83980946        0.46117919
## 100        -0.80413364        0.31028376       -0.83980946       -1.23113036
## 101        -0.87658763        0.20501110       -0.85805346        0.62344075
## 102        -0.67050162       -0.85805346       -0.65465430       -0.99487522
## 103        -0.54790615       -0.80413364       -0.54790615       -0.93409710
## 104        -0.83980946        0.05091800       -0.82184079        0.11476746
## 105        -0.53318051       -0.78667510       -0.53318051       -0.91459156
## 106        -0.51856960       -2.10223158       -0.46117919        2.42690063
## 107         0.68651916       -0.71909690        0.65465430       -1.56855670
## 108         0.37779383       -2.42690063        0.63118620        1.71527720
## 109         0.71909690       -1.83849262        0.91459156        0.31028376
## 110         0.36416334        0.56275157        0.31028376        0.06366298
## 111         0.63896971       -0.44707302        0.59282318       -1.91230127
## 112         0.53318051       -0.24416040        0.44707302       -2.23555842
## 113        -0.57772207       -0.82184079       -0.56275157       -0.95396468
## 114        -0.65465430       -0.57772207       -0.67050162       -0.40526982
## 115        -0.71909690        0.59282318       -0.76945312       -0.21802303
## 116        -0.75245638        0.21802303       -0.75245638        0.63896971
## 117        -0.63896971       -1.71527720       -0.59282318        0.48967276
## 118        -0.62344075       -1.56855670       -0.62344075        0.14042416
## 119        -0.60806071       -1.03752256       -0.63896971       -1.31706374
## 120        -1.71527720       -1.20442230       -1.71527720       -0.51856960
```

```
## 121       -1.66232963       -0.50406856       -1.61367018       -0.54790615
## 122       -1.41400510       -0.93409710       -1.44946373       -1.08214564
## 123       -1.34797950       -0.16617364       -1.38024023       -1.52642702
## 124       -2.80216172        0.01272434       -2.80216172        0.07641832
## 125       -2.23555842        0.46117919       -2.42690063       -0.07641832
## 126       -1.99828954       -0.40526982       -1.91230127       -0.36416334
## 127       -1.61367018       -0.35060018       -1.77352271       -1.38024023
## 128       -1.83849262       -0.39149488       -1.66232963       -0.35060018
## 129       -1.01596791       -0.02545075       -1.05957037        0.43305527
## 130       -1.91230127        0.29695946       -2.10223158       -1.25874673
## 131       -2.42690063        0.17908874       -2.23555842        0.59282318
## 132       -1.56855670       -0.95396468       -1.52642702       -1.10528634
## 133       -1.31706374       -0.89542793       -1.31706374       -1.03752256
## 134       -2.10223158        0.02545075       -1.99828954        0.08918610
## 135       -1.28735798       -0.87658763       -1.28735798       -1.01596791
## 136       -1.25874673       -2.23555842       -1.25874673        2.23555842
## 137       -1.10528634       -0.73567430       -1.10528634       -1.61367018
## 138       -1.20442230       -2.80216172       -1.12903457        1.66232963
## 139       -1.05957037       -1.91230127       -1.03752256        0.29695946
## 140       -1.23113036        0.53318051       -1.23113036        0.03818128
## 141       -1.12903457       -0.47537773       -1.17854682       -2.10223158
## 142       -1.15343724       -0.27046566       -1.20442230       -2.80216172
## 143       -1.38024023       -0.91459156       -1.34797950       -1.05957037
## 144       -1.52642702       -0.59282318       -1.56855670       -0.41912210
## 145       -1.77352271        0.19203379       -1.83849262        0.60806071
## 146       -1.48684468       -1.77352271       -1.41400510        0.47537773
## 147       -1.44946373       -1.61367018       -1.48684468        0.12758531
## 148        1.44946373        1.23113036        1.34797950        0.39149488
## 149        1.34797950        0.73567430        1.38024023        1.12903457
## 150        1.31706374        1.12903457        1.31706374        0.53318051
## 151        1.48684468        0.89542793        1.44946373        0.40526982
## 152        1.03752256        1.99828954        1.05957037        1.99828954
## 153        2.80216172        1.20442230        2.80216172        0.28368767
## 154        1.17854682        1.44946373        1.12903457        1.08214564
## 155        1.12903457        1.38024023        1.10528634        1.44946373
## 156        1.23113036        1.08214564        1.28735798        0.97421613
## 157        2.42690063        0.78667510        2.23555842        0.37779383
## 158        1.05957037        0.82184079        1.23113036        2.10223158
## 159        2.10223158        0.68651916        1.99828954        0.36416334
## 160        1.28735798        0.75245638        1.48684468        1.34797950
## 161        1.08214564        1.31706374        1.15343724        1.52642702
## 162        1.10528634        1.91230127        1.03752256        1.23113036
## 163        1.38024023        0.87658763        1.41400510        0.57772207
## 164        1.25874673        1.10528634        1.20442230        0.16617364
## 165        2.23555842        0.70271480        2.10223158        0.70271480
## 166        1.20442230        1.41400510        1.17854682        1.17854682
## 167        1.56855670        0.71909690        1.66232963        0.41912210
## 168        1.15343724        1.77352271        1.08214564        0.95396468
## 169        1.41400510        1.25874673        1.25874673        0.20501110
## 170        1.83849262        1.28735798        1.83849262        0.35060018
## 171        1.77352271        1.56855670        1.71527720        0.71909690
## 172        1.61367018        1.61367018        1.56855670        1.48684468
## 173        1.71527720        0.67050162        1.77352271        1.77352271
## 174        1.91230127        0.80413364        2.42690063        0.85805346
## 175        1.66232963        2.42690063        1.52642702        0.91459156
```

```
## 176        1.52642702        2.80216172        1.61367018        1.91230127
## 177        1.99828954        1.17854682        1.91230127        0.24416040
## 178        0.21802303        1.71527720        0.21802303        0.93409710
## 179        0.28368767        0.91459156        0.33710120        1.31706374
## 180        0.35060018        0.95396468        0.35060018        0.51856960
## 181        0.32366339        0.99487522        0.37779383        0.82184079
## 182        0.27046566        1.66232963        0.25729077        0.27046566
## 183        0.25729077        1.83849262        0.27046566        1.61367018
## 184        0.23107198        1.52642702        0.24416040        1.56855670
## 185        0.31028376        1.48684468        0.28368767        0.33710120
## 186        0.24416040        2.23555842        0.23107198        1.28735798
## 187        0.29695946        0.93409710        0.29695946        0.73567430
## 188        0.33710120        0.83980946        0.32366339        0.83980946
## 189       -0.97421613        0.76945312       -0.97421613        0.56275157
## 190       -0.95396468        0.97421613       -0.93409710        0.54790615
## 191       -0.91459156        0.85805346       -0.91459156        0.32366339
## 192       -0.78667510        1.15343724       -0.78667510        0.23107198
## 193       -1.17854682        1.34797950       -1.15343724        1.41400510
## 194       -1.08214564        2.10223158       -1.08214564        1.20442230
## 195       -1.03752256        1.01596791       -1.01596791        0.78667510
## 196       -0.93409710        1.05957037       -0.99487522        0.25729077
## 197       -0.99487522        1.03752256       -0.95396468        0.80413364
##     GLNU_norm_align.H.PET RLNU_norm_align.H.PET GLVAR_align.H.PET
## 1             -0.39149488            0.00000000       -0.41912210
## 2             -0.63896971            0.53318051       -0.53318051
## 3              0.73567430           -1.31706374       -0.70271480
## 4             -0.48967276           -0.44707302        0.14042416
## 5              1.44946373           -1.56855670       -2.42690063
## 6              1.10528634           -1.83849262       -1.20442230
## 7             -1.08214564            0.51856960        0.16617364
## 8              0.20501110           -0.33710120       -0.95396468
## 9             -0.21802303           -0.37779383       -0.24416040
## 10            -0.07641832           -0.06366298       -0.59282318
## 11            -0.20501110           -0.85805346        0.47537773
## 12             0.80413364           -1.52642702       -0.76945312
## 13            -1.05957037            0.21802303        0.48967276
## 14             0.65465430           -0.05091800       -1.83849262
## 15            -1.25874673            0.50406856        0.23107198
## 16             0.19203379           -0.62344075       -0.25729077
## 17            -0.14042416           -0.67050162       -0.10196844
## 18            -0.59282318           -0.31028376       -0.39149488
## 19            -0.67050162            0.25729077        0.15328619
## 20            -0.70271480            0.02545075        0.00000000
## 21            -0.11476746           -0.29695946       -0.50406856
## 22             0.41912210           -0.17908874       -1.12903457
## 23            -0.73567430            0.19203379        0.17908874
## 24            -0.46117919            0.11476746       -0.14042416
## 25             0.23107198           -0.63896971       -0.33710120
## 26             0.85805346           -1.44946373       -1.91230127
## 27            -0.25729077            0.32366339       -0.65465430
## 28             0.00000000           -0.59282318        0.01272434
## 29             0.93409710           -1.23113036       -0.82184079
## 30            -0.93409710            0.14042416        0.50406856
## 31             1.03752256           -1.25874673       -1.48684468
## 32            -0.16617364           -0.47537773       -0.62344075
```

```
## 33          -0.75245638          -0.03818128        0.43305527
## 34          -0.41912210          -0.01272434       -0.56275157
## 35          -0.76945312           0.35060018       -0.20501110
## 36           0.95396468          -0.65465430       -1.38024023
## 37           0.57772207          -0.78667510       -1.17854682
## 38          -0.29695946           0.36416334       -0.44707302
## 39          -0.43305527          -0.51856960        0.51856960
## 40          -1.12903457           0.57772207        0.31028376
## 41          -0.91459156           0.60806071       -0.28368767
## 42          -0.82184079           0.29695946        0.28368767
## 43           0.53318051          -1.66232963       -1.23113036
## 44           1.01596791          -1.28735798       -1.52642702
## 45           2.42690063          -1.91230127       -2.80216172
## 46          -1.17854682           0.27046566       -0.15328619
## 47           1.34797950          -1.99828954       -0.60806071
## 48          -0.68651916          -0.07641832        0.33710120
## 49          -0.33710120           0.54790615        0.07641832
## 50          -0.12758531          -0.32366339        0.21802303
## 51          -0.28368767           0.08918610       -0.19203379
## 52          -0.60806071           0.31028376        0.40526982
## 53           1.12903457          -1.34797950       -1.99828954
## 54          -0.47537773           0.46117919       -0.17908874
## 55           0.12758531          -0.46117919       -0.78667510
## 56           0.68651916          -0.75245638       -0.47537773
## 57          -0.03818128          -0.36416334       -0.40526982
## 58          -0.95396468           0.39149488        0.68651916
## 59           0.83980946          -1.48684468       -1.05957037
## 60          -1.15343724           0.28368767        0.41912210
## 61          -0.08918610          -0.76945312        0.08918610
## 62           0.51856960          -0.93409710       -0.89542793
## 63           0.40526982          -0.54790615       -0.93409710
## 64          -0.51856960          -0.24416040       -0.21802303
## 65          -0.54790615           0.48967276       -0.51856960
## 66          -0.71909690          -0.02545075        0.71909690
## 67           0.25729077          -0.56275157       -0.46117919
## 68          -0.89542793           0.15328619        0.24416040
## 69           0.21802303          -0.25729077       -0.83980946
## 70          -0.53318051           0.65465430       -0.02545075
## 71          -0.35060018           0.47537773       -0.01272434
## 72           0.06366298          -0.19203379       -0.57772207
## 73           0.70271480          -0.83980946       -1.31706374
## 74           0.71909690          -1.03752256       -0.75245638
## 75          -0.40526982          -0.40526982        0.06366298
## 76           0.62344075           0.01272434       -1.08214564
## 77           1.31706374          -1.61367018       -1.15343724
## 78          -0.57772207           0.59282318        0.05091800
## 79           0.14042416          -0.35060018       -0.85805346
## 80           0.01272434          -0.87658763       -0.48967276
## 81          -0.56275157           0.03818128        0.10196844
## 82          -0.36416334          -0.39149488       -0.23107198
## 83          -0.23107198           0.33710120       -0.63896971
## 84           0.97421613          -1.17854682       -0.80413364
## 85           1.05957037          -1.20442230       -1.44946373
## 86          -0.24416040           0.40526982       -0.43305527
## 87           0.47537773          -0.71909690       -1.77352271
```

```
## 88          -0.31028376          -0.14042416       -0.35060018
## 89          -0.32366339          -0.28368767       -0.03818128
## 90          -1.03752256          -0.21802303        0.27046566
## 91          -0.85805346          -0.23107198        0.20501110
## 92          -1.48684468           0.12758531        0.62344075
## 93          -0.97421613           0.43305527        0.03818128
## 94           0.08918610          -1.01596791       -0.99487522
## 95           0.33710120          -0.60806071       -1.25874673
## 96          -0.65465430          -0.43305527       -0.06366298
## 97          -1.20442230           0.44707302        0.12758531
## 98          -0.62344075          -0.41912210       -0.05091800
## 99           0.54790615          -0.89542793       -0.87658763
## 100         -0.44707302           0.16617364       -0.67050162
## 101          0.89542793          -1.41400510       -1.61367018
## 102         -1.52642702           0.10196844        0.60806071
## 103         -1.38024023           0.20501110        0.65465430
## 104          0.10196844          -0.99487522       -0.97421613
## 105         -1.34797950           0.23107198        0.67050162
## 106          1.28735798          -2.42690063       -2.10223158
## 107         -0.99487522           0.56275157        0.36416334
## 108          0.75245638          -2.10223158       -0.71909690
## 109          0.07641832          -0.91459156        0.39149488
## 110          1.08214564          -0.57772207       -1.34797950
## 111         -0.87658763           0.62344075        0.32366339
## 112         -0.78667510           0.63896971       -0.27046566
## 113         -1.44946373           0.17908874        0.63896971
## 114         -0.50406856          -0.27046566       -0.36416334
## 115          0.37779383          -0.20501110       -1.10528634
## 116          0.91459156          -1.38024023       -1.56855670
## 117         -0.27046566          -0.73567430       -0.11476746
## 118         -0.37779383          -0.95396468        0.46117919
## 119         -1.56855670           0.05091800       -0.16617364
## 120         -1.83849262          -0.48967276        0.25729077
## 121         -1.61367018          -0.50406856        0.19203379
## 122         -2.42690063          -0.15328619        0.54790615
## 123         -1.71527720           0.06366298        0.02545075
## 124         -0.10196844          -1.15343724       -1.03752256
## 125          0.05091800          -0.82184079       -1.28735798
## 126         -1.31706374          -0.70271480       -0.08918610
## 127         -1.91230127           0.07641832        0.11476746
## 128         -1.28735798          -0.68651916       -0.07641832
## 129          0.29695946          -1.05957037       -0.91459156
## 130         -1.10528634          -0.12758531       -0.68651916
## 131          0.63896971          -1.77352271       -1.71527720
## 132         -2.80216172          -0.16617364        0.53318051
## 133         -2.10223158          -0.10196844        0.57772207
## 134         -0.05091800          -1.12903457       -1.01596791
## 135         -1.99828954          -0.08918610        0.59282318
## 136          1.15343724          -2.80216172       -2.23555842
## 137         -1.77352271           0.24416040        0.35060018
## 138          0.39149488          -2.23555842       -0.73567430
## 139         -0.17908874          -1.08214564        0.37779383
## 140          0.78667510          -0.80413364       -1.41400510
## 141         -1.66232963           0.37779383        0.29695946
## 142         -1.41400510           0.41912210       -0.29695946
```

```
## 143          -2.23555842          -0.11476746        0.56275157
## 144          -1.23113036          -0.53318051       -0.37779383
## 145           0.67050162          -1.71527720       -1.66232963
## 146          -0.83980946          -0.97421613       -0.12758531
## 147          -1.01596791          -1.10528634        0.44707302
## 148           0.46117919           2.23555842        1.52642702
## 149           0.76945312           1.10528634        1.77352271
## 150           0.56275157           1.41400510        1.20442230
## 151           0.17908874           1.56855670        1.99828954
## 152           2.23555842           0.70271480       -0.54790615
## 153           0.35060018           1.91230127        1.23113036
## 154           1.23113036           0.95396468        0.91459156
## 155           1.71527720           0.85805346        1.03752256
## 156           0.87658763           1.05957037        1.10528634
## 157          -0.01272434           1.66232963        2.42690063
## 158           1.91230127           0.68651916        0.78667510
## 159          -0.15328619           1.52642702        2.10223158
## 160           0.82184079           0.83980946        1.56855670
## 161           1.61367018           0.78667510        0.83980946
## 162           1.52642702           0.93409710        0.82184079
## 163           0.32366339           1.17854682        1.17854682
## 164           0.28368767           2.10223158        0.99487522
## 165           0.11476746           1.31706374        2.80216172
## 166           1.41400510           0.91459156        1.05957037
## 167           0.02545075           1.48684468        1.83849262
## 168           1.38024023           1.15343724        0.87658763
## 169           0.31028376           2.80216172        1.34797950
## 170           0.44707302           1.99828954        1.38024023
## 171           1.17854682           1.25874673        0.97421613
## 172           1.77352271           0.82184079        0.70271480
## 173           1.83849262           0.75245638        0.93409710
## 174           0.36416334           1.01596791        1.48684468
## 175           1.66232963           1.34797950        0.76945312
## 176           2.80216172           0.67050162        0.75245638
## 177           0.24416040           2.42690063        1.44946373
## 178           1.25874673           1.08214564        0.85805346
## 179           0.99487522           0.80413364        1.01596791
## 180           0.27046566           1.38024023        1.61367018
## 181           0.43305527           1.03752256        1.15343724
## 182           0.60806071           1.61367018        0.95396468
## 183           1.99828954           0.73567430        0.89542793
## 184           2.10223158           0.71909690       -0.31028376
## 185           0.59282318           1.71527720        1.08214564
## 186           1.56855670           0.87658763       -0.32366339
## 187           0.50406856           1.28735798        1.12903457
## 188           0.48967276           1.12903457        1.31706374
## 189          -0.06366298           1.23113036        1.91230127
## 190           0.03818128           1.20442230        1.71527720
## 191          -0.80413364           1.44946373        2.23555842
## 192          -0.02545075           1.77352271        1.41400510
## 193           1.20442230           0.76945312        0.80413364
## 194           1.48684468           0.89542793        0.73567430
## 195           0.15328619           0.97421613        1.25874673
## 196          -0.19203379           1.83849262        1.66232963
## 197           0.16617364           0.99487522        1.28735798
```

```
##     RLVAR_align.H.PET Entropy_align.H.PET  SZSE.H.PET  LZSE.H.PET LGLZE.H.PET
## 1         -0.48967276         -0.27046566 -0.27046566 -0.14042416 -0.23107198
## 2         -1.25874673         -0.10196844  0.71909690 -2.80216172 -0.21802303
## 3          1.05957037         -1.12903457 -0.99487522  0.91459156 -0.32366339
## 4          0.10196844          0.16617364 -0.48967276  0.82184079 -0.07641832
## 5          1.17854682         -1.71527720 -1.20442230  1.12903457 -0.48967276
## 6          1.44946373         -1.15343724 -1.23113036  1.48684468 -0.40526982
## 7         -1.34797950          0.37779383  0.54790615 -1.77352271  0.20501110
## 8         -0.12758531         -1.03752256 -0.10196844 -0.27046566 -0.33710120
## 9          0.06366298         -0.43305527 -0.93409710  0.51856960 -0.19203379
## 10        -0.41912210         -0.65465430  0.02545075  0.78667510 -0.29695946
## 11         0.48967276         -0.06366298 -0.63896971  0.39149488  0.00000000
## 12         1.15343724         -0.99487522 -1.31706374  0.97421613 -0.35060018
## 13        -0.75245638          0.39149488  0.07641832 -0.50406856  0.19203379
## 14        -0.83980946         -1.77352271  0.21802303 -0.95396468 -0.43305527
## 15        -1.23113036          0.46117919  0.56275157  0.89542793  0.15328619
## 16         0.03818128         -0.93409710 -0.73567430 -1.41400510 -0.16617364
## 17         1.01596791         -0.29695946 -2.23555842  1.44946373 -0.12758531
## 18        -0.07641832          0.21802303 -0.21802303 -0.10196844 -0.14042416
## 19        -0.82184079         -0.05091800 -0.02545075  0.35060018 -0.08918610
## 20        -0.56275157          0.07641832 -0.23107198 -0.53318051 -0.05091800
## 21        -0.19203379         -0.56275157 -0.31028376 -0.08918610 -0.25729077
## 22        -0.73567430         -1.66232963 -0.16617364 -1.03752256 -0.36416334
## 23        -0.70271480         -0.01272434  0.10196844 -0.24416040 -0.02545075
## 24        -0.60806071         -0.23107198  0.06366298 -0.75245638 -0.10196844
## 25        -0.10196844         -1.05957037 -0.75245638 -0.36416334 -0.24416040
## 26         1.23113036         -0.78667510 -0.87658763  1.77352271 -0.47537773
## 27        -0.97421613         -0.48967276  0.57772207 -0.68651916 -0.31028376
## 28         0.24416040         -0.57772207 -0.35060018  0.50406856 -0.17908874
## 29         0.76945312         -1.31706374 -1.28735798  0.53318051 -0.37779383
## 30        -0.62344075          0.33710120  0.03818128 -0.47537773  0.16617364
## 31         0.71909690         -1.38024023 -1.56855670 -0.41912210 -0.41912210
## 32         0.01272434         -0.21802303 -0.44707302  0.31028376 -0.27046566
## 33        -0.50406856          0.15328619  0.23107198 -0.89542793  0.10196844
## 34        -0.46117919         -0.15328619 -0.11476746 -0.51856960 -0.28368767
## 35        -0.93409710          0.10196844  0.53318051 -1.15343724 -0.15328619
## 36        -0.11476746         -2.23555842 -0.57772207 -0.20501110 -0.46117919
## 37         0.36416334         -1.23113036 -1.05957037  0.68651916 -0.39149488
## 38        -1.10528634         -0.62344075  0.37779383 -1.99828954 -0.20501110
## 39         0.17908874          0.00000000 -0.20501110  0.16617364  0.03818128
## 40        -1.48684468          0.25729077  0.19203379 -1.01596791  0.06366298
## 41        -1.56855670          0.31028376  0.67050162 -2.23555842 -0.11476746
## 42        -0.87658763          0.11476746  0.14042416 -0.83980946  0.05091800
## 43         1.48684468         -0.54790615 -1.34797950  2.23555842 -0.44707302
## 44         0.70271480         -1.41400510 -1.61367018 -0.43305527 -0.50406856
## 45         1.71527720         -2.80216172 -1.48684468  2.10223158  0.39149488
## 46        -0.57772207          0.65465430  0.36416334 -0.57772207  0.68651916
## 47         1.77352271         -1.20442230 -1.01596791 -0.48967276  0.43305527
## 48        -0.21802303          0.36416334  0.16617364 -0.60806071  0.71909690
## 49        -0.89542793         -0.51856960  0.12758531 -0.78667510  0.65465430
## 50         0.15328619         -0.40526982 -0.36416334  0.29695946  0.59282318
## 51        -0.43305527         -0.33710120  0.20501110 -0.87658763  0.57772207
## 52        -0.68651916          0.06366298  0.48967276 -1.08214564  0.73567430
## 53         1.20442230         -1.17854682 -1.91230127  1.52642702  0.40526982
## 54        -0.85805346          0.12758531  0.51856960 -1.38024023  1.01596791
```

```
## 55         0.25729077         -0.67050162 -0.60806071  0.48967276  0.47537773
## 56         0.07641832         -1.61367018 -1.41400510 -1.12903457  0.50406856
## 57         0.11476746         -0.37779383 -0.33710120  0.24416040  0.56275157
## 58        -0.71909690          0.43305527  0.25729077 -0.76945312  0.97421613
## 59         1.31706374         -0.80413364 -1.44946373  1.66232963  0.46117919
## 60        -0.63896971          0.62344075  0.35060018 -0.35060018  0.95396468
## 61         0.53318051         -0.07641832 -0.40526982  1.01596791  0.62344075
## 62         0.87658763         -0.89542793 -0.95396468  1.05957037  0.44707302
## 63         0.21802303         -0.97421613 -0.59282318  0.67050162  0.41912210
## 64        -0.16617364          0.27046566 -0.17908874 -0.07641832  0.60806071
## 65        -1.08214564          0.17908874  0.63896971 -1.91230127  0.54790615
## 66        -0.33710120          0.35060018  0.05091800  0.14042416  0.99487522
## 67         0.05091800         -0.87658763 -0.76945312 -0.23107198  0.53318051
## 68        -0.51856960          0.44707302  0.28368767 -0.73567430  0.78667510
## 69         0.00000000         -0.82184079 -0.46117919  0.28368767  0.48967276
## 70        -1.28735798         -0.19203379  0.60806071 -1.10528634  0.63896971
## 71        -0.78667510         -0.24416040  0.43305527 -0.82184079  0.89542793
## 72        -0.20501110         -0.63896971 -0.06366298  0.03818128  0.83980946
## 73         0.35060018         -1.08214564  0.00000000 -0.85805346  0.80413364
## 74         1.10528634         -1.01596791 -1.17854682 -0.56275157  0.85805346
## 75         0.14042416          0.28368767 -0.24416040 -0.05091800  0.91459156
## 76        -0.29695946         -1.91230127 -0.71909690  0.33710120  0.76945312
## 77         0.93409710         -1.83849262 -1.83849262 -0.97421613  0.75245638
## 78        -0.99487522          0.03818128  0.62344075 -1.17854682  0.93409710
## 79        -0.05091800         -0.83980946 -0.54790615  0.27046566 -0.03818128
## 80         0.47537773         -0.25729077 -0.65465430  0.57772207  0.07641832
## 81        -0.54790615         -0.03818128 -0.01272434 -0.46117919  0.17908874
## 82        -0.01272434         -0.02545075 -0.37779383  0.25729077  0.12758531
## 83        -0.95396468         -0.46117919  0.59282318 -0.67050162  0.02545075
## 84         0.80413364         -1.28735798 -1.25874673 -0.80413364  0.01272434
## 85         0.73567430         -1.34797950 -1.52642702  1.28735798 -0.01272434
## 86        -1.03752256         -0.60806071  0.41912210  1.34797950  0.08918610
## 87         0.37779383         -0.91459156 -0.41912210 -0.65465430 -0.06366298
## 88        -0.27046566         -0.31028376 -0.43305527  0.20501110  0.11476746
## 89        -0.25729077         -0.28368767 -0.32366339  0.07641832  0.14042416
## 90        -0.53318051          0.20501110 -0.25729077 -0.62344075 -0.71909690
## 91        -0.44707302          0.08918610 -0.19203379 -0.29695946 -0.70271480
## 92        -1.17854682          0.56275157  0.29695946 -1.31706374 -0.59282318
## 93        -1.44946373          0.01272434  0.39149488 -1.20442230 -0.56275157
## 94         0.43305527         -0.70271480 -0.83980946  0.63896971 -0.89542793
## 95         0.16617364         -1.10528634 -0.68651916  0.11476746 -0.85805346
## 96        -0.15328619         -0.14042416 -0.29695946  0.00000000 -0.80413364
## 97        -1.52642702          0.14042416  0.50406856  0.87658763 -0.68651916
## 98        -0.14042416         -0.12758531 -0.28368767  0.01272434 -0.76945312
## 99         0.89542793         -0.85805346 -0.91459156  1.08214564  0.82184079
## 100       -1.31706374         -0.50406856  0.44707302 -0.70271480 -0.82184079
## 101        0.63896971         -1.48684468 -1.77352271  1.23113036 -0.87658763
## 102       -1.20442230          0.54790615  0.27046566 -1.34797950 -0.67050162
## 103       -1.05957037          0.59282318  0.32366339 -1.25874673 -0.54790615
## 104        0.46117919         -0.68651916 -0.82184079  0.65465430 -0.83980946
## 105       -1.01596791          0.60806071  0.33710120 -1.23113036 -0.53318051
## 106        2.80216172         -0.75245638 -0.97421613  2.80216172 -0.51856960
## 107       -1.15343724          0.41912210  0.68651916 -1.71527720  0.70271480
## 108        2.10223158         -0.36416334 -1.38024023  1.99828954  0.36416334
## 109        0.51856960         -0.44707302 -0.89542793 -0.91459156  0.87658763
```

```
## 110       -0.06366298         -1.99828954 -0.47537773 -0.19203379  0.35060018
## 111       -1.38024023          0.29695946  0.24416040 -0.99487522  0.67050162
## 112       -1.41400510          0.32366339  0.70271480 -2.10223158  0.51856960
## 113       -1.12903457          0.57772207  0.31028376 -1.28735798 -0.57772207
## 114       -0.36416334         -0.35060018 -0.56275157  0.19203379 -0.65465430
## 115       -0.47537773         -2.10223158 -0.78667510  0.32366339 -0.75245638
## 116        0.65465430         -1.44946373 -1.71527720  1.25874673 -0.73567430
## 117        0.95396468         -0.32366339 -2.42690063  1.41400510 -0.63896971
## 118        0.41912210         -0.08918610 -0.70271480  0.37779383 -0.62344075
## 119       -0.76945312          0.63896971  0.17908874 -0.59282318 -0.60806071
## 120       -0.91459156          0.19203379 -0.50406856 -0.63896971 -1.71527720
## 121       -0.80413364          0.02545075 -0.39149488 -0.31028376 -1.66232963
## 122       -1.83849262          0.48967276 -0.08918610 -1.61367018 -1.41400510
## 123       -2.42690063         -0.11476746  0.08918610 -1.44946373 -1.34797950
## 124        0.31028376         -0.73567430 -1.08214564  0.60806071 -2.80216172
## 125       -0.02545075         -1.25874673 -0.80413364  0.10196844 -2.23555842
## 126       -0.39149488         -0.20501110 -0.53318051 -0.02545075 -1.91230127
## 127       -2.80216172          0.05091800  0.15328619  0.83980946 -1.61367018
## 128       -0.37779383         -0.17908874 -0.51856960 -0.01272434 -1.83849262
## 129        0.75245638         -0.95396468 -1.12903457  1.03752256 -1.03752256
## 130       -1.99828954         -0.59282318  0.11476746 -0.71909690 -1.99828954
## 131        0.54790615         -1.56855670 -2.10223158  1.17854682 -2.42690063
## 132       -1.91230127          0.47537773 -0.12758531 -1.66232963 -1.56855670
## 133       -1.66232963          0.51856960 -0.05091800 -1.52642702 -1.31706374
## 134        0.32366339         -0.71909690 -1.03752256  0.62344075 -2.10223158
## 135       -1.61367018          0.53318051  0.01272434 -1.48684468 -1.28735798
## 136        2.42690063         -0.76945312 -1.15343724  2.42690063 -1.25874673
## 137       -1.77352271          0.40526982  0.40526982 -1.83849262 -1.08214564
## 138        1.99828954         -0.47537773 -1.66232963  1.91230127 -1.20442230
## 139        0.33710120         -0.53318051 -1.10528634 -0.93409710 -1.01596791
## 140       -0.32366339         -2.42690063 -0.62344075 -0.21802303 -1.23113036
## 141       -2.10223158          0.23107198 -0.14042416 -1.05957037 -1.12903457
## 142       -2.23555842          0.24416040  0.46117919 -2.42690063 -1.15343724
## 143       -1.71527720          0.50406856 -0.07641832 -1.56855670 -1.38024023
## 144       -0.65465430         -0.41912210 -0.67050162  0.17908874 -1.52642702
## 145        0.57772207         -1.52642702 -1.99828954  1.20442230 -1.77352271
## 146        0.82184079         -0.39149488 -2.80216172  1.38024023 -1.48684468
## 147        0.29695946         -0.16617364 -0.85805346  0.36416334 -1.44946373
## 148       -0.17908874          1.03752256  1.41400510 -0.11476746  1.44946373
## 149        0.99487522          1.08214564  1.05957037  0.76945312  1.31706374
## 150        0.28368767          1.12903457  1.44946373 -0.17908874  1.28735798
## 151        0.08918610          1.52642702  1.83849262 -0.28368767  1.48684468
## 152        1.91230127          0.75245638 -0.15328619  1.71527720  1.03752256
## 153       -0.08918610          1.61367018  1.99828954 -0.44707302  2.80216172
## 154        1.12903457          0.97421613  0.89542793  0.85805346  1.12903457
## 155        0.85805346          0.70271480  0.73567430 -0.33710120  1.17854682
## 156        0.91459156          1.10528634  1.08214564  0.70271480  1.25874673
## 157        0.02545075          2.10223158  1.48684468 -0.06366298  2.23555842
## 158        2.23555842          0.93409710  0.65465430  1.83849262  1.10528634
## 159        0.12758531          2.80216172  1.61367018  0.15328619  2.10223158
## 160        1.41400510          1.34797950  1.01596791  1.15343724  1.38024023
## 161        1.61367018          0.85805346  0.78667510  1.31706374  1.08214564
## 162        1.08214564          0.82184079  0.91459156  0.99487522  1.05957037
## 163        0.59282318          1.83849262  1.25874673  0.40526982  1.34797950
## 164       -0.31028376          1.71527720  2.80216172 -0.54790615  1.23113036
```

```
## 165        0.39149488          1.99828954  1.38024023  0.56275157  2.42690063
## 166        0.83980946          0.87658763  0.82184079  0.23107198  1.20442230
## 167        0.23107198          2.23555842  1.52642702 -0.03818128  1.61367018
## 168        0.78667510          0.91459156  0.95396468  0.75245638  1.15343724
## 169       -0.40526982          1.25874673  2.23555842 -0.32366339  1.41400510
## 170       -0.03818128          1.23113036  1.77352271 -0.15328619  1.83849262
## 171        0.56275157          0.99487522  1.28735798  0.46117919  1.71527720
## 172        1.25874673          0.78667510  1.34797950 -0.16617364  1.66232963
## 173        1.83849262          0.80413364  0.76945312  0.08918610  1.77352271
## 174        0.97421613          1.91230127  1.20442230  0.41912210  1.91230127
## 175        0.40526982          0.67050162  0.83980946  0.80413364  1.56855670
## 176        1.66232963          0.68651916 -0.03818128 -0.25729077  1.52642702
## 177       -0.24416040          1.48684468  2.42690063 -0.37779383  1.99828954
## 178        0.67050162          0.89542793  0.93409710  0.73567430  0.23107198
## 179        1.38024023          1.20442230  0.87658763  0.93409710  0.28368767
## 180        0.19203379          1.38024023  1.31706374  0.12758531  0.37779383
## 181        0.68651916          1.41400510  1.03752256  0.71909690  0.32366339
## 182       -0.23107198          1.05957037  2.10223158  0.02545075  0.27046566
## 183        1.56855670          0.73567430  0.75245638 -0.12758531  0.25729077
## 184        1.52642702          0.71909690  0.47537773  1.56855670  0.24416040
## 185       -0.28368767          1.01596791  1.71527720  1.61367018  0.29695946
## 186        1.28735798          0.83980946  0.99487522  0.05091800  0.21802303
## 187        0.44707302          1.15343724  0.97421613  0.59282318  0.31028376
## 188        0.50406856          1.17854682  1.10528634  0.47537773  0.33710120
## 189        0.20501110          1.77352271  1.17854682  0.06366298 -0.97421613
## 190        0.27046566          1.56855670  1.23113036  0.21802303 -0.95396468
## 191       -0.35060018          2.42690063  1.56855670 -0.40526982 -0.91459156
## 192       -0.59282318          1.44946373  1.66232963 -0.39149488 -0.78667510
## 193        1.34797950          0.95396468  0.80413364  0.95396468 -1.17854682
## 194        1.03752256          0.76945312  0.85805346  0.54790615 -1.10528634
## 195        0.60806071          1.28735798  1.12903457  0.43305527 -1.05957037
## 196       -0.67050162          1.66232963  1.91230127  1.10528634 -0.93409710
## 197        0.62344075          1.31706374  1.15343724  0.44707302 -0.99487522
##     HGLZE.H.PET SZLGE.H.PET SZHGE.H.PET LZLGE.H.PET LZHGE.H.PET GLNU_area.H.PET
## 1    0.12758531 -0.21802303 -0.02545075 -0.37779383 -0.28368767     -0.46117919
## 2   -0.65465430 -0.16617364  0.36416334 -0.70271480 -1.99828954     -0.59282318
## 3    0.00000000 -0.33710120 -1.31706374  0.01272434  0.93409710     -0.23107198
## 4    0.59282318 -0.12758531 -0.62344075  0.70271480  0.59282318      1.12903457
## 5    0.68651916 -0.48967276  0.46117919  0.54790615  1.01596791     -0.60806071
## 6    0.39149488 -0.43305527 -0.95396468  1.17854682  1.41400510     -0.47537773
## 7   -1.05957037  0.20501110  0.06366298 -0.40526982 -1.71527720     -0.40526982
## 8   -0.12758531 -0.31028376  0.35060018 -0.62344075 -0.48967276     -0.37779383
## 9    0.11476746 -0.20501110 -1.41400510  0.37779383  0.37779383     -1.48684468
## 10   0.62344075 -0.28368767  0.31028376 -0.41912210 -0.40526982     -1.44946373
## 11  -0.75245638 -0.08918610 -1.15343724  0.19203379  0.29695946      1.91230127
## 12   0.14042416 -0.36416334 -1.23113036  0.51856960  0.78667510     -0.36416334
## 13  -2.10223158  0.19203379 -1.08214564 -0.32366339 -0.35060018      0.23107198
## 14   0.24416040 -0.35060018  0.73567430 -0.76945312 -0.85805346     -1.99828954
## 15   0.29695946  0.15328619 -0.33710120 -0.31028376 -1.23113036      0.93409710
## 16  -0.25729077 -0.19203379 -0.48967276 -0.35060018  0.24416040     -0.71909690
## 17   0.33710120 -0.39149488 -2.23555842  1.56855670  1.31706374      0.17908874
## 18   0.48967276 -0.14042416 -0.36416334 -0.29695946 -0.29695946      1.15343724
## 19  -0.54790615 -0.10196844  0.10196844 -0.47537773 -0.71909690     -0.03818128
## 20   0.54790615 -0.07641832 -0.63896971 -0.48967276 -0.46117919     -0.12758531
## 21   0.08918610 -0.24416040 -0.35060018 -0.43305527 -0.15328619     -0.14042416
```

```
## 22  -0.28368767 -0.32366339  0.11476746 -0.78667510 -0.68651916     -1.52642702
## 23  -1.91230127 -0.03818128 -0.89542793 -0.36416334 -0.11476746     -0.01272434
## 24  -0.57772207 -0.06366298 -0.16617364 -0.53318051 -0.70271480      0.65465430
## 25  -0.14042416 -0.23107198 -1.12903457 -0.01272434 -0.08918610     -1.34797950
## 26   0.56275157 -0.47537773  0.43305527  1.83849262  1.56855670     -0.07641832
## 27  -0.17908874 -0.29695946  0.70271480 -0.56275157 -1.38024023     -1.71527720
## 28  -0.39149488 -0.17908874 -0.57772207  0.08918610  0.44707302      0.25729077
## 29   0.40526982 -0.40526982 -0.67050162 -0.33710120  0.53318051     -0.78667510
## 30  -0.97421613  0.16617364 -0.47537773 -0.14042416 -0.47537773      0.05091800
## 31  -0.02545075 -0.44707302 -1.52642702  1.05957037  1.20442230     -1.17854682
## 32   0.41912210 -0.25729077 -0.60806071 -0.08918610  0.17908874      0.20501110
## 33  -0.80413364  0.10196844 -0.27046566 -0.50406856 -0.80413364      0.44707302
## 34  -0.29695946 -0.27046566  0.19203379 -0.51856960 -0.76945312     -0.35060018
## 35  -0.56275157 -0.11476746  0.25729077 -0.60806071 -1.48684468      0.12758531
## 36   0.46117919 -0.41912210  0.51856960 -0.71909690 -0.17908874     -0.97421613
## 37   0.10196844 -0.37779383 -1.03752256 -0.05091800  0.57772207     -0.16617364
## 38  -0.35060018 -0.15328619  0.32366339 -0.73567430 -1.91230127     -1.12903457
## 39  -0.71909690  0.02545075 -0.56275157  0.02545075  0.08918610      0.33710120
## 40  -1.01596791  0.03818128 -0.24416040 -0.54790615 -0.91459156     -0.85805346
## 41  -0.62344075 -0.05091800  0.39149488 -0.68651916 -2.23555842     -0.31028376
## 42  -1.61367018  0.07641832 -0.93409710 -0.59282318 -0.73567430     -0.54790615
## 43   0.51856960 -0.46117919 -0.68651916  2.23555842  1.83849262      0.03818128
## 44  -0.03818128 -0.50406856 -1.56855670  1.03752256  1.17854682     -1.20442230
## 45   1.41400510  0.39149488  0.65465430  1.66232963  2.23555842     -2.23555842
## 46  -0.91459156  0.70271480  0.08918610  0.40526982 -0.82184079      0.43305527
## 47  -0.11476746  0.44707302 -1.44946373  1.71527720  2.10223158     -0.67050162
## 48  -1.56855670  0.71909690 -0.70271480  0.03818128 -0.54790615      1.31706374
## 49  -0.95396468  0.65465430 -0.53318051 -0.06366298 -0.67050162     -0.93409710
## 50  -1.44946373  0.62344075 -1.10528634  0.43305527  0.31028376     -0.24416040
## 51  -0.73567430  0.59282318 -0.37779383 -0.11476746 -0.78667510      0.19203379
## 52  -0.89542793  0.76945312 -0.01272434 -0.07641832 -0.95396468     -0.56275157
## 53   0.53318051  0.40526982 -1.34797950  1.20442230  1.34797950     -0.75245638
## 54  -0.36416334  1.01596791  0.41912210  0.29695946 -1.77352271     -0.70271480
## 55  -0.21802303  0.47537773 -0.51856960  0.36416334  0.16617364     -0.21802303
## 56  -0.51856960  0.50406856 -2.10223158  0.39149488  0.67050162     -1.61367018
## 57   0.43305527  0.54790615 -0.21802303  0.23107198  0.15328619      0.32366339
## 58  -1.77352271  0.97421613 -0.83980946  0.11476746 -0.63896971      0.24416040
## 59  -0.27046566  0.41912210 -1.38024023  1.44946373  1.61367018     -0.53318051
## 60  -1.99828954  0.95396468 -0.76945312  0.20501110 -0.33710120      0.56275157
## 61  -1.08214564  0.60806071 -0.91459156  1.01596791  0.85805346      0.57772207
## 62   0.19203379  0.43305527 -0.80413364  0.93409710  0.89542793      0.01272434
## 63   0.21802303  0.46117919  0.12758531  0.41912210  0.47537773      0.89542793
## 64  -0.46117919  0.63896971  0.05091800  0.16617364 -0.03818128      1.66232963
## 65  -0.31028376  0.56275157  0.48967276 -0.17908874 -2.80216172     -1.05957037
## 66  -2.23555842  0.99487522 -1.28735798  0.25729077  0.11476746      0.35060018
## 67  -0.10196844  0.51856960 -0.50406856  0.21802303  0.32366339     -0.80413364
## 68   0.07641832  0.75245638 -0.59282318  0.10196844 -0.65465430      1.99828954
## 69  -0.23107198  0.48967276  0.01272434  0.12758531  0.20501110     -0.43305527
## 70  -0.59282318  0.68651916  0.23107198 -0.16617364 -0.97421613     -1.08214564
## 71  -0.37779383  0.89542793  0.27046566  0.05091800 -0.87658763      0.08918610
## 72   0.01272434  0.87658763  0.47537773  0.17908874 -0.31028376      0.14042416
## 73  -0.47537773  0.83980946  0.44707302  0.14042416  0.25729077     -0.68651916
## 74  -1.83849262  0.85805346 -1.99828954  1.15343724  1.48684468     -0.33710120
## 75  -0.53318051  0.91459156 -0.39149488  0.32366339 -0.20501110      1.17854682
## 76  -1.66232963  0.80413364  0.60806071  0.24416040  0.02545075     -2.42690063
```

```
## 77  -0.15328619  0.78667510 -1.25874673  1.34797950  1.38024023     -2.10223158
## 78  -0.67050162  0.93409710  0.17908874 -0.03818128 -1.25874673     -0.62344075
## 79  -0.24416040 -0.02545075  0.00000000 -0.24416040  0.19203379     -0.44707302
## 80   0.23107198  0.06366298 -0.40526982  0.35060018  0.36416334      0.54790615
## 81  -0.82184079  0.17908874 -0.54790615 -0.39149488 -0.41912210     -0.08918610
## 82   0.37779383  0.08918610 -0.17908874  0.00000000  0.23107198      0.21802303
## 83  -0.16617364  0.05091800  0.71909690 -0.44707302 -1.34797950     -1.66232963
## 84  -0.32366339  0.01272434 -0.65465430 -0.21802303  0.54790615     -0.76945312
## 85  -0.01272434 -0.01272434 -1.48684468  1.10528634  1.23113036     -1.15343724
## 86  -0.33710120  0.12758531  0.33710120 -0.65465430 -1.83849262     -1.10528634
## 87   0.50406856  0.00000000  0.57772207  1.08214564  0.82184079     -0.57772207
## 88  -0.83980946  0.11476746 -0.97421613 -0.15328619  0.06366298      0.39149488
## 89   0.25729077  0.14042416 -0.71909690 -0.28368767  0.00000000      0.31028376
## 90  -1.10528634 -0.75245638 -0.73567430 -1.03752256 -0.56275157      0.51856960
## 91  -0.48967276 -0.70271480  0.03818128 -0.91459156 -0.50406856      0.70271480
## 92  -1.23113036 -0.59282318 -0.07641832 -0.97421613 -1.05957037      0.82184079
## 93  -0.68651916 -0.56275157  0.16617364 -0.99487522 -1.28735798     -0.63896971
## 94   0.05091800 -0.89542793 -0.43305527 -0.63896971  0.41912210      0.99487522
## 95   0.28368767 -0.85805346  0.29695946 -1.08214564 -0.05091800     -0.19203379
## 96  -0.41912210 -0.82184079 -0.29695946 -0.85805346 -0.24416040      1.56855670
## 97   0.36416334 -0.67050162  0.21802303 -1.15343724 -1.61367018      0.28368767
## 98  -0.40526982 -0.76945312 -0.28368767 -0.80413364 -0.23107198      1.61367018
## 99   0.20501110  0.82184079 -0.78667510  0.99487522  0.91459156      0.02545075
## 100 -0.19203379 -0.80413364  0.68651916 -1.12903457 -1.41400510     -1.77352271
## 101 -0.06366298 -0.87658763 -1.66232963  0.85805346  1.12903457     -1.25874673
## 102 -1.25874673 -0.65465430 -0.08918610 -1.01596791 -1.08214564      0.80413364
## 103 -1.17854682 -0.54790615 -0.05091800 -0.93409710 -1.01596791      0.85805346
## 104  0.06366298 -0.83980946 -0.41912210 -0.57772207  0.43305527      1.01596791
## 105 -1.15343724 -0.53318051 -0.03818128 -0.82184079 -0.99487522      0.87658763
## 106  0.71909690 -0.51856960  0.63896971  2.80216172  2.80216172     -1.01596791
## 107 -1.48684468  0.73567430 -0.19203379 -0.12758531 -1.52642702     -1.38024023
## 108  0.16617364  0.36416334 -0.85805346  2.10223158  1.99828954      0.11476746
## 109 -2.42690063  0.57772207 -1.83849262  1.23113036  0.97421613     -0.89542793
## 110  0.47537773  0.37779383  0.53318051 -0.20501110 -0.16617364     -0.95396468
## 111 -0.99487522  0.67050162 -0.23107198 -0.10196844 -0.89542793     -0.83980946
## 112 -0.60806071  0.53318051  0.40526982 -0.19203379 -2.10223158     -0.29695946
## 113 -1.20442230 -0.57772207 -0.06366298 -0.95396468 -1.03752256      0.83980946
## 114 -0.85805346 -0.63896971 -0.99487522 -0.83980946  0.05091800      0.37779383
## 115 -1.71527720 -0.71909690  0.59282318 -0.87658763  0.01272434     -2.80216172
## 116 -0.05091800 -0.73567430 -1.61367018  0.91459156  1.15343724     -1.23113036
## 117  0.32366339 -0.68651916 -2.42690063  1.52642702  1.28735798      0.16617364
## 118 -0.76945312 -0.62344075 -1.17854682 -0.27046566  0.28368767      1.83849262
## 119 -0.93409710 -0.60806071  0.07641832 -0.46117919 -0.83980946      0.41912210
## 120 -1.12903457 -1.77352271 -0.75245638 -2.10223158 -0.57772207      0.50406856
## 121 -0.50406856 -1.66232963  0.02545075 -1.66232963 -0.51856960      0.68651916
## 122 -1.38024023 -1.41400510 -0.14042416 -1.83849262 -1.17854682      0.73567430
## 123 -0.70271480 -1.34797950  0.15328619 -1.91230127 -1.31706374     -0.65465430
## 124  0.02545075 -2.80216172 -0.46117919 -1.44946373  0.39149488      0.95396468
## 125  0.27046566 -2.23555842  0.28368767 -2.23555842 -0.06366298     -0.20501110
## 126 -0.44707302 -1.99828954 -0.32366339 -1.61367018 -0.27046566      1.48684468
## 127  0.35060018 -1.56855670  0.20501110 -2.80216172 -1.66232963      0.27046566
## 128 -0.43305527 -1.83849262 -0.31028376 -1.48684468 -0.25729077      1.52642702
## 129  0.17908874 -1.01596791 -0.82184079  0.33710120  0.87658763      0.00000000
## 130 -0.20501110 -1.91230127  0.67050162 -2.42690063 -1.44946373     -1.83849262
## 131 -0.08918610 -2.42690063 -1.77352271  0.07641832  1.08214564     -1.31706374
```

```
## 132 -1.41400510 -1.52642702 -0.15328619 -1.99828954 -1.20442230      0.71909690
## 133 -1.31706374 -1.31706374 -0.11476746 -1.71527720 -1.12903457      0.76945312
## 134  0.03818128 -2.10223158 -0.44707302 -1.41400510  0.40526982      0.97421613
## 135 -1.28735798 -1.28735798 -0.10196844 -1.52642702 -1.10528634      0.78667510
## 136  0.70271480 -1.25874673  0.62344075  2.42690063  2.42690063     -1.03752256
## 137 -1.52642702 -1.03752256 -0.20501110 -1.28735798 -1.56855670     -1.41400510
## 138  0.15328619 -1.23113036 -0.87658763  1.99828954  1.91230127      0.10196844
## 139 -2.80216172 -1.12903457 -1.91230127  1.12903457  0.95396468     -0.91459156
## 140  0.44707302 -1.20442230  0.50406856 -1.34797950 -0.19203379     -0.99487522
## 141 -1.03752256 -1.10528634 -0.25729077 -1.25874673 -0.93409710     -0.87658763
## 142 -0.63896971 -1.15343724  0.37779383 -1.31706374 -2.42690063     -0.32366339
## 143 -1.34797950 -1.38024023 -0.12758531 -1.77352271 -1.15343724      0.75245638
## 144 -0.87658763 -1.48684468 -1.01596791 -1.56855670  0.03818128      0.36416334
## 145 -0.07641832 -1.71527720 -1.71527720  0.15328619  1.10528634     -1.28735798
## 146  0.31028376 -1.61367018 -2.80216172  1.28735798  1.25874673      0.15328619
## 147 -0.78667510 -1.44946373 -1.20442230 -1.38024023  0.27046566      1.77352271
## 148  0.80413364  1.41400510  0.99487522  0.53318051 -0.14042416     -0.39149488
## 149  0.73567430  1.34797950  0.78667510  0.97421613  0.70271480      0.40526982
## 150  0.87658763  1.28735798  1.12903457  0.48967276 -0.21802303      0.62344075
## 151  0.82184079  1.52642702  1.28735798  0.50406856 -0.36416334     -0.05091800
## 152  2.80216172  1.03752256  0.56275157  1.61367018  1.52642702     -0.25729077
## 153  1.12903457  2.80216172  1.83849262  0.80413364 -0.60806071     -0.17908874
## 154  1.31706374  1.12903457  1.01596791  0.87658763  0.60806071      0.46117919
## 155  0.97421613  1.17854682 -1.05957037  0.89542793  0.83980946     -0.73567430
## 156  2.23555842  1.23113036  1.20442230  0.75245638  0.56275157      1.05957037
## 157  0.65465430  2.23555842  0.83980946  0.62344075 -0.10196844      0.67050162
## 158  1.23113036  1.05957037  0.54790615  1.91230127  1.77352271     -0.02545075
## 159  0.60806071  2.10223158  0.87658763  0.71909690  0.07641832      1.25874673
## 160  0.78667510  1.31706374  0.82184079  1.31706374  1.03752256      1.28735798
## 161  1.66232963  1.08214564  0.85805346  1.25874673  1.05957037      0.53318051
## 162  1.71527720  1.10528634  1.44946373  0.95396468  0.76945312      1.41400510
## 163  1.03752256  1.38024023  1.41400510  0.67050162  0.35060018      2.42690063
## 164  1.20442230  1.25874673  2.10223158  0.44707302 -0.75245638     -0.41912210
## 165  0.57772207  2.42690063  0.75245638  0.78667510  0.51856960      1.08214564
## 166  1.44946373  1.20442230  1.03752256  0.73567430  0.71909690     -0.28368767
## 167  1.61367018  1.48684468  0.95396468  0.60806071 -0.12758531      2.80216172
## 168  1.28735798  1.15343724  1.34797950  0.63896971  0.63896971      0.07641832
## 169  0.93409710  1.44946373  1.61367018  0.46117919 -0.37779383     -0.48967276
## 170  1.10528634  1.83849262  1.66232963  0.59282318 -0.32366339      0.59282318
## 171  1.52642702  1.77352271  1.99828954  0.68651916  0.10196844      0.60806071
## 172  1.01596791  1.66232963  1.91230127  0.65465430  0.68651916     -0.15328619
## 173  0.63896971  1.71527720  0.14042416  1.48684468  1.71527720      0.29695946
## 174  0.95396468  1.91230127  1.10528634  0.82184079  0.21802303      1.71527720
## 175  0.67050162  1.61367018  2.42690063  0.76945312  0.48967276     -1.91230127
## 176  1.38024023  1.56855670  0.76945312  1.77352271  1.66232963     -1.56855670
## 177  0.91459156  1.99828954  1.52642702  0.56275157 -0.43305527     -0.10196844
## 178  1.25874673  0.21802303  1.31706374  0.28368767  0.62344075      0.06366298
## 179  1.77352271  0.28368767  1.08214564  0.83980946  0.73567430      1.23113036
## 180  0.85805346  0.35060018  0.97421613  0.06366298 -0.01272434      0.48967276
## 181  2.10223158  0.29695946  1.23113036  0.57772207  0.65465430      0.63896971
## 182  1.34797950  0.27046566  2.80216172 -0.02545075 -0.53318051     -0.82184079
## 183  1.17854682  0.25729077  0.93409710  0.31028376  0.80413364     -0.27046566
## 184  1.48684468  0.23107198  0.24416040  1.41400510  1.44946373     -0.51856960
## 185  1.15343724  0.32366339  1.77352271 -0.25729077 -0.62344075     -0.50406856
## 186  2.42690063  0.24416040  2.23555842  1.38024023  0.99487522     -0.06366298
```

```
## 187  0.83980946  0.31028376  0.80413364  0.47537773  0.50406856      1.10528634
## 188  1.83849262  0.33710120  0.91459156  0.27046566  0.46117919      1.03752256
## 189  0.76945312 -0.97421613  0.89542793 -1.17854682 -0.07641832      1.20442230
## 190  0.99487522 -0.95396468  1.38024023 -0.89542793 -0.02545075      1.34797950
## 191  0.75245638 -0.91459156  1.25874673 -1.05957037 -0.39149488      1.38024023
## 192  0.89542793 -0.78667510  1.48684468 -1.10528634 -0.44707302     -0.11476746
## 193  1.56855670 -1.17854682  1.05957037 -0.23107198  0.75245638      1.44946373
## 194  1.91230127 -1.08214564  1.71527720 -1.20442230  0.33710120      0.47537773
## 195  1.05957037 -1.05957037  1.15343724 -0.75245638  0.12758531      2.10223158
## 196  1.99828954 -0.93409710  1.56855670 -1.23113036 -0.59282318      0.91459156
## 197  1.08214564 -0.99487522  1.17854682 -0.67050162  0.14042416      2.23555842
##      ZSNU.H.PET   ZSP.H.PET GLNU_norm.H.PET ZSNU_norm.H.PET GLVAR_area.H.PET
## 1   -0.32366339 -0.16617364     -0.39149488     -0.21802303      -0.43305527
## 2   -0.01272434  0.89542793     -0.65465430      0.85805346      -0.48967276
## 3   -0.82184079 -0.97421613      0.89542793     -1.05957037      -0.82184079
## 4    0.76945312 -0.60806071     -0.46117919     -0.47537773       0.17908874
## 5   -1.17854682 -1.12903457      0.99487522     -1.23113036      -2.42690063
## 6   -1.12903457 -1.28735798      1.03752256     -1.38024023      -0.95396468
## 7    0.27046566  0.70271480     -1.08214564      0.60806071       0.25729077
## 8   -0.40526982 -0.06366298      0.20501110     -0.03818128      -0.91459156
## 9   -0.91459156 -0.80413364     -0.11476746     -0.99487522      -0.46117919
## 10  -0.70271480 -0.03818128     -0.16617364      0.02545075      -0.65465430
## 11   1.03752256 -0.57772207     -0.19203379     -0.63896971       0.41912210
## 12  -0.87658763 -1.08214564      0.71909690     -1.41400510      -0.54790615
## 13   0.50406856  0.03818128     -1.01596791      0.07641832       0.31028376
## 14  -1.15343724  0.33710120      0.50406856      0.31028376      -1.44946373
## 15   1.66232963  0.62344075     -1.23113036      0.62344075       0.08918610
## 16  -0.80413364 -0.54790615      0.14042416     -0.76945312       0.71909690
## 17  -0.14042416 -1.25874673     -0.07641832     -0.60806071      -0.11476746
## 18   0.89542793 -0.14042416     -0.57772207     -0.12758531      -0.31028376
## 19   0.25729077  0.05091800     -0.70271480     -0.02545075       0.19203379
## 20   0.10196844  0.00000000     -0.68651916     -0.14042416       0.02545075
## 21  -0.17908874 -0.24416040     -0.08918610     -0.25729077      -0.57772207
## 22  -1.05957037  0.25729077      0.60806071     -0.07641832      -1.20442230
## 23   0.28368767 -0.05091800     -0.56275157      0.08918610      -0.41912210
## 24   0.78667510  0.08918610     -0.43305527      0.06366298       0.00000000
## 25  -1.10528634 -0.40526982      0.41912210     -0.67050162      -0.62344075
## 26  -0.48967276 -1.20442230      0.39149488     -0.93409710      -1.52642702
## 27  -0.63896971  0.41912210     -0.44707302      0.71909690      -0.85805346
## 28   0.02545075 -0.51856960      0.02545075     -0.28368767       0.21802303
## 29  -1.23113036 -0.85805346      0.76945312     -1.34797950      -0.53318051
## 30   0.46117919 -0.01272434     -0.95396468      0.03818128       0.70271480
## 31  -1.61367018 -1.41400510      1.20442230     -1.66232963      -1.61367018
## 32   0.03818128 -0.44707302     -0.15328619     -0.43305527      -0.67050162
## 33   0.65465430  0.32366339     -0.71909690      0.29695946       0.62344075
## 34  -0.02545075  0.01272434     -0.47537773     -0.05091800      -0.60806071
## 35   0.47537773  0.57772207     -0.80413364      0.59282318      -0.21802303
## 36  -1.01596791 -0.29695946      0.73567430     -0.48967276      -1.38024023
## 37  -0.71909690 -0.89542793      0.56275157     -1.08214564      -1.08214564
## 38  -0.51856960  0.68651916     -0.29695946      0.48967276      -0.40526982
## 39   0.44707302 -0.28368767     -0.40526982     -0.11476746       0.65465430
## 40  -0.20501110  0.39149488     -1.15343724      0.20501110       0.44707302
## 41   0.37779383  0.82184079     -1.03752256      0.76945312      -0.27046566
## 42  -0.12758531  0.12758531     -0.73567430      0.11476746       0.33710120
## 43  -0.60806071 -1.48684468      0.16617364     -1.44946373      -1.10528634
```

```
## 44  -1.66232963 -1.44946373      1.17854682     -1.71527720      -1.66232963
## 45  -2.42690063 -2.10223158      1.52642702     -1.52642702      -2.80216172
## 46   0.93409710  0.31028376     -1.20442230      0.39149488      -0.36416334
## 47  -1.34797950 -1.71527720      1.71527720     -1.10528634      -0.59282318
## 48   1.61367018  0.06366298     -0.63896971      0.12758531       0.23107198
## 49  -0.46117919  0.21802303     -0.31028376      0.10196844      -0.20501110
## 50  -0.23107198 -0.47537773     -0.12758531     -0.32366339      -0.16617364
## 51   0.31028376  0.28368767     -0.21802303      0.21802303      -0.35060018
## 52  -0.07641832  0.56275157     -0.59282318      0.53318051       0.63896971
## 53  -1.41400510 -1.38024023      0.75245638     -2.10223158      -1.48684468
## 54  -0.10196844  0.63896971     -0.54790615      0.54790615       0.01272434
## 55  -0.41912210 -0.50406856      0.10196844     -0.57772207      -0.80413364
## 56  -1.52642702 -1.01596791      0.87658763     -1.48684468      -0.44707302
## 57   0.07641832 -0.31028376     -0.06366298     -0.29695946      -0.33710120
## 58   0.70271480  0.27046566     -0.91459156      0.28368767       0.67050162
## 59  -1.28735798 -1.52642702      1.01596791     -1.77352271      -1.05957037
## 60   1.05957037  0.10196844     -1.12903457      0.35060018       0.35060018
## 61   0.40526982 -0.71909690     -0.02545075     -0.33710120       0.07641832
## 62  -0.54790615 -1.05957037      0.51856960     -1.01596791      -0.76945312
## 63   0.11476746 -0.59282318      0.43305527     -0.54790615      -0.93409710
## 64   1.77352271 -0.08918610     -0.48967276     -0.10196844      -0.19203379
## 65  -0.33710120  0.76945312     -0.67050162      0.75245638      -0.47537773
## 66   0.60806071 -0.15328619     -0.76945312      0.01272434       0.78667510
## 67  -0.83980946 -0.68651916      0.17908874     -0.82184079       0.32366339
## 68   2.42690063  0.24416040     -0.85805346      0.32366339       0.06366298
## 69  -0.57772207 -0.36416334      0.23107198     -0.46117919      -0.68651916
## 70  -0.39149488  0.59282318     -0.50406856      0.67050162       0.12758531
## 71   0.33710120  0.36416334     -0.33710120      0.44707302      -0.17908874
## 72   0.05091800 -0.11476746      0.01272434     -0.06366298      -0.56275157
## 73  -0.75245638 -0.46117919      0.70271480      0.05091800      -1.31706374
## 74  -0.93409710 -1.17854682      1.12903457     -1.25874673      -1.17854682
## 75   0.87658763 -0.20501110     -0.36416334     -0.20501110       0.16617364
## 76  -1.99828954 -0.65465430      0.47537773     -0.65465430      -1.25874673
## 77  -2.80216172 -1.61367018      1.41400510     -1.99828954      -1.23113036
## 78  -0.03818128  0.73567430     -0.53318051      0.65465430       0.28368767
## 79  -0.59282318 -0.43305527      0.12758531     -0.50406856      -0.70271480
## 80   0.19203379 -0.70271480     -0.05091800     -0.70271480      -0.32366339
## 81   0.08918610  0.02545075     -0.51856960     -0.01272434       0.20501110
## 82   0.12758531 -0.37779383     -0.35060018     -0.31028376      -0.01272434
## 83  -0.62344075  0.44707302     -0.41912210      0.73567430      -0.83980946
## 84  -1.20442230 -0.82184079      0.78667510     -1.31706374      -0.51856960
## 85  -1.56855670 -1.34797950      1.25874673     -1.61367018      -1.56855670
## 86  -0.50406856  0.71909690     -0.24416040      0.50406856      -0.39149488
## 87  -0.68651916 -0.67050162      0.25729077     -0.39149488      -1.99828954
## 88   0.24416040 -0.35060018     -0.23107198     -0.41912210      -0.02545075
## 89   0.29695946 -0.25729077     -0.27046566     -0.27046566      -0.15328619
## 90   0.63896971 -0.02545075     -1.05957037     -0.15328619       0.05091800
## 91   0.85805346 -0.07641832     -0.87658763     -0.08918610       0.15328619
## 92   1.41400510  0.47537773     -1.44946373      0.40526982       0.56275157
## 93  -0.05091800  0.53318051     -0.99487522      0.51856960       0.27046566
## 94   0.16617364 -0.78667510      0.07641832     -0.91459156      -0.99487522
## 95  -0.43305527 -0.48967276      0.15328619     -0.68651916      -1.12903457
## 96   1.17854682 -0.23107198     -0.62344075     -0.17908874      -0.07641832
## 97   0.73567430  0.60806071     -1.17854682      0.63896971       0.11476746
## 98   1.20442230 -0.21802303     -0.60806071     -0.16617364      -0.06366298
```

```
## 99  -0.53318051 -1.03752256      0.54790615     -0.97421613      -0.75245638
## 100 -0.65465430  0.35060018     -0.75245638      0.56275157      -0.87658763
## 101 -1.77352271 -1.66232963      1.10528634     -1.91230127      -1.77352271
## 102  1.38024023  0.46117919     -1.52642702      0.36416334       0.54790615
## 103  1.48684468  0.50406856     -1.38024023      0.43305527       0.59282318
## 104  0.17908874 -0.76945312      0.08918610     -0.87658763      -0.97421613
## 105  1.52642702  0.51856960     -1.31706374      0.46117919       0.60806071
## 106 -1.44946373 -2.42690063      1.34797950     -1.03752256      -2.10223158
## 107 -0.24416040  0.78667510     -0.93409710      0.78667510       0.37779383
## 108 -0.76945312 -1.83849262      0.68651916     -1.56855670      -0.71909690
## 109 -0.95396468 -1.10528634      0.33710120     -0.95396468      -0.23107198
## 110 -0.99487522 -0.27046566      0.82184079     -0.44707302      -1.34797950
## 111 -0.19203379  0.43305527     -0.89542793      0.27046566       0.46117919
## 112  0.39149488  0.85805346     -0.83980946      0.80413364      -0.25729077
## 113  1.44946373  0.48967276     -1.41400510      0.41912210       0.57772207
## 114  0.23107198 -0.41912210     -0.37779383     -0.51856960      -0.03818128
## 115 -2.10223158 -0.73567430      0.28368767     -0.78667510      -1.28735798
## 116 -1.71527720 -1.56855670      1.15343724     -1.83849262      -1.71527720
## 117 -0.15328619 -1.31706374     -0.17908874     -0.71909690      -0.12758531
## 118  1.01596791 -0.62344075     -0.32366339     -0.73567430       0.40526982
## 119  0.91459156  0.11476746     -1.56855670      0.23107198      -0.37779383
## 120  0.62344075 -0.12758531     -1.83849262     -0.36416334       0.03818128
## 121  0.83980946 -0.17908874     -1.61367018     -0.24416040       0.14042416
## 122  1.25874673  0.17908874     -2.42690063      0.15328619       0.48967276
## 123 -0.06366298  0.29695946     -1.77352271      0.24416040       0.24416040
## 124  0.14042416 -0.95396468     -0.28368767     -1.15343724      -1.03752256
## 125 -0.44707302 -0.63896971     -0.10196844     -0.83980946      -1.15343724
## 126  1.12903457 -0.33710120     -1.28735798     -0.40526982      -0.10196844
## 127  0.71909690  0.37779383     -1.91230127      0.37779383       0.10196844
## 128  1.15343724 -0.32366339     -1.25874673     -0.37779383      -0.08918610
## 129 -0.56275157 -1.15343724      0.21802303     -1.20442230      -0.78667510
## 130 -0.67050162  0.07641832     -1.34797950      0.33710120      -0.89542793
## 131 -1.91230127 -1.99828954      0.91459156     -2.80216172      -1.91230127
## 132  1.23113036  0.16617364     -2.80216172      0.14042416       0.47537773
## 133  1.31706374  0.20501110     -2.10223158      0.17908874       0.51856960
## 134  0.15328619 -0.91459156     -0.25729077     -1.12903457      -1.01596791
## 135  1.34797950  0.23107198     -1.99828954      0.19203379       0.53318051
## 136 -1.48684468 -2.80216172      1.08214564     -1.28735798      -2.23555842
## 137 -0.25729077  0.54790615     -1.71527720      0.57772207       0.36416334
## 138 -0.78667510 -2.23555842      0.44707302     -2.23555842      -0.73567430
## 139 -0.97421613 -1.23113036      0.06366298     -1.17854682      -0.24416040
## 140 -1.03752256 -0.39149488      0.57772207     -0.56275157      -1.41400510
## 141 -0.21802303  0.15328619     -1.66232963      0.00000000       0.43305527
## 142  0.36416334  0.65465430     -1.48684468      0.70271480      -0.28368767
## 143  1.28735798  0.19203379     -2.23555842      0.16617364       0.50406856
## 144  0.21802303 -0.56275157     -1.10528634     -0.62344075      -0.05091800
## 145 -1.83849262 -1.91230127      0.93409710     -2.42690063      -1.83849262
## 146 -0.16617364 -1.77352271     -0.78667510     -0.85805346      -0.14042416
## 147  0.99487522 -0.75245638     -0.97421613     -0.89542793       0.39149488
## 148 -0.11476746  1.44946373      0.59282318      1.41400510       1.12903457
## 149  0.20501110  0.97421613      0.80413364      1.03752256       1.20442230
## 150  0.75245638  1.56855670      0.67050162      1.44946373       1.05957037
## 151  0.35060018  1.83849262      0.29695946      1.83849262       2.23555842
## 152 -1.08214564 -0.87658763      1.83849262     -0.80413364      -0.29695946
## 153  0.32366339  2.10223158      0.31028376      1.91230127       1.38024023
```

```
## 154  0.00000000  0.93409710      1.23113036      0.89542793       0.87658763
## 155 -1.25874673 -0.10196844      1.99828954     -0.35060018       1.01596791
## 156  0.51856960  1.10528634      0.83980946      1.08214564       1.08214564
## 157  1.08214564  1.52642702      0.00000000      1.48684468       2.42690063
## 158 -0.89542793 -0.93409710      2.10223158     -0.59282318       0.80413364
## 159  1.83849262  1.41400510     -0.14042416      1.56855670       1.99828954
## 160  0.82184079  0.67050162      0.95396468      1.01596791       1.48684468
## 161 -0.28368767 -0.19203379      1.66232963      0.25729077       0.89542793
## 162  0.54790615  0.91459156      1.56855670      0.91459156       0.83980946
## 163  2.23555842  1.28735798      0.37779383      1.23113036       1.15343724
## 164  0.06366298  2.80216172      0.19203379      2.80216172       0.99487522
## 165  0.95396468  1.23113036      0.11476746      1.34797950       2.80216172
## 166 -0.47537773  0.80413364      1.38024023      0.68651916       1.91230127
## 167  2.80216172  1.48684468      0.05091800      1.52642702       1.44946373
## 168 -0.29695946  1.05957037      1.44946373      0.95396468       0.93409710
## 169  0.01272434  1.91230127      0.36416334      2.23555842       1.56855670
## 170  0.80413364  1.61367018      0.53318051      1.66232963       1.17854682
## 171  0.48967276  1.25874673      0.97421613      1.28735798       0.95396468
## 172 -0.37779383  0.99487522      1.77352271      1.38024023       0.29695946
## 173 -0.73567430 -0.53318051      2.23555842     -0.19203379       0.75245638
## 174  1.71527720  1.20442230      0.46117919      1.12903457       1.66232963
## 175 -1.38024023  0.87658763      1.61367018      0.87658763       0.68651916
## 176 -2.23555842 -0.99487522      2.80216172     -0.75245638       0.73567430
## 177  0.43305527  2.42690063      0.32366339      2.10223158       1.83849262
## 178 -0.31028376  1.01596791      1.28735798      0.93409710       0.91459156
## 179  0.59282318  0.75245638      0.85805346      0.82184079       1.10528634
## 180  0.53318051  1.38024023      0.35060018      1.31706374       1.71527720
## 181  0.56275157  1.03752256      0.48967276      1.05957037       1.34797950
## 182 -0.35060018  1.66232963      0.40526982      2.42690063       0.85805346
## 183 -0.85805346  0.14042416      1.91230127     -0.23107198       0.97421613
## 184 -1.31706374 -0.83980946      2.42690063     -0.53318051      -0.50406856
## 185 -0.27046566  2.23555842      0.63896971      1.71527720       1.03752256
## 186 -0.36416334  0.83980946      1.48684468      0.99487522      -0.63896971
## 187  0.67050162  1.08214564      0.65465430      0.97421613       1.31706374
## 188  0.68651916  1.12903457      0.62344075      1.10528634       1.23113036
## 189  0.97421613  1.34797950     -0.03818128      1.20442230       1.41400510
## 190  1.56855670  1.31706374      0.03818128      1.25874673       1.61367018
## 191  2.10223158  1.71527720     -0.82184079      1.61367018       2.10223158
## 192  0.41912210  1.77352271     -0.01272434      1.77352271       1.77352271
## 193  0.57772207  0.40526982      1.05957037      0.47537773       0.82184079
## 194 -0.08918610  0.95396468      1.31706374      0.83980946       0.76945312
## 195  1.91230127  1.15343724      0.24416040      1.15343724       1.25874673
## 196  1.10528634  1.99828954     -0.20501110      1.99828954       1.52642702
## 197  1.99828954  1.17854682      0.27046566      1.17854682       1.28735798
##     ZSVAR_H.PET Entropy_area.H.PET Max_cooc.W.PET Average_cooc.W.PET
## 1   -0.21802303        -0.28368767    -0.47537773        -0.11476746
## 2   -1.83849262        -0.82184079    -0.37779383         0.27046566
## 3    0.82184079        -0.95396468     0.44707302        -1.15343724
## 4    0.75245638         0.60806071    -0.43305527        -0.02545075
## 5    0.97421613        -1.10528634     1.52642702        -2.42690063
## 6    1.34797950        -1.03752256     0.91459156        -1.83849262
## 7   -1.66232963         0.10196844    -0.63896971         0.71909690
## 8   -0.29695946        -1.23113036     0.20501110        -0.70271480
## 9    0.32366339         0.00000000    -0.40526982        -0.40526982
## 10  -0.20501110        -0.99487522     0.00000000        -0.50406856
```

```
## 11   0.25729077         0.32366339    -0.28368767         -0.31028376
## 12   0.78667510        -0.48967276     0.47537773         -1.23113036
## 13  -0.46117919         0.36416334    -0.67050162          0.62344075
## 14  -1.01596791        -2.42690063     0.87658763         -0.82184079
## 15  -1.10528634         0.37779383    -0.70271480          1.31706374
## 16   0.11476746        -0.80413364     0.25729077         -0.68651916
## 17   1.28735798         0.15328619    -0.16617364         -0.46117919
## 18  -0.15328619         0.25729077    -0.44707302          0.10196844
## 19  -0.73567430         0.05091800    -0.54790615          0.20501110
## 20  -0.59282318         0.11476746    -0.53318051          0.23107198
## 21  -0.19203379        -0.67050162    -0.31028376         -0.53318051
## 22  -1.15343724        -2.80216172     0.31028376         -0.80413364
## 23  -0.24416040        -0.37779383    -0.60806071          0.21802303
## 24  -0.71909690        -0.47537773    -0.57772207         -0.05091800
## 25  -0.05091800        -1.25874673     0.14042416         -0.63896971
## 26   1.77352271        -0.43305527     1.23113036         -1.71527720
## 27  -0.50406856        -1.01596791    -0.15328619          0.02545075
## 28   0.43305527        -0.60806071    -0.08918610         -0.56275157
## 29   0.36416334        -0.85805346     0.73567430         -1.52642702
## 30  -0.41912210         0.47537773    -0.62344075          0.51856960
## 31   1.12903457        -1.31706374     0.93409710         -1.28735798
## 32   0.28368767        -0.12758531    -0.27046566         -0.36416334
## 33  -0.85805346        -0.36416334    -0.50406856          0.32366339
## 34  -0.53318051        -0.29695946    -0.10196844          0.07641832
## 35  -1.05957037        -0.46117919    -0.59282318          0.24416040
## 36  -0.36416334        -1.99828954     1.15343724         -1.61367018
## 37   0.56275157        -0.62344075     0.27046566         -1.08214564
## 38  -2.80216172        -1.17854682    -0.32366339         -0.10196844
## 39   0.07641832        -0.15328619    -0.36416334          0.06366298
## 40  -0.99487522         0.20501110    -0.65465430          0.68651916
## 41  -1.99828954        -0.03818128    -0.51856960          0.57772207
## 42  -0.83980946        -0.35060018    -0.56275157          0.40526982
## 43   2.23555842         0.33710120     1.03752256         -1.10528634
## 44   1.10528634        -1.34797950     0.89542793         -1.31706374
## 45   2.10223158        -2.10223158     2.80216172         -2.80216172
## 46  -0.43305527         0.65465430    -0.19203379          1.25874673
## 47   1.71527720        -1.71527720     1.77352271         -1.91230127
## 48  -0.56275157         0.28368767    -0.14042416          0.47537773
## 49  -0.82184079        -0.76945312     0.15328619          0.08918610
## 50   0.14042416        -0.33710120     0.21802303         -0.29695946
## 51  -0.87658763        -0.71909690     0.02545075         -0.07641832
## 52  -0.93409710        -0.53318051    -0.03818128          0.39149488
## 53   1.31706374        -0.05091800     1.41400510         -1.77352271
## 54  -1.34797950        -0.32366339     0.03818128          0.54790615
## 55   0.41912210        -0.41912210     0.37779383         -0.60806071
## 56   0.40526982        -1.20442230     0.59282318         -0.97421613
## 57   0.29695946        -0.27046566     0.10196844         -0.44707302
## 58  -0.68651916         0.57772207    -0.11476746          0.89542793
## 59   1.52642702        -0.44707302     0.82184079         -1.20442230
## 60  -0.32366339         0.62344075    -0.23107198          1.17854682
## 61   0.85805346        -0.20501110     0.16617364         -0.41912210
## 62   0.89542793        -0.19203379     0.50406856         -0.93409710
## 63   0.59282318        -0.68651916     0.39149488         -0.87658763
## 64  -0.14042416         0.35060018    -0.07641832          0.17908874
## 65  -2.10223158        -0.54790615     0.01272434          0.53318051
```

```
## 66   0.03818128         0.48967276    -0.05091800         0.60806071
## 67   0.33710120        -0.50406856     0.63896971        -0.67050162
## 68  -0.65465430         0.59282318    -0.24416040         0.65465430
## 69   0.17908874        -0.87658763     0.36416334        -0.62344075
## 70  -0.91459156        -0.70271480     0.07641832         0.35060018
## 71  -0.78667510        -0.56275157    -0.01272434         0.00000000
## 72  -0.06366298        -0.63896971     0.35060018        -0.59282318
## 73   0.19203379        -1.56855670     1.25874673        -1.05957037
## 74   1.41400510        -0.78667510     1.10528634        -0.99487522
## 75  -0.16617364         0.46117919     0.11476746         0.12758531
## 76   0.10196844        -1.52642702     1.05957037        -1.01596791
## 77   1.38024023        -1.83849262     1.99828954        -2.23555842
## 78  -1.08214564        -0.57772207     0.05091800         0.36416334
## 79   0.16617364        -0.91459156     0.17908874        -0.65465430
## 80   0.47537773         0.21802303    -0.02545075        -0.57772207
## 81  -0.39149488        -0.24416040    -0.46117919         0.14042416
## 82   0.27046566         0.19203379    -0.29695946        -0.16617364
## 83  -0.48967276        -0.97421613    -0.06366298         0.03818128
## 84   0.37779383        -0.83980946     0.76945312        -1.48684468
## 85   1.15343724        -1.28735798     0.99487522        -1.25874673
## 86  -2.42690063        -1.15343724    -0.20501110        -0.08918610
## 87   0.99487522        -1.05957037     0.97421613        -0.89542793
## 88   0.06366298         0.08918610    -0.41912210        -0.17908874
## 89  -0.03818128        -0.39149488    -0.48967276        -0.21802303
## 90  -0.62344075         0.16617364    -0.93409710         0.43305527
## 91  -0.28368767         0.01272434    -0.99487522         0.16617364
## 92  -1.28735798         0.51856960    -1.08214564         1.03752256
## 93  -1.12903457        -0.59282318    -0.82184079         0.33710120
## 94   0.53318051         0.02545075    -0.39149488        -0.75245638
## 95  -0.01272434        -0.89542793    -0.35060018        -0.83980946
## 96  -0.10196844        -0.10196844    -0.91459156        -0.24416040
## 97  -1.41400510        -0.40526982    -1.05957037         0.46117919
## 98  -0.08918610        -0.07641832    -0.85805346        -0.23107198
## 99   0.91459156        -0.16617364     0.62344075        -0.91459156
## 100 -0.51856960        -1.08214564    -0.71909690         0.01272434
## 101  1.05957037        -1.41400510     0.48967276        -1.38024023
## 102 -1.31706374         0.50406856    -1.15343724         1.01596791
## 103 -1.23113036         0.54790615    -0.95396468         1.08214564
## 104  0.54790615         0.03818128    -0.33710120        -0.73567430
## 105 -1.20442230         0.56275157    -0.87658763         1.10528634
## 106  2.80216172        -1.61367018     1.56855670        -1.99828954
## 107 -1.38024023        -0.06366298    -0.12758531         0.83980946
## 108  1.99828954         0.31028376     1.01596791        -1.12903457
## 109  0.95396468        -0.73567430     0.41912210        -0.37779383
## 110 -0.33710120        -1.91230127     1.31706374        -1.56855670
## 111 -0.95396468         0.23107198    -0.21802303         0.70271480
## 112 -1.91230127        -0.01272434    -0.17908874         0.59282318
## 113 -1.25874673         0.53318051    -1.01596791         1.05957037
## 114  0.05091800         0.06366298    -0.83980946        -0.19203379
## 115  0.08918610        -1.66232963     0.33710120        -1.03752256
## 116  1.08214564        -1.38024023     0.54790615        -1.34797950
## 117  1.25874673         0.12758531    -0.68651916        -0.47537773
## 118  0.24416040         0.29695946    -0.75245638        -0.32366339
## 119 -0.44707302         0.63896971    -0.97421613         1.23113036
## 120 -0.63896971         0.14042416    -1.83849262         0.41912210
```

```
## 121 -0.31028376        -0.14042416    -1.99828954         0.15328619
## 122 -1.56855670         0.40526982    -2.42690063         0.93409710
## 123 -1.17854682        -0.65465430    -1.56855670         0.31028376
## 124  0.50406856        -0.11476746    -1.41400510        -0.78667510
## 125 -0.02545075        -0.93409710    -1.38024023        -0.85805346
## 126 -0.12758531        -0.25729077    -1.77352271        -0.28368767
## 127 -1.77352271        -0.51856960    -2.23555842         0.44707302
## 128 -0.11476746        -0.23107198    -1.66232963        -0.27046566
## 129  0.87658763        -0.31028376    -0.73567430        -0.95396468
## 130 -0.54790615        -1.12903457    -1.48684468        -0.01272434
## 131  1.01596791        -1.48684468    -0.78667510        -1.44946373
## 132 -1.61367018         0.39149488    -2.80216172         0.91459156
## 133 -1.48684468         0.43305527    -1.91230127         0.97421613
## 134  0.51856960        -0.08918610    -1.34797950        -0.76945312
## 135 -1.44946373         0.44707302    -1.71527720         0.99487522
## 136  2.42690063        -1.77352271     1.08214564        -2.10223158
## 137 -1.71527720        -0.21802303    -1.25874673         0.80413364
## 138  1.91230127         0.27046566    -0.25729077        -1.17854682
## 139  0.93409710        -0.75245638    -0.80413364        -0.39149488
## 140 -0.37779383        -2.23555842     0.43305527        -1.66232963
## 141 -1.03752256         0.17908874    -1.31706374         0.67050162
## 142 -2.23555842        -0.17908874    -1.28735798         0.56275157
## 143 -1.52642702         0.41912210    -2.10223158         0.95396468
## 144  0.02545075        -0.02545075    -1.61367018        -0.25729077
## 145  1.03752256        -1.44946373    -0.76945312        -1.41400510
## 146  1.23113036         0.07641832    -1.44946373        -0.51856960
## 147  0.20501110         0.24416040    -1.52642702        -0.35060018
## 148 -0.40526982         0.89542793     0.80413364         1.34797950
## 149  0.57772207         1.23113036     0.95396468         0.75245638
## 150 -0.47537773         0.91459156     0.67050162         1.15343724
## 151 -0.60806071         1.08214564     0.56275157         1.66232963
## 152  1.56855670         1.48684468     2.23555842        -0.54790615
## 153 -0.76945312         1.25874673     0.68651916         1.91230127
## 154  0.73567430         1.15343724     1.20442230         0.37779383
## 155  0.71909690         0.73567430     1.38024023        -0.12758531
## 156  0.67050162         1.28735798     0.75245638         0.63896971
## 157 -0.27046566         2.23555842     0.40526982         2.23555842
## 158  1.83849262         1.12903457     1.61367018        -0.33710120
## 159  0.00000000         2.80216172     0.29695946         2.80216172
## 160  1.17854682         1.34797950     0.83980946         0.73567430
## 161  1.20442230         1.38024023     1.34797950        -0.06366298
## 162  0.83980946         0.95396468     1.28735798         0.05091800
## 163  0.15328619         1.83849262     0.46117919         1.48684468
## 164 -0.89542793         1.05957037     0.65465430         1.83849262
## 165  0.44707302         1.99828954     0.53318051         1.99828954
## 166  0.68651916         1.10528634     1.44946373         0.25729077
## 167 -0.25729077         2.42690063     0.28368767         2.10223158
## 168  0.62344075         0.83980946     1.17854682         0.29695946
## 169 -0.57772207         0.93409710     0.71909690         1.56855670
## 170 -0.35060018         1.03752256     0.60806071         1.20442230
## 171  0.31028376         0.97421613     1.12903457         0.48967276
## 172  0.63896971         0.68651916     2.10223158        -0.20501110
## 173  1.66232963         0.87658763     1.91230127        -0.14042416
## 174  0.12758531         1.91230127     0.78667510         1.38024023
## 175  0.48967276         0.70271480     1.83849262        -0.15328619
```

```
## 176  1.61367018         0.67050162     2.42690063        -0.71909690
## 177 -0.67050162         1.01596791     0.70271480         1.61367018
## 178  0.60806071         0.80413364     0.85805346         0.28368767
## 179  0.76945312         1.77352271     0.57772207         0.50406856
## 180 -0.07641832         1.31706374     0.08918610         1.41400510
## 181  0.65465430         1.71527720     0.24416040         0.87658763
## 182 -0.17908874         0.78667510     0.51856960         1.28735798
## 183  0.70271480         0.85805346     1.48684468        -0.48967276
## 184  1.48684468         0.71909690     1.71527720        -0.43305527
## 185 -0.97421613         0.75245638     0.32366339         1.12903457
## 186  1.44946373         0.76945312     1.66232963        -0.03818128
## 187  0.46117919         1.61367018     0.12758531         0.85805346
## 188  0.35060018         1.20442230     0.06366298         0.82184079
## 189 -0.23107198         1.66232963    -1.12903457         1.71527720
## 190  0.01272434         1.52642702    -1.17854682         1.44946373
## 191 -0.75245638         2.10223158    -1.23113036         2.42690063
## 192 -0.70271480         0.99487522    -0.89542793         1.52642702
## 193  0.80413364         1.56855670     0.19203379         0.19203379
## 194  0.39149488         0.82184079     0.23107198         0.11476746
## 195  0.21802303         1.41400510    -1.10528634         0.76945312
## 196 -0.80413364         1.17854682    -1.20442230         1.77352271
## 197  0.23107198         1.44946373    -1.03752256         0.78667510
##     Variance_cooc.W.PET Entropy_cooc.W.PET DAVE_cooc.W.PET DVAR_cooc.W.PET
## 1            0.02545075        -0.10196844     -0.10196844      0.01272434
## 2            0.70271480         0.16617364      0.56275157      0.78667510
## 3           -1.56855670        -1.17854682     -1.48684468     -1.48684468
## 4           -0.01272434        -0.11476746     -0.28368767     -0.10196844
## 5           -1.83849262        -1.91230127     -1.71527720     -1.31706374
## 6           -1.91230127        -1.83849262     -1.77352271     -1.77352271
## 7            1.20442230         0.40526982      1.05957037      1.41400510
## 8           -0.59282318        -0.63896971     -0.46117919     -0.39149488
## 9           -0.29695946        -0.54790615     -0.59282318     -0.78667510
## 10          -0.02545075        -0.40526982     -0.05091800      0.15328619
## 11          -0.44707302        -0.48967276     -0.70271480     -0.59282318
## 12          -1.61367018        -1.61367018     -1.66232963     -1.66232963
## 13           0.60806071         0.31028376      0.43305527      0.56275157
## 14          -0.33710120        -0.87658763     -0.11476746     -0.02545075
## 15           1.34797950         0.63896971      1.23113036      1.34797950
## 16          -0.87658763        -0.83980946     -0.85805346     -0.82184079
## 17          -0.39149488        -0.46117919     -0.54790615     -0.40526982
## 18           0.37779383         0.05091800     -0.08918610      0.20501110
## 19           0.28368767         0.10196844      0.23107198      0.25729077
## 20           0.31028376         0.07641832      0.05091800      0.07641832
## 21          -0.24416040        -0.39149488     -0.32366339     -0.24416040
## 22          -0.63896971        -0.85805346     -0.40526982     -0.44707302
## 23           0.20501110         0.03818128      0.25729077      0.21802303
## 24           0.00000000        -0.06366298      0.10196844      0.14042416
## 25          -0.85805346        -0.89542793     -0.91459156     -0.99487522
## 26          -0.91459156        -1.10528634     -1.15343724     -0.89542793
## 27           0.51856960        -0.27046566      0.33710120      0.47537773
## 28          -0.60806071        -0.59282318     -0.53318051     -0.50406856
## 29          -1.71527720        -1.71527720     -1.56855670     -1.56855670
## 30           0.40526982         0.27046566      0.36416334      0.53318051
## 31          -1.12903457        -1.23113036     -1.23113036     -1.25874673
## 32           0.06366298        -0.31028376     -0.36416334     -0.25729077
```

```
## 33          0.05091800         0.00000000     -0.03818128      0.02545075
## 34          0.36416334        -0.03818128      0.12758531      0.35060018
## 35          0.67050162         0.24416040      0.41912210      0.63896971
## 36         -1.38024023        -1.48684468     -1.01596791     -1.05957037
## 37         -0.99487522        -0.97421613     -0.87658763     -0.85805346
## 38          0.24416040        -0.16617364      0.19203379      0.36416334
## 39         -0.23107198        -0.35060018     -0.35060018     -0.32366339
## 40          0.82184079         0.37779383      0.97421613      0.89542793
## 41          1.52642702         0.43305527      1.17854682      1.48684468
## 42          0.33710120         0.12758531      0.28368767      0.39149488
## 43         -0.89542793        -1.03752256     -1.34797950     -1.01596791
## 44         -1.15343724        -1.25874673     -1.25874673     -1.28735798
## 45         -2.80216172        -2.80216172     -2.80216172     -2.23555842
## 46          2.80216172         0.67050162      1.12903457      2.23555842
## 47         -2.23555842        -2.10223158     -1.99828954     -1.99828954
## 48          0.35060018         0.17908874      0.03818128      0.33710120
## 49         -0.06366298        -0.14042416      0.14042416      0.11476746
## 50         -0.31028376        -0.41912210     -0.33710120     -0.33710120
## 51         -0.14042416        -0.12758531      0.00000000      0.03818128
## 52          0.17908874         0.02545075      0.17908874      0.31028376
## 53         -1.31706374        -1.34797950     -1.38024023     -1.12903457
## 54          0.68651916         0.20501110      0.44707302      0.75245638
## 55         -0.37779383        -0.57772207     -0.50406856     -0.47537773
## 56         -1.52642702        -1.12903457     -1.08214564     -1.17854682
## 57         -0.27046566        -0.37779383     -0.37779383     -0.35060018
## 58          0.73567430         0.36416334      0.48967276      0.76945312
## 59         -1.23113036        -1.15343724     -1.61367018     -1.71527720
## 60          1.38024023         0.62344075      0.54790615      1.28735798
## 61         -0.32366339        -0.44707302     -0.67050162     -0.51856960
## 62         -1.03752256        -0.93409710     -0.95396468     -0.93409710
## 63         -0.68651916        -0.75245638     -0.73567430     -0.53318051
## 64          0.43305527         0.11476746     -0.02545075      0.23107198
## 65          1.66232963         0.25729077      0.95396468      1.31706374
## 66          0.29695946         0.14042416      0.08918610      0.29695946
## 67         -0.80413364        -0.71909690     -0.76945312     -0.71909690
## 68          0.95396468         0.44707302      0.39149488      0.57772207
## 69         -0.48967276        -0.60806071     -0.41912210     -0.36416334
## 70          0.59282318         0.15328619      0.89542793      0.99487522
## 71          0.08918610        -0.01272434      0.27046566      0.32366339
## 72         -0.19203379        -0.43305527     -0.24416040      0.00000000
## 73         -0.83980946        -0.99487522     -0.89542793     -0.57772207
## 74         -1.08214564        -1.08214564     -1.10528634     -1.10528634
## 75          0.19203379        -0.07641832     -0.27046566     -0.15328619
## 76         -0.95396468        -1.01596791     -0.57772207     -0.73567430
## 77         -2.42690063        -2.42690063     -2.10223158     -2.10223158
## 78          0.57772207         0.23107198      0.53318051      0.68651916
## 79         -0.50406856        -0.62344075     -0.43305527     -0.37779383
## 80         -0.35060018        -0.56275157     -0.65465430     -0.46117919
## 81          0.12758531        -0.02545075      0.06366298      0.12758531
## 82          0.03818128        -0.20501110     -0.29695946     -0.11476746
## 83          0.53318051        -0.25729077      0.35060018      0.48967276
## 84         -1.66232963        -1.66232963     -1.52642702     -1.52642702
## 85         -1.10528634        -1.20442230     -1.20442230     -1.23113036
## 86          0.25729077        -0.15328619      0.20501110      0.37779383
## 87         -0.43305527        -0.78667510     -0.48967276     -0.27046566
```

```
## 88          -0.15328619        -0.24416040     -0.14042416     -0.17908874
## 89          -0.20501110        -0.36416334     -0.23107198     -0.28368767
## 90           0.23107198         0.08918610      0.02545075      0.19203379
## 91           0.11476746         0.01272434     -0.01272434      0.10196844
## 92           1.10528634         0.56275157      0.73567430      1.15343724
## 93           0.56275157         0.21802303      0.51856960      0.67050162
## 94          -0.54790615        -0.67050162     -0.80413364     -0.65465430
## 95          -0.65465430        -0.73567430     -0.63896971     -0.54790615
## 96          -0.10196844        -0.19203379     -0.19203379     -0.06366298
## 97           0.65465430         0.29695946      0.82184079      0.83980946
## 98          -0.08918610        -0.17908874     -0.17908874     -0.05091800
## 99          -1.01596791        -0.91459156     -0.93409710     -0.91459156
## 100          0.50406856        -0.29695946      0.32366339      0.46117919
## 101         -1.20442230        -1.31706374     -1.31706374     -1.38024023
## 102          1.08214564         0.54790615      0.70271480      1.12903457
## 103          1.15343724         0.59282318      0.76945312      1.20442230
## 104         -0.53318051        -0.65465430     -0.78667510     -0.63896971
## 105          1.17854682         0.60806071      0.78667510      1.23113036
## 106         -1.99828954        -1.99828954     -2.23555842     -2.42690063
## 107          1.25874673         0.33710120      0.60806071      0.62344075
## 108         -1.44946373        -1.56855670     -1.83849262     -1.83849262
## 109         -0.75245638        -0.80413364     -1.12903457     -1.15343724
## 110         -1.34797950        -1.44946373     -0.99487522     -1.03752256
## 111          0.83980946         0.39149488      0.99487522      0.91459156
## 112          1.56855670         0.46117919      1.20442230      1.52642702
## 113          1.12903457         0.57772207      0.75245638      1.17854682
## 114         -0.16617364        -0.28368767     -0.15328619     -0.19203379
## 115         -0.97421613        -1.05957037     -0.60806071     -0.75245638
## 116         -1.17854682        -1.28735798     -1.28735798     -1.34797950
## 117         -0.40526982        -0.47537773     -0.56275157     -0.41912210
## 118         -0.46117919        -0.50406856     -0.71909690     -0.60806071
## 119          2.42690063         0.65465430      1.08214564      2.10223158
## 120          0.21802303         0.06366298      0.01272434      0.17908874
## 121          0.10196844        -0.05091800     -0.06366298      0.08918610
## 122          0.99487522         0.48967276      0.63896971      1.03752256
## 123          0.54790615         0.19203379      0.50406856      0.65465430
## 124         -0.57772207        -0.70271480     -0.83980946     -0.68651916
## 125         -0.67050162        -0.76945312     -0.68651916     -0.56275157
## 126         -0.12758531        -0.23107198     -0.21802303     -0.08918610
## 127          0.63896971         0.28368767      0.80413364      0.82184079
## 128         -0.11476746        -0.21802303     -0.20501110     -0.07641832
## 129         -1.05957037        -0.95396468     -0.97421613     -0.95396468
## 130          0.48967276        -0.33710120      0.31028376      0.44707302
## 131         -1.28735798        -1.41400510     -1.44946373     -1.44946373
## 132          0.97421613         0.47537773      0.62344075      1.01596791
## 133          1.03752256         0.51856960      0.67050162      1.08214564
## 134         -0.56275157        -0.68651916     -0.82184079     -0.67050162
## 135          1.05957037         0.53318051      0.68651916      1.10528634
## 136         -2.10223158        -2.23555842     -2.42690063     -2.80216172
## 137          1.23113036         0.32366339      0.59282318      0.60806071
## 138         -1.48684468        -1.77352271     -1.91230127     -1.91230127
## 139         -0.78667510        -0.82184079     -1.17854682     -1.20442230
## 140         -1.41400510        -1.52642702     -1.03752256     -1.08214564
## 141          0.80413364         0.35060018      0.93409710      0.87658763
## 142          1.48684468         0.41912210      1.15343724      1.44946373
```

```
## 143          1.01596791         0.50406856      0.65465430      1.05957037
## 144         -0.17908874        -0.32366339     -0.16617364     -0.20501110
## 145         -1.25874673        -1.38024023     -1.41400510     -1.41400510
## 146         -0.41912210        -0.51856960     -0.62344075     -0.43305527
## 147         -0.47537773        -0.53318051     -0.75245638     -0.62344075
## 148          0.62344075         1.28735798      1.44946373      0.71909690
## 149          0.16617364         1.05957037      0.71909690      0.24416040
## 150          0.44707302         1.31706374      1.31706374      0.59282318
## 151          0.85805346         1.48684468      1.48684468      0.95396468
## 152         -0.76945312         0.70271480     -0.44707302     -0.76945312
## 153          1.77352271         1.71527720      1.71527720      1.71527720
## 154          0.07641832         0.97421613      0.37779383     -0.03818128
## 155         -0.82184079         0.75245638     -0.25729077     -0.80413364
## 156          0.27046566         1.08214564      0.57772207      0.16617364
## 157          1.83849262         2.10223158      1.77352271      1.77352271
## 158         -0.73567430         0.73567430     -0.51856960     -0.97421613
## 159          2.10223158         2.80216172      1.99828954      2.42690063
## 160          0.15328619         1.01596791      0.16617364     -0.12758531
## 161         -0.62344075         0.82184079     -0.12758531     -0.48967276
## 162         -0.25729077         0.85805346      0.15328619     -0.14042416
## 163          1.28735798         1.56855670      1.25874673      0.85805346
## 164          2.23555842         1.91230127      2.80216172      2.80216172
## 165          0.93409710         1.61367018      1.41400510      0.93409710
## 166         -0.28368767         0.89542793      0.11476746     -0.29695946
## 167          1.91230127         2.23555842      1.66232963      1.56855670
## 168         -0.03818128         0.95396468      0.47537773      0.06366298
## 169          1.61367018         1.66232963      2.42690063      1.91230127
## 170          0.75245638         1.41400510      1.56855670      0.97421613
## 171          0.39149488         1.03752256      0.87658763      0.54790615
## 172         -0.36416334         0.80413364     -0.07641832     -0.21802303
## 173         -0.70271480         0.76945312     -0.31028376     -0.70271480
## 174          0.87658763         1.34797950      0.85805346      0.41912210
## 175         -0.51856960         0.78667510      0.29695946     -0.31028376
## 176         -1.77352271        -0.08918610     -1.05957037     -1.61367018
## 177          1.44946373         1.83849262      1.91230127      1.66232963
## 178         -0.05091800         0.93409710      0.46117919      0.05091800
## 179          0.14042416         0.99487522      0.21802303     -0.01272434
## 180          0.78667510         1.38024023      1.38024023      0.73567430
## 181          0.71909690         1.17854682      0.83980946      0.43305527
## 182          1.31706374         1.12903457      1.61367018      1.38024023
## 183         -0.93409710         0.68651916     -0.47537773     -0.87658763
## 184         -0.71909690         0.71909690     -0.39149488     -0.83980946
## 185          0.91459156         1.25874673      1.52642702      1.25874673
## 186          0.01272434         0.83980946      0.40526982      0.28368767
## 187          0.41912210         1.15343724      1.10528634      0.40526982
## 188          0.32366339         1.10528634      0.91459156      0.27046566
## 189          0.89542793         1.52642702      1.34797950      0.80413364
## 190          0.76945312         1.44946373      1.28735798      0.70271480
## 191          1.99828954         2.42690063      2.10223158      1.99828954
## 192          1.41400510         1.77352271      1.83849262      1.61367018
## 193         -0.07641832         0.91459156      0.07641832     -0.23107198
## 194         -0.21802303         0.87658763      0.24416040     -0.16617364
## 195          0.46117919         1.20442230      1.01596791      0.50406856
## 196          1.71527720         1.99828954      2.23555842      1.83849262
## 197          0.47537773         1.23113036      1.03752256      0.51856960
```

```
##     DENT_cooc.W.PET SAVE_cooc.W.PET SVAR_cooc.W.PET SENT_cooc.W.PET
## 1       -0.19203379     -0.11476746      0.05091800      0.01272434
## 2        0.29695946      0.27046566      0.67050162      0.37779383
## 3       -1.41400510     -1.15343724     -1.44946373     -1.28735798
## 4       -0.35060018     -0.02545075      0.02545075      0.05091800
## 5       -1.61367018     -2.42690063     -1.83849262     -1.83849262
## 6       -1.77352271     -1.83849262     -1.91230127     -1.71527720
## 7        0.59282318      0.71909690      0.91459156      0.48967276
## 8       -0.48967276     -0.70271480     -0.60806071     -0.60806071
## 9       -0.70271480     -0.40526982     -0.23107198     -0.25729077
## 10      -0.14042416     -0.51856960     -0.06366298     -0.24416040
## 11      -0.68651916     -0.31028376     -0.40526982     -0.31028376
## 12      -1.71527720     -1.23113036     -1.61367018     -1.52642702
## 13       0.19203379      0.62344075      0.63896971      0.41912210
## 14      -0.20501110     -0.82184079     -0.57772207     -0.63896971
## 15       0.63896971      1.31706374      1.41400510      0.62344075
## 16      -0.89542793     -0.68651916     -0.91459156     -0.78667510
## 17      -0.54790615     -0.46117919     -0.33710120     -0.33710120
## 18      -0.11476746      0.10196844      0.56275157      0.28368767
## 19       0.03818128      0.20501110      0.19203379      0.15328619
## 20      -0.08918610      0.23107198      0.36416334      0.29695946
## 21      -0.39149488     -0.53318051     -0.27046566     -0.29695946
## 22      -0.51856960     -0.80413364     -0.80413364     -0.76945312
## 23       0.01272434      0.21802303      0.08918610      0.11476746
## 24      -0.03818128     -0.05091800     -0.02545075     -0.07641832
## 25      -0.97421613     -0.62344075     -0.85805346     -0.73567430
## 26      -1.08214564     -1.71527720     -0.87658763     -1.05957037
## 27       0.14042416      0.02545075      0.60806071      0.21802303
## 28      -0.57772207     -0.56275157     -0.56275157     -0.47537773
## 29      -1.56855670     -1.52642702     -1.71527720     -1.66232963
## 30       0.16617364      0.53318051      0.46117919      0.33710120
## 31      -1.28735798     -1.28735798     -1.12903457     -1.17854682
## 32      -0.41912210     -0.36416334      0.21802303      0.06366298
## 33      -0.16617364      0.31028376      0.03818128      0.10196844
## 34       0.02545075      0.07641832      0.44707302      0.20501110
## 35       0.20501110      0.24416040      0.71909690      0.39149488
## 36      -1.03752256     -1.61367018     -1.52642702     -1.48684468
## 37      -0.91459156     -1.08214564     -1.01596791     -0.97421613
## 38       0.05091800     -0.10196844      0.15328619      0.02545075
## 39      -0.43305527      0.06366298     -0.21802303     -0.20501110
## 40       0.53318051      0.68651916      0.76945312      0.44707302
## 41       0.65465430      0.57772207      1.52642702      0.54790615
## 42       0.11476746      0.40526982      0.31028376      0.27046566
## 43      -1.17854682     -1.10528634     -0.78667510     -0.83980946
## 44      -1.31706374     -1.31706374     -1.15343724     -1.20442230
## 45      -2.80216172     -2.80216172     -2.80216172     -2.80216172
## 46       0.70271480      1.25874673      2.80216172      0.68651916
## 47      -1.99828954     -1.91230127     -2.23555842     -2.23555842
## 48      -0.02545075      0.47537773      0.47537773      0.36416334
## 49       0.00000000      0.08918610     -0.16617364     -0.16617364
## 50      -0.40526982     -0.29695946     -0.37779383     -0.39149488
## 51      -0.10196844     -0.07641832     -0.19203379     -0.19203379
## 52       0.07641832      0.39149488      0.06366298      0.12758531
## 53      -1.20442230     -1.77352271     -1.28735798     -1.34797950
## 54       0.23107198      0.54790615      0.70271480      0.40526982
```

```
## 55      -0.53318051     -0.60806071     -0.32366339     -0.43305527
## 56      -1.12903457     -0.97421613     -1.41400510     -1.31706374
## 57      -0.44707302     -0.44707302     -0.25729077     -0.28368767
## 58       0.27046566      0.89542793      0.73567430      0.46117919
## 59      -1.66232963     -1.20442230     -1.08214564     -1.03752256
## 60       0.40526982      1.17854682      1.77352271      0.63896971
## 61      -0.62344075     -0.41912210     -0.28368767     -0.27046566
## 62      -0.95396468     -0.93409710     -0.97421613     -0.93409710
## 63      -0.65465430     -0.87658763     -0.75245638     -0.70271480
## 64      -0.07641832      0.17908874      0.65465430      0.35060018
## 65       0.57772207      0.51856960      1.66232963      0.51856960
## 66      -0.01272434      0.60806071      0.28368767      0.25729077
## 67      -0.76945312     -0.67050162     -0.82184079     -0.67050162
## 68       0.17908874      0.65465430      1.23113036      0.53318051
## 69      -0.46117919     -0.63896971     -0.53318051     -0.51856960
## 70       0.54790615      0.35060018      0.25729077      0.16617364
## 71       0.10196844     -0.01272434     -0.01272434      0.00000000
## 72      -0.27046566     -0.59282318     -0.17908874     -0.32366339
## 73      -0.87658763     -1.05957037     -0.89542793     -0.89542793
## 74      -1.10528634     -0.99487522     -1.31706374     -1.08214564
## 75      -0.29695946      0.11476746      0.32366339      0.19203379
## 76      -0.67050162     -1.01596791     -1.34797950     -1.10528634
## 77      -2.10223158     -2.23555842     -2.42690063     -2.42690063
## 78       0.28368767      0.36416334      0.41912210      0.32366339
## 79      -0.47537773     -0.65465430     -0.54790615     -0.54790615
## 80      -0.60806071     -0.57772207     -0.31028376     -0.37779383
## 81      -0.05091800      0.14042416      0.07641832      0.08918610
## 82      -0.37779383     -0.16617364      0.14042416      0.07641832
## 83       0.15328619      0.03818128      0.62344075      0.23107198
## 84      -1.52642702     -1.48684468     -1.66232963     -1.61367018
## 85      -1.25874673     -1.25874673     -1.10528634     -1.15343724
## 86       0.06366298     -0.08918610      0.16617364      0.03818128
## 87      -0.50406856     -0.89542793     -0.51856960     -0.62344075
## 88      -0.21802303     -0.17908874     -0.12758531     -0.15328619
## 89      -0.36416334     -0.25729077     -0.20501110     -0.23107198
## 90      -0.06366298      0.43305527      0.24416040     -0.71909690
## 91      -0.15328619      0.16617364      0.11476746     -0.65465430
## 92       0.44707302      1.03752256      1.10528634     -0.05091800
## 93       0.25729077      0.33710120      0.40526982      0.31028376
## 94      -0.82184079     -0.75245638     -0.47537773     -0.82184079
## 95      -0.63896971     -0.83980946     -0.68651916     -1.91230127
## 96      -0.25729077     -0.24416040     -0.08918610     -0.48967276
## 97       0.41912210      0.46117919      0.54790615     -0.44707302
## 98      -0.24416040     -0.21802303     -0.07641832     -0.46117919
## 99      -0.93409710     -0.91459156     -0.95396468     -0.91459156
## 100      0.12758531      0.01272434      0.59282318      0.17908874
## 101     -1.38024023     -1.38024023     -1.20442230     -1.25874673
## 102      0.43305527      1.01596791      1.08214564     -0.06366298
## 103      0.47537773      1.08214564      1.15343724     -0.02545075
## 104     -0.80413364     -0.73567430     -0.46117919     -0.80413364
## 105      0.48967276      1.10528634      1.17854682     -0.01272434
## 106     -2.23555842     -1.99828954     -1.99828954     -1.77352271
## 107      0.32366339      0.83980946      1.34797950      0.60806071
## 108     -1.83849262     -1.12903457     -1.03752256     -0.99487522
## 109     -1.15343724     -0.37779383     -0.62344075     -0.50406856
```

```
## 110     -1.01596791     -1.56855670     -1.48684468     -1.44946373
## 111      0.56275157      0.70271480      0.78667510      0.47537773
## 112      0.68651916      0.59282318      1.56855670      0.57772207
## 113      0.46117919      1.05957037      1.12903457     -0.03818128
## 114     -0.23107198     -0.19203379     -0.14042416     -0.17908874
## 115     -0.75245638     -1.03752256     -1.38024023     -1.12903457
## 116     -1.34797950     -1.34797950     -1.17854682     -1.23113036
## 117     -0.56275157     -0.47537773     -0.35060018     -0.36416334
## 118     -0.71909690     -0.32366339     -0.41912210     -0.35060018
## 119      0.67050162      1.23113036      2.42690063      0.67050162
## 120     -0.12758531      0.41912210      0.23107198     -0.75245638
## 121     -0.17908874      0.15328619      0.10196844     -0.68651916
## 122      0.35060018      0.93409710      0.99487522     -0.12758531
## 123      0.21802303      0.32366339      0.39149488      0.24416040
## 124     -0.85805346     -0.78667510     -0.50406856     -0.87658763
## 125     -0.73567430     -0.85805346     -0.70271480     -2.10223158
## 126     -0.33710120     -0.28368767     -0.11476746     -0.57772207
## 127      0.31028376      0.44707302      0.53318051     -0.53318051
## 128     -0.32366339     -0.27046566     -0.10196844     -0.56275157
## 129     -0.99487522     -0.95396468     -0.99487522     -0.95396468
## 130      0.08918610      0.00000000      0.57772207      0.14042416
## 131     -1.48684468     -1.44946373     -1.25874673     -1.41400510
## 132      0.33710120      0.91459156      0.97421613     -0.14042416
## 133      0.37779383      0.97421613      1.03752256     -0.10196844
## 134     -0.83980946     -0.76945312     -0.48967276     -0.85805346
## 135      0.39149488      0.99487522      1.05957037     -0.08918610
## 136     -2.42690063     -2.10223158     -2.10223158     -1.99828954
## 137      0.24416040      0.82184079      1.31706374      0.56275157
## 138     -1.91230127     -1.17854682     -1.05957037     -1.01596791
## 139     -1.23113036     -0.39149488     -0.63896971     -0.59282318
## 140     -1.05957037     -1.66232963     -1.56855670     -1.56855670
## 141      0.50406856      0.67050162      0.75245638      0.43305527
## 142      0.60806071      0.56275157      1.48684468      0.50406856
## 143      0.36416334      0.95396468      1.01596791     -0.11476746
## 144     -0.31028376     -0.20501110     -0.15328619     -0.21802303
## 145     -1.44946373     -1.41400510     -1.23113036     -1.38024023
## 146     -0.59282318     -0.48967276     -0.36416334     -0.41912210
## 147     -0.78667510     -0.33710120     -0.43305527     -0.40526982
## 148      1.44946373      1.34797950      0.43305527      1.28735798
## 149      1.05957037      0.75245638      0.12758531      1.10528634
## 150      1.28735798      1.15343724      0.35060018      1.25874673
## 151      1.52642702      1.66232963      0.80413364      1.52642702
## 152      0.73567430     -0.54790615     -0.71909690      0.71909690
## 153      1.71527720      1.91230127      1.71527720      1.99828954
## 154      0.95396468      0.37779383      0.17908874      1.08214564
## 155      0.75245638     -0.12758531     -0.83980946      0.73567430
## 156      1.03752256      0.63896971      0.29695946      1.17854682
## 157      1.83849262      2.23555842      1.83849262      2.10223158
## 158      0.51856960     -0.35060018     -0.65465430      0.80413364
## 159      1.99828954      2.80216172      2.23555842      2.80216172
## 160      0.91459156      0.73567430      0.27046566      1.20442230
## 161      0.78667510     -0.06366298     -0.59282318      0.82184079
## 162      0.87658763      0.05091800     -0.29695946      0.89542793
## 163      1.31706374      1.48684468      1.61367018      1.91230127
## 164      2.80216172      1.83849262      2.10223158      2.23555842
```

```
## 165      1.41400510      1.99828954      0.95396468      1.71527720
## 166      0.83980946      0.25729077     -0.39149488      0.91459156
## 167      1.66232963      2.10223158      1.99828954      2.42690063
## 168      1.01596791      0.29695946     -0.03818128      0.99487522
## 169      2.42690063      1.56855670      0.93409710      1.56855670
## 170      1.56855670      1.20442230      0.68651916      1.38024023
## 171      1.15343724      0.48967276      0.37779383      1.15343724
## 172      0.80413364     -0.23107198     -0.44707302      0.83980946
## 173      0.76945312     -0.14042416     -0.73567430      0.78667510
## 174      1.12903457      1.38024023      1.20442230      1.61367018
## 175      0.85805346     -0.15328619     -0.76945312      0.76945312
## 176     -0.28368767     -0.71909690     -1.77352271      0.59282318
## 177      1.91230127      1.61367018      1.28735798      1.83849262
## 178      0.99487522      0.28368767     -0.05091800      0.97421613
## 179      0.93409710      0.50406856      0.20501110      1.12903457
## 180      1.38024023      1.41400510      0.82184079      1.48684468
## 181      1.08214564      0.87658763      0.85805346      1.44946373
## 182      1.61367018      1.28735798      1.44946373      1.66232963
## 183      0.62344075     -0.50406856     -0.93409710      0.70271480
## 184      0.71909690     -0.43305527     -0.67050162      0.75245638
## 185      1.48684468      1.12903457      0.87658763      1.41400510
## 186      0.97421613     -0.03818128      0.00000000      0.95396468
## 187      1.23113036      0.85805346      0.48967276      1.31706374
## 188      1.10528634      0.76945312      0.33710120      1.23113036
## 189      1.34797950      1.71527720      0.89542793      0.87658763
## 190      1.25874673      1.44946373      0.83980946      0.93409710
## 191      2.23555842      2.42690063      1.91230127      1.34797950
## 192      1.77352271      1.52642702      1.25874673      1.77352271
## 193      0.82184079      0.19203379      0.01272434      0.85805346
## 194      0.89542793      0.12758531     -0.24416040      0.65465430
## 195      1.17854682      0.78667510      0.50406856      1.01596791
## 196      2.10223158      1.77352271      1.38024023      1.05957037
## 197      1.20442230      0.80413364      0.51856960      1.03752256
##     ASM_cooc.W.PET Contrast_cooc.W.PET Dissimilarity_cooc.W.PET
## 1      -0.35060018          0.01272434              -0.10196844
## 2      -0.44005334          0.80413364               0.56275157
## 3       0.47537773         -1.44946373              -1.48684468
## 4      -0.32366339         -0.15328619              -0.28368767
## 5       1.44946373         -1.56855670              -1.71527720
## 6       1.01596791         -1.77352271              -1.77352271
## 7      -0.53318051          1.34797950               1.05957037
## 8      -0.08918610         -0.40526982              -0.46117919
## 9      -0.17908874         -0.60806071              -0.59282318
## 10     -0.21802303          0.11476746              -0.05091800
## 11     -0.15328619         -0.62344075              -0.70271480
## 12      0.59282318         -1.61367018              -1.66232963
## 13     -0.51856960          0.57772207               0.43305527
## 14      0.29695946          0.00000000              -0.11476746
## 15     -0.57772207          1.41400510               1.23113036
## 16      0.07641832         -0.83980946              -0.85805346
## 17     -0.14042416         -0.44707302              -0.54790615
## 18     -0.36416334          0.12758531              -0.08918610
## 19     -0.44005334          0.31028376               0.23107198
## 20     -0.41912210          0.14042416               0.05091800
## 21     -0.23107198         -0.24416040              -0.32366339
```

```
## 22      0.02545075         -0.36416334              -0.40526982
## 23     -0.46117919          0.28368767               0.25729077
## 24     -0.37779383          0.21802303               0.10196844
## 25      0.03818128         -0.89542793              -0.91459156
## 26      0.75245638         -1.05957037              -1.15343724
## 27     -0.28368767          0.51856960               0.33710120
## 28     -0.11476746         -0.48967276              -0.53318051
## 29      0.62344075         -1.52642702              -1.56855670
## 30     -0.50406856          0.54790615               0.36416334
## 31      0.56275157         -1.25874673              -1.23113036
## 32     -0.25729077         -0.28368767              -0.36416334
## 33     -0.40526982          0.02545075              -0.03818128
## 34     -0.33710120          0.29695946               0.12758531
## 35     -0.48967276          0.59282318               0.41912210
## 36      0.63896971         -1.01596791              -1.01596791
## 37      0.25729077         -0.85805346              -0.87658763
## 38     -0.31028376          0.36416334               0.19203379
## 39     -0.29695946         -0.31028376              -0.35060018
## 40     -0.56275157          1.17854682               0.97421613
## 41     -0.54790615          1.48684468               1.17854682
## 42     -0.47537773          0.41912210               0.28368767
## 43      0.44707302         -1.12903457              -1.34797950
## 44      0.51856960         -1.28735798              -1.25874673
## 45      2.80216172         -2.80216172              -2.80216172
## 46      0.06366298          1.66232963               1.12903457
## 47      1.66232963         -1.99828954              -1.99828954
## 48      0.14042416          0.23107198               0.03818128
## 49      0.28368767          0.27046566               0.14042416
## 50      0.35060018         -0.29695946              -0.33710120
## 51      0.27046566          0.03818128               0.00000000
## 52      0.23107198          0.32366339               0.17908874
## 53      1.25874673         -1.20442230              -1.38024023
## 54      0.17908874          0.62344075               0.44707302
## 55      0.41912210         -0.41912210              -0.50406856
## 56      0.80413364         -1.10528634              -1.08214564
## 57      0.33710120         -0.33710120              -0.37779383
## 58      0.10196844          0.65465430               0.48967276
## 59      0.97421613         -1.66232963              -1.61367018
## 60      0.05091800          0.89542793               0.54790615
## 61      0.37779383         -0.54790615              -0.67050162
## 62      0.65465430         -0.93409710              -0.95396468
## 63      0.57772207         -0.59282318              -0.73567430
## 64      0.21802303          0.15328619              -0.02545075
## 65      0.12758531          1.31706374               0.95396468
## 66      0.19203379          0.25729077               0.08918610
## 67      0.54790615         -0.70271480              -0.76945312
## 68      0.08918610          0.56275157               0.39149488
## 69      0.43305527         -0.37779383              -0.41912210
## 70      0.15328619          1.12903457               0.89542793
## 71      0.36416334          0.35060018               0.27046566
## 72      0.50406856         -0.07641832              -0.24416040
## 73      0.95396468         -0.78667510              -0.89542793
## 74      0.99487522         -1.08214564              -1.10528634
## 75      0.39149488         -0.19203379              -0.27046566
## 76      0.83980946         -0.56275157              -0.57772207
```

```
## 77      2.10223158         -2.10223158              -2.10223158
## 78      0.32366339          0.70271480               0.53318051
## 79     -0.05091800         -0.39149488              -0.43305527
## 80     -0.07641832         -0.50406856              -0.65465430
## 81     -0.27046566          0.16617364               0.06366298
## 82     -0.16617364         -0.17908874              -0.29695946
## 83     -0.12758531          0.53318051               0.35060018
## 84      0.67050162         -1.48684468              -1.52642702
## 85      0.60806071         -1.23113036              -1.20442230
## 86     -0.19203379          0.37779383               0.20501110
## 87      0.40526982         -0.35060018              -0.48967276
## 88     -0.24416040         -0.10196844              -0.14042416
## 89     -0.20501110         -0.23107198              -0.23107198
## 90     -0.93409710          0.19203379               0.02545075
## 91     -0.91459156          0.08918610              -0.01272434
## 92     -0.97421613          1.03752256               0.73567430
## 93     -0.73567430          0.68651916               0.51856960
## 94     -0.65465430         -0.73567430              -0.80413364
## 95     -0.60806071         -0.51856960              -0.63896971
## 96     -0.89542793         -0.03818128              -0.19203379
## 97     -0.95396468          0.87658763               0.82184079
## 98     -0.82184079         -0.02545075              -0.17908874
## 99      0.73567430         -0.91459156              -0.93409710
## 100    -0.78667510          0.50406856               0.32366339
## 101    -0.10196844         -1.34797950              -1.31706374
## 102    -1.01596791          1.01596791               0.70271480
## 103    -0.80413364          1.08214564               0.76945312
## 104    -0.59282318         -0.71909690              -0.78667510
## 105    -0.75245638          1.10528634               0.78667510
## 106     1.52642702         -2.23555842              -2.23555842
## 107     0.01272434          0.76945312               0.60806071
## 108     1.10528634         -1.83849262              -1.83849262
## 109     0.48967276         -1.15343724              -1.12903457
## 110     1.12903457         -0.99487522              -0.99487522
## 111    -0.01272434          1.20442230               0.99487522
## 112     0.00000000          1.52642702               1.20442230
## 113    -0.85805346          1.05957037               0.75245638
## 114    -0.76945312         -0.11476746              -0.15328619
## 115    -0.39149488         -0.57772207              -0.60806071
## 116    -0.06366298         -1.31706374              -1.28735798
## 117    -0.68651916         -0.46117919              -0.56275157
## 118    -0.70271480         -0.63896971              -0.71909690
## 119    -0.87658763          1.61367018               1.08214564
## 120    -2.10223158          0.17908874               0.01272434
## 121    -1.99828954          0.07641832              -0.06366298
## 122    -2.42690063          0.93409710               0.63896971
## 123    -1.52642702          0.67050162               0.50406856
## 124    -1.41400510         -0.76945312              -0.83980946
## 125    -1.38024023         -0.53318051              -0.68651916
## 126    -1.91230127         -0.06366298              -0.21802303
## 127    -2.23555842          0.85805346               0.80413364
## 128    -1.77352271         -0.05091800              -0.20501110
## 129    -0.83980946         -0.95396468              -0.97421613
## 130    -1.66232963          0.48967276               0.31028376
## 131    -1.31706374         -1.41400510              -1.44946373
```

```
## 132    -2.80216172          0.91459156               0.62344075
## 133    -1.71527720          0.97421613               0.67050162
## 134    -1.34797950         -0.75245638              -0.82184079
## 135    -1.56855670          0.99487522               0.68651916
## 136    -0.03818128         -2.42690063              -2.42690063
## 137    -1.20442230          0.75245638               0.59282318
## 138    -0.63896971         -1.91230127              -1.91230127
## 139    -1.03752256         -1.17854682              -1.17854682
## 140    -0.62344075         -1.03752256              -1.03752256
## 141    -1.25874673          1.15343724               0.93409710
## 142    -1.23113036          1.44946373               1.15343724
## 143    -1.83849262          0.95396468               0.65465430
## 144    -1.61367018         -0.12758531              -0.16617364
## 145    -1.28735798         -1.38024023              -1.41400510
## 146    -1.44946373         -0.47537773              -0.62344075
## 147    -1.48684468         -0.65465430              -0.75245638
## 148     0.93409710          0.83980946               1.44946373
## 149     1.08214564          0.24416040               0.71909690
## 150     0.91459156          0.60806071               1.31706374
## 151     0.89542793          1.23113036               1.48684468
## 152     2.23555842         -0.80413364              -0.44707302
## 153     0.82184079          1.71527720               1.71527720
## 154     1.28735798         -0.01272434               0.37779383
## 155     1.71527720         -0.68651916              -0.25729077
## 156     1.05957037          0.20501110               0.57772207
## 157     0.71909690          1.77352271               1.77352271
## 158     1.91230127         -0.97421613              -0.51856960
## 159     0.68651916          2.10223158               1.99828954
## 160     1.17854682         -0.16617364               0.16617364
## 161     1.56855670         -0.43305527              -0.12758531
## 162     1.41400510         -0.21802303               0.15328619
## 163     0.87658763          0.71909690               1.25874673
## 164     0.76945312          2.80216172               2.80216172
## 165     0.85805346          0.82184079               1.41400510
## 166     1.38024023         -0.25729077               0.11476746
## 167     0.70271480          1.56855670               1.66232963
## 168     1.31706374          0.06366298               0.47537773
## 169     0.78667510          2.42690063               2.42690063
## 170     1.15343724          1.25874673               1.56855670
## 171     1.34797950          0.44707302               0.87658763
## 172     1.83849262         -0.32366339              -0.07641832
## 173     1.99828954         -0.67050162              -0.31028376
## 174     1.20442230          0.39149488               0.85805346
## 175     1.77352271         -0.20501110               0.29695946
## 176     2.42690063         -1.71527720              -1.05957037
## 177     1.03752256          1.91230127               1.91230127
## 178     0.53318051          0.05091800               0.46117919
## 179     0.46117919         -0.08918610               0.21802303
## 180    -0.02545075          0.73567430               1.38024023
## 181     0.24416040          0.40526982               0.83980946
## 182     0.31028376          1.38024023               1.61367018
## 183     1.61367018         -0.87658763              -0.47537773
## 184     1.48684468         -0.82184079              -0.39149488
## 185     0.20501110          1.28735798               1.52642702
## 186     1.23113036          0.10196844               0.40526982
```

```
## 187     0.11476746          0.43305527               1.10528634
## 188     0.16617364          0.33710120               0.91459156
## 189    -1.12903457          0.78667510               1.34797950
## 190    -1.10528634          0.63896971               1.28735798
## 191    -1.17854682          2.23555842               2.10223158
## 192    -0.99487522          1.83849262               1.83849262
## 193    -0.71909690         -0.27046566               0.07641832
## 194    -0.67050162         -0.14042416               0.24416040
## 195    -1.08214564          0.46117919               1.01596791
## 196    -1.15343724          1.99828954               2.23555842
## 197    -1.05957037          0.47537773               1.03752256
##     Inv_diff_cooc.W.PET Inv_diff_norm_cooc.W.PET IDM_cooc.W.PET
## 1           -0.47537773              -0.28368767    -0.47537773
## 2           -1.03752256              -0.85805346    -1.03752256
## 3            0.48967276              -0.23107198     0.71909690
## 4           -0.27046566               0.37779383    -0.27046566
## 5            0.75245638               0.11476746     0.97421613
## 6            0.70271480              -0.07641832     0.95396468
## 7           -1.25874673              -0.51856960    -1.25874673
## 8           -0.17908874              -0.83980946    -0.15328619
## 9           -0.06366298               0.01272434    -0.03818128
## 10          -0.44707302              -0.48967276    -0.43305527
## 11           0.02545075               0.31028376     0.07641832
## 12           0.60806071              -0.02545075     0.89542793
## 13          -0.99487522              -0.41912210    -0.97421613
## 14          -0.32366339              -1.61367018    -0.31028376
## 15          -1.52642702              -0.16617364    -1.48684468
## 16           0.23107198               0.07641832     0.29695946
## 17           0.05091800               0.29695946     0.10196844
## 18          -0.37779383               0.32366339    -0.35060018
## 19          -0.75245638              -0.31028376    -0.78667510
## 20          -0.54790615              -0.06366298    -0.56275157
## 21          -0.28368767              -0.19203379    -0.29695946
## 22          -0.23107198              -1.71527720    -0.21802303
## 23          -0.78667510              -1.15343724    -0.80413364
## 24          -0.57772207              -0.12758531    -0.60806071
## 25           0.19203379              -0.60806071     0.25729077
## 26           0.50406856               0.46117919     0.76945312
## 27          -0.73567430              -0.59282318    -0.73567430
## 28          -0.02545075              -0.05091800     0.01272434
## 29           0.56275157              -0.40526982     0.80413364
## 30          -0.83980946              -0.27046566    -0.83980946
## 31           0.44707302              -0.75245638     0.63896971
## 32          -0.20501110               0.16617364    -0.16617364
## 33          -0.50406856              -0.17908874    -0.51856960
## 34          -0.51856960              -0.24416040    -0.48967276
## 35          -0.89542793               0.02545075    -0.89542793
## 36           0.28368767              -1.41400510     0.41912210
## 37           0.21802303              -0.68651916     0.28368767
## 38          -0.71909690              -0.82184079    -0.71909690
## 39          -0.21802303              -0.11476746    -0.20501110
## 40          -1.48684468              -1.03752256    -1.44946373
## 41          -1.38024023              -0.62344075    -1.31706374
## 42          -0.82184079              -0.53318051    -0.85805346
## 43           0.53318051               0.51856960     0.82184079
```

```
## 44          0.41912210              -0.78667510     0.62344075
## 45          1.31706374               0.53318051     1.66232963
## 46         -0.95396468               0.59282318    -0.87658763
## 47          0.99487522               0.21802303     1.23113036
## 48         -0.36416334               0.44707302    -0.36416334
## 49         -0.63896971              -1.23113036    -0.67050162
## 50         -0.12758531              -0.21802303    -0.11476746
## 51         -0.43305527              -0.54790615    -0.44707302
## 52         -0.56275157              -0.36416334    -0.57772207
## 53          0.62344075               0.39149488     0.87658763
## 54         -0.65465430              -0.20501110    -0.54790615
## 55          0.00000000               0.25729077     0.03818128
## 56          0.36416334              -0.76945312     0.54790615
## 57         -0.08918610               0.33710120    -0.10196844
## 58         -0.87658763               0.20501110    -0.91459156
## 59          0.63896971               0.19203379     0.93409710
## 60         -0.85805346               0.50406856    -0.82184079
## 61          0.10196844               0.63896971     0.15328619
## 62          0.29695946               0.17908874     0.48967276
## 63          0.15328619               0.65465430     0.21802303
## 64         -0.35060018               0.62344075    -0.37779383
## 65         -1.01596791              -0.03818128    -0.99487522
## 66         -0.46117919               0.54790615    -0.46117919
## 67          0.16617364               0.14042416     0.23107198
## 68         -0.67050162               0.47537773    -0.65465430
## 69         -0.07641832              -0.29695946    -0.02545075
## 70         -1.05957037              -0.63896971    -1.05957037
## 71         -0.62344075              -0.47537773    -0.63896971
## 72         -0.11476746               0.40526982    -0.08918610
## 73          0.37779383               0.48967276     0.56275157
## 74          0.47537773               0.23107198     0.67050162
## 75         -0.19203379               0.56275157    -0.17908874
## 76          0.01272434              -1.38024023     0.05091800
## 77          1.03752256              -0.01272434     1.28735798
## 78         -0.91459156              -0.43305527    -0.93409710
## 79         -0.14042416              -0.57772207    -0.14042416
## 80          0.07641832               0.60806071     0.11476746
## 81         -0.53318051              -0.50406856    -0.53318051
## 82         -0.25729077               0.43305527    -0.23107198
## 83         -0.70271480              -0.56275157    -0.70271480
## 84          0.57772207              -0.35060018     0.83980946
## 85          0.46117919              -0.65465430     0.65465430
## 86         -0.68651916              -0.73567430    -0.68651916
## 87          0.08918610               0.12758531     0.16617364
## 88         -0.39149488              -0.44707302    -0.39149488
## 89         -0.33710120              -0.39149488    -0.33710120
## 90         -0.59282318              -0.25729077    -0.59282318
## 91         -0.60806071              -0.37779383    -0.62344075
## 92         -1.41400510              -0.08918610    -1.41400510
## 93         -1.17854682              -1.17854682    -1.20442230
## 94          0.03818128               0.24416040     0.12758531
## 95         -0.03818128              -1.12903457     0.02545075
## 96         -0.41912210              -0.15328619    -0.41912210
## 97         -1.56855670              -1.05957037    -1.56855670
## 98         -0.40526982              -0.14042416    -0.40526982
```

```
## 99          0.31028376              0.27046566     0.51856960
## 100        -0.97421613             -0.97421613    -1.01596791
## 101         0.33710120             -1.25874673     0.57772207
## 102        -1.44946373             -0.10196844    -1.52642702
## 103        -1.31706374              0.03818128    -1.34797950
## 104         0.06366298              0.28368767     0.14042416
## 105        -1.28735798              0.08918610    -1.28735798
## 106         1.08214564              0.35060018     1.38024023
## 107        -1.08214564              0.06366298    -1.08214564
## 108         0.89542793              0.57772207     1.15343724
## 109         0.40526982              0.41912210     0.60806071
## 110         0.32366339             -0.95396468     0.50406856
## 111        -1.20442230             -0.80413364    -1.23113036
## 112        -1.15343724             -0.33710120    -1.10528634
## 113        -1.34797950              0.00000000    -1.38024023
## 114        -0.48967276             -0.87658763    -0.50406856
## 115        -0.10196844             -1.77352271    -0.12758531
## 116         0.39149488             -1.10528634     0.59282318
## 117        -0.01272434              0.05091800     0.06366298
## 118        -0.05091800              0.10196844    -0.01272434
## 119        -1.23113036              0.36416334    -1.17854682
## 120        -1.10528634             -1.44946373    -1.12903457
## 121        -1.12903457             -1.52642702    -1.15343724
## 122        -2.23555842             -1.20442230    -2.23555842
## 123        -1.77352271             -2.42690063    -1.77352271
## 124        -0.16617364             -0.71909690    -0.06366298
## 125        -0.29695946             -2.23555842    -0.25729077
## 126        -0.80413364             -1.34797950    -0.76945312
## 127        -2.80216172             -1.99828954    -2.80216172
## 128        -0.76945312             -1.31706374    -0.75245638
## 129         0.12758531             -0.70271480     0.24416040
## 130        -1.61367018             -1.91230127    -1.61367018
## 131         0.17908874             -2.80216172     0.31028376
## 132        -2.42690063             -1.28735798    -2.42690063
## 133        -1.99828954             -1.01596791    -1.99828954
## 134        -0.15328619             -0.67050162    -0.05091800
## 135        -1.91230127             -0.91459156    -1.91230127
## 136         0.87658763             -0.46117919     1.20442230
## 137        -1.66232963             -0.93409710    -1.66232963
## 138         0.76945312              0.15328619     1.01596791
## 139         0.25729077             -0.32366339     0.36416334
## 140         0.14042416             -1.83849262     0.20501110
## 141        -1.83849262             -1.56855670    -1.83849262
## 142        -1.71527720             -1.48684468    -1.71527720
## 143        -2.10223158             -1.08214564    -2.10223158
## 144        -0.93409710             -1.66232963    -0.95396468
## 145         0.20501110             -2.10223158     0.33710120
## 146        -0.24416040             -0.99487522    -0.19203379
## 147        -0.31028376             -0.89542793    -0.28368767
## 148         0.73567430              0.68651916     0.37779383
## 149         1.20442230              1.08214564     1.08214564
## 150         0.93409710              0.85805346     0.70271480
## 151         0.83980946              0.99487522     0.46117919
## 152         2.23555842              1.56855670     2.23555842
## 153         0.71909690              1.10528634     0.47537773
```

```
## 154          1.38024023                1.48684468     1.31706374
## 155          1.77352271                0.75245638     1.77352271
## 156          1.25874673                1.52642702     1.10528634
## 157          0.54790615                1.38024023     0.19203379
## 158          2.42690063                1.34797950     2.42690063
## 159          0.59282318                1.83849262     0.27046566
## 160          1.56855670                2.42690063     1.48684468
## 161          1.71527720                1.31706374     1.71527720
## 162          1.61367018                2.80216172     1.56855670
## 163          1.05957037                2.23555842     0.85805346
## 164          0.43305527                1.20442230     0.08918610
## 165          0.91459156                1.91230127     0.68651916
## 166          1.66232963                1.28735798     1.61367018
## 167          0.68651916                1.71527720     0.39149488
## 168          1.28735798                1.03752256     1.17854682
## 169          0.35060018                0.80413364     0.00000000
## 170          0.78667510                0.89542793     0.40526982
## 171          1.23113036                1.61367018     1.12903457
## 172          1.83849262                1.77352271     1.83849262
## 173          1.99828954                1.41400510     1.99828954
## 174          1.15343724                1.99828954     1.03752256
## 175          1.41400510                0.67050162     1.34797950
## 176          2.80216172                1.23113036     2.80216172
## 177          0.51856960                0.93409710     0.17908874
## 178          1.17854682                0.82184079     1.05957037
## 179          1.48684468                2.10223158     1.41400510
## 180          0.85805346                0.87658763     0.53318051
## 181          1.12903457                1.66232963     0.99487522
## 182          0.65465430                0.83980946     0.32366339
## 183          2.10223158                1.01596791     2.10223158
## 184          1.91230127                0.78667510     1.91230127
## 185          0.67050162                0.76945312     0.35060018
## 186          1.52642702                1.25874673     1.52642702
## 187          1.01596791                0.91459156     0.78667510
## 188          1.10528634                0.95396468     0.91459156
## 189          0.82184079                1.05957037     0.44707302
## 190          0.80413364                0.97421613     0.43305527
## 191          0.24416040                1.17854682    -0.24416040
## 192          0.27046566                0.70271480    -0.07641832
## 193          1.44946373                1.44946373     1.44946373
## 194          1.34797950                0.71909690     1.25874673
## 195          0.95396468                1.12903457     0.73567430
## 196          0.11476746                0.73567430    -0.32366339
## 197          0.97421613                1.15343724     0.75245638
##     IDM_norm_cooc.W.PET Inv_var_cooc.W.PET Correlation_cooc.W.PET
## 1           -0.27707061        -0.43305527             0.02545075
## 2           -0.78667510        -0.97421613            -1.05957037
## 3           -0.20501110         0.76945312             0.06366298
## 4            0.36416334        -0.21802303             0.37779383
## 5            0.05091800         0.80413364            -0.73567430
## 6           -0.03818128         0.99487522            -0.28368767
## 7           -0.57772207        -1.28735798            -1.12903457
## 8           -0.76945312        -0.01272434            -1.20442230
## 9            0.16617364         0.02545075             0.71909690
## 10          -0.51856960        -0.46117919            -1.10528634
```

```
## 11          0.27046566         0.11476746             0.47537773
## 12          0.03818128         0.89542793             0.03818128
## 13         -0.39149488        -0.95396468            -0.67050162
## 14         -1.71527720        -0.37779383            -2.10223158
## 15         -0.08918610        -1.48684468            -0.12758531
## 16          0.12758531         0.32366339            -0.82184079
## 17          0.19203379        -0.14042416             0.36416334
## 18          0.25729077        -0.35060018             0.48967276
## 19         -0.19203379        -0.89542793            -0.78667510
## 20          0.11476746        -0.53318051             0.33710120
## 21         -0.12758531        -0.25729077            -0.31028376
## 22         -1.66232963        -0.06366298            -1.83849262
## 23         -0.89542793        -0.80413364            -1.01596791
## 24          0.00000000        -0.59282318            -1.15343724
## 25         -0.48967276         0.27046566             0.20501110
## 26          0.37779383         0.63896971             0.41912210
## 27         -0.62344075        -0.91459156            -0.05091800
## 28          0.07641832         0.05091800            -0.23107198
## 29         -0.40526982         0.70271480            -0.41912210
## 30         -0.25729077        -0.85805346            -0.63896971
## 31         -0.71909690         0.57772207             0.23107198
## 32          0.17908874        -0.16617364             0.73567430
## 33         -0.07641832        -0.47537773            -0.15328619
## 34         -0.29695946        -0.57772207             0.05091800
## 35          0.06366298        -0.78667510            -0.29695946
## 36         -1.10528634         0.10196844            -1.52642702
## 37         -0.68651916         0.29695946            -1.25874673
## 38         -0.75245638        -0.56275157            -1.03752256
## 39         -0.05091800        -0.19203379             0.08918610
## 40         -0.83980946        -1.41400510            -1.28735798
## 41         -0.65465430        -1.23113036            -0.10196844
## 42         -0.47537773        -0.75245638            -0.56275157
## 43          0.41912210         0.75245638             0.62344075
## 44         -0.73567430         0.56275157             0.21802303
## 45          0.35060018         0.62344075            -0.70271480
## 46          0.57772207        -0.87658763             0.83980946
## 47          0.24416040         1.10528634             0.19203379
## 48          0.47537773        -0.32366339             0.35060018
## 49         -0.87658763        -0.63896971            -1.61367018
## 50         -0.06366298        -0.02545075            -0.47537773
## 51         -0.43305527        -0.41912210            -1.34797950
## 52         -0.17908874        -0.67050162            -1.08214564
## 53          0.44707302         0.68651916             0.17908874
## 54         -0.11476746        -0.70271480            -0.50406856
## 55          0.33710120         0.03818128             0.39149488
## 56         -0.59282318         0.59282318            -0.83980946
## 57          0.43305527        -0.11476746             0.11476746
## 58          0.28368767        -0.82184079            -0.48967276
## 59          0.31028376         0.95396468             0.65465430
## 60          0.53318051        -0.76945312             0.51856960
## 61          0.63896971         0.25729077             0.63896971
## 62          0.29695946         0.39149488            -0.43305527
## 63          0.65465430         0.28368767            -0.76945312
## 64          0.62344075        -0.33710120             0.59282318
## 65          0.14042416        -0.99487522             0.27046566
```

```
## 66          0.56275157        -0.44707302             0.01272434
## 67          0.20501110         0.23107198            -0.71909690
## 68          0.51856960        -0.68651916             0.56275157
## 69         -0.15328619         0.00000000            -0.95396468
## 70         -0.54790615        -1.08214564            -1.99828954
## 71         -0.27707061        -0.62344075            -1.44946373
## 72          0.46117919        -0.05091800            -0.32366339
## 73          0.50406856         0.44707302            -0.53318051
## 74          0.32366339         0.67050162            -0.24416040
## 75          0.60806071        -0.17908874             0.76945312
## 76         -1.03752256         0.08918610            -2.42690063
## 77          0.08918610         1.15343724             0.07641832
## 78         -0.24416040        -0.93409710            -1.31706374
## 79         -0.56275157        -0.08918610            -0.97421613
## 80          0.54790615         0.16617364             0.50406856
## 81         -0.46117919        -0.50406856            -0.40526982
## 82          0.40526982        -0.23107198             0.54790615
## 83         -0.53318051        -0.83980946            -0.01272434
## 84         -0.35060018         0.71909690            -0.36416334
## 85         -0.63896971         0.60806071             0.24416040
## 86         -0.70271480        -0.54790615            -0.99487522
## 87          0.02545075         0.12758531            -0.65465430
## 88         -0.37779383        -0.40526982            -0.25729077
## 89         -0.31028376        -0.31028376            -0.16617364
## 90         -0.44707302        -0.65465430            -0.08918610
## 91         -0.50406856        -0.60806071            -0.11476746
## 92         -0.21802303        -1.44946373            -0.21802303
## 93         -0.99487522        -1.25874673            -1.48684468
## 94          0.01272434         0.14042416             0.43305527
## 95         -1.08214564         0.01272434            -0.93409710
## 96         -0.36416334        -0.39149488            -0.35060018
## 97         -0.93409710        -1.56855670            -1.56855670
## 98         -0.33710120        -0.36416334            -0.33710120
## 99          0.39149488         0.41912210            -0.39149488
## 100        -0.97421613        -1.03752256            -0.17908874
## 101        -1.05957037         0.40526982             0.14042416
## 102        -0.32366339        -1.52642702            -0.27046566
## 103        -0.10196844        -1.34797950            -0.19203379
## 104         0.10196844         0.15328619             0.44707302
## 105        -0.01272434        -1.31706374            -0.14042416
## 106         0.23107198         1.08214564             0.82184079
## 107         0.21802303        -1.12903457             0.40526982
## 108         0.59282318         1.05957037             1.17854682
## 109         0.48967276         0.73567430             0.93409710
## 110        -0.85805346         0.17908874            -1.41400510
## 111        -0.60806071        -1.17854682            -1.23113036
## 112        -0.23107198        -1.05957037            -0.02545075
## 113        -0.14042416        -1.38024023            -0.20501110
## 114        -0.80413364        -0.51856960            -0.37779383
## 115        -1.61367018        -0.10196844            -2.80216172
## 116        -1.01596791         0.43305527             0.15328619
## 117        -0.16617364        -0.24416040             0.29695946
## 118        -0.02545075         0.07641832             0.46117919
## 119         0.15328619        -1.15343724             0.75245638
## 120        -1.48684468        -1.20442230            -0.51856960
```

```
## 121         -1.52642702        -1.10528634            -0.54790615
## 122         -1.31706374        -2.23555842            -0.68651916
## 123         -2.10223158        -1.83849262            -1.71527720
## 124         -1.15343724        -0.15328619             0.28368767
## 125         -2.80216172        -0.29695946            -1.17854682
## 126         -1.44946373        -0.73567430            -0.87658763
## 127         -1.91230127        -2.80216172            -1.77352271
## 128         -1.41400510        -0.71909690            -0.85805346
## 129         -0.82184079         0.21802303            -0.91459156
## 130         -1.99828954        -1.61367018            -0.59282318
## 131         -2.42690063         0.20501110            -0.03818128
## 132         -1.38024023        -2.42690063            -0.75245638
## 133         -1.23113036        -1.99828954            -0.60806071
## 134         -1.12903457        -0.12758531             0.31028376
## 135         -1.17854682        -1.91230127            -0.57772207
## 136         -0.91459156         0.87658763             0.67050162
## 137         -0.95396468        -1.71527720             0.25729077
## 138         -0.41912210         0.82184079             0.91459156
## 139         -0.67050162         0.37779383             0.80413364
## 140         -1.83849262        -0.07641832            -1.66232963
## 141         -1.56855670        -1.77352271            -1.38024023
## 142         -1.34797950        -1.66232963            -0.44707302
## 143         -1.25874673        -2.10223158            -0.62344075
## 144         -1.77352271        -1.01596791            -0.89542793
## 145         -2.23555842         0.24416040             0.00000000
## 146         -1.28735798        -0.48967276             0.10196844
## 147         -1.20442230        -0.27046566             0.32366339
## 148          0.73567430         0.51856960            -0.80413364
## 149          1.17854682         1.28735798             1.01596791
## 150          0.91459156         0.85805346             0.12758531
## 151          1.10528634         0.48967276             0.53318051
## 152          1.61367018         2.10223158             1.52642702
## 153          1.15343724         0.46117919             0.97421613
## 154          1.48684468         1.38024023             1.66232963
## 155          0.78667510         1.83849262             0.78667510
## 156          1.56855670         1.20442230             1.48684468
## 157          1.34797950         0.35060018             0.99487522
## 158          1.41400510         2.42690063             2.42690063
## 159          1.83849262         0.36416334             1.83849262
## 160          2.42690063         1.61367018             2.23555842
## 161          1.38024023         1.71527720             1.03752256
## 162          2.80216172         1.66232963             0.85805346
## 163          2.23555842         1.01596791             2.10223158
## 164          1.28735798         0.19203379             1.61367018
## 165          1.99828954         0.83980946             1.41400510
## 166          1.31706374         1.56855670             0.87658763
## 167          1.77352271         0.47537773             1.99828954
## 168          1.12903457         1.31706374             0.68651916
## 169          0.82184079         0.06366298            -1.91230127
## 170          1.03752256         0.53318051            -0.06366298
## 171          1.66232963         1.25874673             1.15343724
## 172          1.71527720         1.77352271             0.95396468
## 173          1.44946373         1.99828954             1.23113036
## 174          2.10223158         1.17854682             2.80216172
## 175          0.68651916         1.41400510            -2.23555842
```

```
## 176          1.25874673         2.80216172             1.44946373
## 177          1.05957037         0.31028376             0.16617364
## 178          0.80413364         1.23113036             0.60806071
## 179          1.91230127         1.52642702             1.77352271
## 180          0.87658763         0.78667510             1.05957037
## 181          1.52642702         1.12903457             1.91230127
## 182          0.83980946         0.33710120             1.38024023
## 183          0.97421613         2.23555842             1.08214564
## 184          0.76945312         1.91230127             1.56855670
## 185          0.75245638         0.65465430             0.57772207
## 186          1.23113036         1.44946373             0.89542793
## 187          0.93409710         0.91459156             1.20442230
## 188          1.01596791         1.03752256             1.28735798
## 189          0.89542793         0.50406856             1.34797950
## 190          0.85805346         0.54790615             1.31706374
## 191          1.08214564        -0.20501110             1.25874673
## 192          0.70271480        -0.03818128            -0.07641832
## 193          1.20442230         1.48684468             1.71527720
## 194          0.67050162         1.34797950             0.70271480
## 195          0.95396468         0.93409710             1.10528634
## 196          0.71909690        -0.28368767            -0.46117919
## 197          0.99487522         0.97421613             1.12903457
##     Autocorrelation_cooc.W.PET Tendency_cooc.W.PET Shade_cooc.W.PET
## 1                   0.05091800          0.05091800       0.28368767
## 2                   0.35060018          0.67050162       0.53318051
## 3                  -1.12903457         -1.44946373      -1.56855670
## 4                   0.11476746          0.02545075       0.39149488
## 5                  -2.23555842         -1.83849262      -0.65465430
## 6                  -1.83849262         -1.91230127      -1.20442230
## 7                   0.97421613          0.91459156       1.23113036
## 8                  -0.71909690         -0.60806071      -0.37779383
## 9                  -0.20501110         -0.23107198      -0.19203379
## 10                 -0.36416334         -0.06366298       0.41912210
## 11                 -0.16617364         -0.40526982      -1.38024023
## 12                 -1.23113036         -1.61367018      -1.52642702
## 13                  0.80413364          0.63896971      -0.43305527
## 14                 -0.83980946         -0.57772207      -0.28368767
## 15                  1.66232963          1.41400510       1.38024023
## 16                 -0.70271480         -0.91459156      -0.59282318
## 17                 -0.32366339         -0.33710120      -0.23107198
## 18                  0.24416040          0.56275157       1.20442230
## 19                  0.28368767          0.19203379       0.36416334
## 20                  0.36416334          0.36416334       0.51856960
## 21                 -0.37779383         -0.27046566       0.17908874
## 22                 -0.80413364         -0.80413364      -0.63896971
## 23                  0.29695946          0.08918610      -0.93409710
## 24                  0.03818128         -0.02545075       0.31028376
## 25                 -0.60806071         -0.85805346      -0.97421613
## 26                 -1.20442230         -0.87658763      -0.10196844
## 27                  0.16617364          0.60806071       0.82184079
## 28                 -0.46117919         -0.56275157      -0.16617364
## 29                 -1.56855670         -1.71527720      -1.25874673
## 30                  0.70271480          0.46117919       0.50406856
## 31                 -1.28735798         -1.12903457      -0.82184079
## 32                 -0.03818128          0.21802303       0.65465430
```

```
## 33                  0.39149488          0.03818128      -0.17908874
## 34                  0.19203379          0.44707302       0.56275157
## 35                  0.43305527          0.71909690       1.41400510
## 36                 -1.66232963         -1.52642702      -1.10528634
## 37                 -1.08214564         -1.01596791      -0.67050162
## 38                  0.01272434          0.15328619       0.59282318
## 39                  0.10196844         -0.21802303      -0.50406856
## 40                  0.91459156          0.76945312       0.15328619
## 41                  0.83980946          1.52642702       1.71527720
## 42                  0.47537773          0.31028376       0.21802303
## 43                 -0.95396468         -0.78667510      -0.27046566
## 44                 -1.31706374         -1.15343724      -0.83980946
## 45                 -2.80216172         -2.80216172      -1.34797950
## 46                  1.99828954          2.80216172       2.80216172
## 47                 -1.91230127         -2.23555842      -1.61367018
## 48                  0.62344075          0.47537773      -0.03818128
## 49                  0.07641832         -0.16617364      -0.75245638
## 50                 -0.15328619         -0.37779383      -1.91230127
## 51                 -0.02545075         -0.19203379      -0.62344075
## 52                  0.44707302          0.06366298      -0.33710120
## 53                 -1.77352271         -1.28735798      -0.60806071
## 54                  0.71909690          0.70271480       0.85805346
## 55                 -0.48967276         -0.32366339       0.12758531
## 56                 -1.01596791         -1.41400510      -1.66232963
## 57                 -0.31028376         -0.25729077       0.01272434
## 58                  1.17854682          0.73567430      -2.10223158
## 59                 -1.10528634         -1.08214564      -0.73567430
## 60                  1.61367018          1.77352271       1.61367018
## 61                 -0.29695946         -0.28368767      -0.14042416
## 62                 -0.91459156         -0.97421613      -0.70271480
## 63                 -0.87658763         -0.75245638      -0.12758531
## 64                  0.31028376          0.65465430       1.34797950
## 65                  0.78667510          1.66232963       1.83849262
## 66                  0.75245638          0.28368767      -2.23555842
## 67                 -0.68651916         -0.82184079      -0.56275157
## 68                  0.99487522          1.23113036       1.31706374
## 69                 -0.57772207         -0.53318051      -0.20501110
## 70                  0.32366339          0.25729077       0.43305527
## 71                  0.06366298         -0.01272434       0.00000000
## 72                 -0.44707302         -0.17908874       0.54790615
## 73                 -0.99487522         -0.89542793      -0.36416334
## 74                 -0.97421613         -1.31706374      -1.31706374
## 75                  0.25729077          0.32366339       0.73567430
## 76                 -1.15343724         -1.34797950      -1.15343724
## 77                 -2.42690063         -2.42690063      -1.48684468
## 78                  0.41912210          0.41912210       0.35060018
## 79                 -0.59282318         -0.54790615      -0.21802303
## 80                 -0.41912210         -0.31028376       0.23107198
## 81                  0.20501110          0.07641832       0.29695946
## 82                  0.00000000          0.14042416       0.68651916
## 83                  0.17908874          0.62344075       0.83980946
## 84                 -1.52642702         -1.66232963      -1.23113036
## 85                 -1.25874673         -1.10528634      -0.80413364
## 86                  0.02545075          0.16617364       0.60806071
## 87                 -0.85805346         -0.51856960       0.24416040
```

```
## 88                  -0.05091800          -0.12758531       -0.29695946
## 89                  -0.14042416          -0.20501110       -0.40526982
## 90                   0.50406856           0.24416040       -0.44707302
## 91                   0.23107198           0.11476746        0.27046566
## 92                   1.44946373           1.10528634        0.99487522
## 93                   0.40526982           0.40526982        0.33710120
## 94                  -0.63896971          -0.47537773        0.10196844
## 95                  -0.76945312          -0.68651916       -0.47537773
## 96                  -0.10196844          -0.08918610        0.05091800
## 97                   0.53318051           0.54790615        0.76945312
## 98                  -0.08918610          -0.07641832        0.06366298
## 99                  -0.89542793          -0.95396468       -0.68651916
## 100                  0.15328619           0.59282318        0.80413364
## 101                 -1.38024023          -1.20442230       -0.87658763
## 102                  1.41400510           1.08214564        0.97421613
## 103                  1.52642702           1.15343724        1.03752256
## 104                 -0.62344075          -0.46117919        0.11476746
## 105                  1.56855670           1.17854682        1.05957037
## 106                 -1.99828954          -1.99828954       -1.01596791
## 107                  1.23113036           1.34797950        1.12903457
## 108                 -1.03752256          -1.03752256       -0.76945312
## 109                 -0.24416040          -0.62344075       -1.71527720
## 110                 -1.61367018          -1.48684468       -1.08214564
## 111                  0.93409710           0.78667510        0.16617364
## 112                  0.85805346           1.56855670        1.77352271
## 113                  1.48684468           1.12903457        1.01596791
## 114                 -0.06366298          -0.14042416       -0.31028376
## 115                 -1.17854682          -1.38024023       -1.17854682
## 116                 -1.34797950          -1.17854682       -0.85805346
## 117                 -0.33710120          -0.35060018       -0.24416040
## 118                 -0.17908874          -0.41912210       -1.41400510
## 119                  1.91230127           2.42690063        2.42690063
## 120                  0.48967276           0.23107198       -0.46117919
## 121                  0.21802303           0.10196844        0.25729077
## 122                  1.28735798           0.99487522        0.89542793
## 123                  0.37779383           0.39149488        0.32366339
## 124                 -0.67050162          -0.50406856        0.07641832
## 125                 -0.78667510          -0.70271480       -0.48967276
## 126                 -0.12758531          -0.11476746        0.02545075
## 127                  0.51856960           0.53318051        0.75245638
## 128                 -0.11476746          -0.10196844        0.03818128
## 129                 -0.93409710          -0.99487522       -0.71909690
## 130                  0.14042416           0.57772207        0.78667510
## 131                 -1.44946373          -1.25874673       -0.91459156
## 132                  1.25874673           0.97421613        0.87658763
## 133                  1.34797950           1.03752256        0.93409710
## 134                 -0.65465430          -0.48967276        0.08918610
## 135                  1.38024023           1.05957037        0.95396468
## 136                 -2.10223158          -2.10223158       -1.03752256
## 137                  1.20442230           1.31706374        1.10528634
## 138                 -1.05957037          -1.05957037       -0.78667510
## 139                 -0.25729077          -0.63896971       -1.77352271
## 140                 -1.71527720          -1.56855670       -1.12903457
## 141                  0.89542793           0.75245638        0.14042416
## 142                  0.82184079           1.48684468        1.66232963
```

```
## 143                 1.31706374          1.01596791       0.91459156
## 144                -0.07641832         -0.15328619      -0.32366339
## 145                -1.41400510         -1.23113036      -0.89542793
## 146                -0.35060018         -0.36416334      -0.25729077
## 147                -0.19203379         -0.43305527      -1.44946373
## 148                 0.68651916          0.43305527      -0.54790615
## 149                 0.46117919          0.12758531      -1.99828954
## 150                 0.60806071          0.35060018      -0.41912210
## 151                 1.10528634          0.80413364      -0.06366298
## 152                -0.82184079         -0.71909690      -0.39149488
## 153                 1.71527720          1.71527720       1.52642702
## 154                -0.01272434          0.17908874       0.48967276
## 155                -0.53318051         -0.83980946      -1.83849262
## 156                 0.27046566          0.29695946       0.40526982
## 157                 2.23555842          1.83849262      -2.42690063
## 158                -0.54790615         -0.65465430      -0.53318051
## 159                 2.80216172          2.23555842       2.10223158
## 160                 0.33710120          0.27046566       0.19203379
## 161                -0.47537773         -0.59282318      -0.51856960
## 162                -0.43305527         -0.29695946       0.20501110
## 163                 1.01596791          1.61367018       1.99828954
## 164                 1.83849262          2.10223158       2.23555842
## 165                 1.77352271          0.95396468      -2.80216172
## 166                -0.28368767         -0.39149488      -0.35060018
## 167                 2.10223158          1.99828954       1.91230127
## 168                -0.21802303         -0.03818128      -0.01272434
## 169                 1.03752256          0.93409710       1.08214564
## 170                 0.67050162          0.68651916       0.37779383
## 171                 0.08918610          0.37779383       1.15343724
## 172                -0.51856960         -0.44707302      -0.07641832
## 173                -0.50406856         -0.73567430      -1.05957037
## 174                 0.95396468          1.20442230       1.28735798
## 175                -0.56275157         -0.76945312      -0.95396468
## 176                -1.48684468         -1.77352271      -1.28735798
## 177                 1.08214564          1.28735798       0.71909690
## 178                -0.23107198         -0.05091800      -0.02545075
## 179                 0.12758531          0.20501110       0.57772207
## 180                 0.76945312          0.82184079       0.67050162
## 181                 0.63896971          0.85805346       1.25874673
## 182                 0.73567430          1.44946373       1.48684468
## 183                -0.75245638         -0.93409710      -0.99487522
## 184                -0.73567430         -0.67050162      -0.57772207
## 185                 0.65465430          0.87658763       1.17854682
## 186                -0.40526982          0.00000000       0.62344075
## 187                 0.59282318          0.48967276      -0.05091800
## 188                 0.54790615          0.33710120      -0.08918610
## 189                 1.12903457          0.89542793      -0.11476746
## 190                 0.87658763          0.83980946       0.63896971
## 191                 2.42690063          1.91230127       1.56855670
## 192                 1.05957037          1.25874673       0.70271480
## 193                -0.27046566          0.01272434       0.47537773
## 194                -0.39149488         -0.24416040      -0.15328619
## 195                 0.56275157          0.50406856       0.44707302
## 196                 1.15343724          1.38024023       1.44946373
## 197                 0.57772207          0.51856960       0.46117919
```

```
##     Prominence_cooc.W.PET IC1_d.W.PET IC2_d.W.PET Coarseness_vdif.W.PET
## 1              0.03818128  0.37779383 -0.11476746           -0.15328619
## 2              0.67050162  0.25729077  0.02545075           -0.14042416
## 3             -1.44946373  0.00000000 -0.41912210            0.00000000
## 4              0.23107198 -0.10196844  0.17908874           -0.54790615
## 5             -1.41400510  0.67050162 -1.44946373            0.02545075
## 6             -1.83849262  0.19203379 -0.95396468           -0.07641832
## 7              1.08214564  0.46117919  0.01272434           -0.25729077
## 8             -0.62344075  1.20442230 -1.52642702           -0.10196844
## 9             -0.28368767 -1.12903457  0.60806071            0.82184079
## 10             0.08918610 -0.06366298  0.08918610            0.29695946
## 11            -0.43305527 -0.32366339  0.27046566           -0.60806071
## 12            -1.66232963 -0.03818128 -0.43305527           -0.01272434
## 13             0.59282318  0.91459156 -0.62344075           -0.48967276
## 14            -0.59282318  0.63896971 -0.99487522            1.05957037
## 15             1.56855670  0.80413364 -0.36416334           -0.57772207
## 16            -0.80413364  0.60806071 -0.93409710            0.37779383
## 17            -0.39149488 -0.19203379  0.20501110           -0.51856960
## 18             0.83980946 -0.17908874  0.28368767           -0.56275157
## 19             0.32366339  0.85805346 -0.67050162           -0.29695946
## 20             0.44707302 -0.05091800  0.21802303           -0.20501110
## 21            -0.12758531  0.56275157 -0.53318051           -0.19203379
## 22            -0.78667510  1.08214564 -1.61367018            1.12903457
## 23             0.06366298  1.12903457 -1.20442230           -0.39149488
## 24             0.05091800  1.52642702 -1.56855670           -0.53318051
## 25            -0.82184079 -0.25729077  0.07641832            1.44946373
## 26            -0.60806071 -0.31028376  0.00000000           -0.47537773
## 27             0.63896971 -0.40526982  0.39149488            0.56275157
## 28            -0.51856960  0.59282318 -0.68651916           -0.32366339
## 29            -1.77352271  0.21802303 -0.83980946            0.67050162
## 30             0.54790615  0.78667510 -0.47537773           -0.43305527
## 31            -1.12903457 -0.23107198 -0.02545075            0.35060018
## 32             0.33710120 -0.57772207  0.47537773           -0.36416334
## 33             0.11476746  0.71909690 -0.46117919           -0.44707302
## 34             0.46117919  0.06366298  0.14042416           -0.23107198
## 35             1.01596791  0.50406856 -0.08918610           -0.41912210
## 36            -1.52642702  1.23113036 -2.10223158            0.59282318
## 37            -0.99487522  1.44946373 -2.23555842           -0.27046566
## 38             0.27046566  0.33710120 -0.14042416            0.50406856
## 39            -0.23107198  0.27046566 -0.12758531           -0.40526982
## 40             0.80413364  0.73567430 -0.28368767           -0.03818128
## 41             1.66232963  0.17908874  0.16617364           -0.31028376
## 42             0.37779383  0.43305527 -0.03818128           -0.11476746
## 43            -0.67050162 -1.10528634  0.43305527           -0.50406856
## 44            -1.15343724 -0.28368767 -0.05091800            0.28368767
## 45            -2.80216172  0.41912210 -1.34797950            1.17854682
## 46             2.80216172 -0.50406856  0.75245638            0.08918610
## 47            -2.23555842 -0.12758531 -0.23107198            0.51856960
## 48             0.47537773  0.48967276  0.25729077           -0.02545075
## 49            -0.17908874  1.61367018 -1.05957037            0.73567430
## 50            -0.48967276  1.41400510 -0.76945312            0.24416040
## 51            -0.25729077  2.10223158 -1.77352271            0.20501110
## 52             0.16617364  1.28735798 -0.44707302            0.47537773
## 53            -0.97421613  0.29695946 -0.21802303            0.36416334
## 54             0.75245638  0.28368767  0.31028376            0.40526982
```

```
## 55            -0.27046566  0.35060018  0.10196844            0.33710120
## 56            -1.61367018  0.99487522 -1.01596791            1.38024023
## 57            -0.11476746  0.95396468 -0.24416040            0.16617364
## 58             0.89542793  1.38024023 -0.35060018            0.14042416
## 59            -1.08214564 -0.76945312  0.41912210            0.46117919
## 60             1.91230127  0.02545075  0.50406856            0.05091800
## 61            -0.19203379 -0.36416334  0.46117919            0.11476746
## 62            -0.93409710  1.48684468 -1.10528634            0.21802303
## 63            -0.47537773  1.71527720 -1.28735798            0.07641832
## 64             0.99487522  0.11476746  0.35060018           -0.06366298
## 65             1.77352271 -0.27046566  0.57772207            0.63896971
## 66             0.36416334  0.97421613 -0.07641832            0.12758531
## 67            -0.75245638  1.25874673 -0.91459156            0.76945312
## 68             1.41400510  0.31028376  0.36416334           -0.12758531
## 69            -0.54790615  1.77352271 -1.25874673            0.41912210
## 70             0.40526982  0.87658763  0.06366298            0.62344075
## 71            -0.01272434  2.42690063 -1.66232963            0.25729077
## 72             0.14042416  1.34797950 -0.50406856            0.31028376
## 73            -0.68651916  0.82184079 -0.37779383            0.85805346
## 74            -1.34797950  1.01596791 -0.80413364            0.44707302
## 75             0.56275157 -0.20501110  0.56275157            0.19203379
## 76            -1.28735798  1.99828954 -1.83849262            2.10223158
## 77            -2.42690063  0.03818128 -0.39149488            1.99828954
## 78             0.51856960  1.66232963 -0.57772207            0.48967276
## 79            -0.56275157  1.03752256 -1.38024023            0.01272434
## 80            -0.10196844 -0.35060018  0.29695946           -0.37779383
## 81             0.17908874  0.89542793 -0.59282318           -0.17908874
## 82             0.39149488 -0.29695946  0.33710120           -0.24416040
## 83             0.65465430 -0.39149488  0.40526982            0.68651916
## 84            -1.71527720  0.36416334 -0.82184079            0.75245638
## 85            -1.10528634 -0.21802303 -0.01272434            0.39149488
## 86             0.28368767  0.47537773 -0.10196844            0.60806071
## 87            -0.24416040  0.40526982 -0.40526982           -0.05091800
## 88            -0.14042416  0.93409710 -0.78667510           -0.33710120
## 89            -0.29695946  0.83980946 -0.63896971           -0.28368767
## 90             0.31028376 -0.08918610 -0.31028376           -0.80413364
## 91             0.21802303  0.08918610 -0.56275157           -0.85805346
## 92             1.25874673  0.07641832 -0.32366339           -0.89542793
## 93             0.50406856  0.51856960 -0.89542793           -0.59282318
## 94            -0.32366339 -0.63896971  0.11476746           -0.91459156
## 95            -0.70271480  0.23107198 -1.31706374           -0.67050162
## 96            -0.05091800  0.10196844 -0.87658763           -0.97421613
## 97             0.73567430  0.57772207 -1.41400510           -0.82184079
## 98            -0.03818128  0.15328619 -0.85805346           -0.93409710
## 99            -0.91459156  1.56855670 -1.08214564            0.32366339
## 100            0.62344075 -0.78667510  0.32366339           -0.08918610
## 101           -1.20442230 -0.53318051 -0.19203379           -0.35060018
## 102            1.23113036  0.01272434 -0.33710120           -0.95396468
## 103            1.31706374  0.16617364 -0.27046566           -0.71909690
## 104           -0.31028376 -0.56275157  0.12758531           -0.87658763
## 105            1.34797950  0.20501110 -0.25729077           -0.68651916
## 106           -1.91230127 -1.83849262  0.54790615           -0.16617364
## 107            1.48684468 -0.37779383  0.62344075            0.89542793
## 108           -1.01596791 -2.10223158  0.76945312            0.10196844
## 109           -0.63896971 -1.23113036  0.67050162            0.99487522
```

```
## 110          -1.48684468  1.83849262 -1.99828954           0.97421613
## 111           0.82184079  1.05957037 -0.20501110           0.43305527
## 112           1.71527720  0.62344075  0.24416040           0.17908874
## 113           1.28735798  0.12758531 -0.29695946          -0.78667510
## 114          -0.15328619  0.24416040 -0.97421613          -0.70271480
## 115          -1.31706374  0.70271480 -2.42690063           1.61367018
## 116          -1.17854682 -0.48967276 -0.17908874          -0.21802303
## 117          -0.40526982 -0.43305527  0.15328619          -0.75245638
## 118          -0.44707302 -0.54790615  0.23107198          -0.83980946
## 119           2.42690063 -1.17854682  0.65465430          -0.76945312
## 120           0.29695946 -1.03752256 -0.71909690          -1.66232963
## 121           0.20501110 -0.89542793 -1.03752256          -1.83849262
## 122           1.12903457 -0.91459156 -0.73567430          -1.99828954
## 123           0.48967276 -0.62344075 -1.17854682          -1.38024023
## 124          -0.35060018 -1.48684468 -0.16617364          -2.10223158
## 125          -0.71909690 -0.73567430 -1.71527720          -1.41400510
## 126          -0.07641832 -0.85805346 -1.15343724          -2.80216172
## 127           0.71909690 -0.47537773 -1.91230127          -1.71527720
## 128          -0.06366298 -0.82184079 -1.12903457          -2.23555842
## 129          -0.95396468 -0.16617364 -1.48684468          -1.03752256
## 130           0.60806071 -1.61367018  0.19203379          -1.25874673
## 131          -1.25874673 -1.38024023 -0.51856960          -1.34797950
## 132           1.10528634 -0.97421613 -0.75245638          -2.42690063
## 133           1.17854682 -0.80413364 -0.65465430          -1.52642702
## 134          -0.33710120 -1.44946373 -0.15328619          -1.91230127
## 135           1.20442230 -0.75245638 -0.60806071          -1.44946373
## 136          -1.99828954 -2.42690063  0.37779383          -1.28735798
## 137           1.44946373 -1.20442230  0.48967276          -0.65465430
## 138          -1.03752256 -2.80216172  0.63896971          -1.20442230
## 139          -0.65465430 -1.91230127  0.59282318          -0.62344075
## 140          -1.56855670 -0.01272434 -2.80216172          -0.63896971
## 141           0.78667510 -0.24416040 -0.54790615          -0.99487522
## 142           1.61367018 -0.46117919  0.05091800          -1.12903457
## 143           1.15343724 -0.83980946 -0.70271480          -1.61367018
## 144          -0.16617364 -0.71909690 -1.23113036          -1.48684468
## 145          -1.23113036 -1.31706374 -0.48967276          -1.31706374
## 146          -0.41912210 -1.25874673 -0.06366298          -1.56855670
## 147          -0.46117919 -1.41400510  0.03818128          -1.77352271
## 148           0.10196844  1.10528634  0.82184079           1.71527720
## 149          -0.21802303  0.75245638  0.99487522           1.01596791
## 150           0.01272434  2.23555842  0.51856960           0.93409710
## 151           0.43305527  0.54790615  1.12903457           1.34797950
## 152          -0.76945312 -0.67050162  1.34797950           1.15343724
## 153           1.05957037 -0.68651916  1.66232963           1.23113036
## 154           0.00000000 -0.60806071  1.52642702           1.10528634
## 155          -1.05957037  0.32366339  0.83980946           2.23555842
## 156           0.15328619  0.05091800  1.31706374           0.87658763
## 157           1.38024023  0.68651916  1.23113036           0.83980946
## 158          -0.83980946 -2.23555842  1.99828954           1.31706374
## 159           2.23555842 -1.08214564  2.23555842           0.70271480
## 160           0.07641832 -1.71527720  2.10223158           0.78667510
## 161          -0.73567430  0.76945312  0.80413364           0.95396468
## 162          -0.20501110  1.17854682  0.73567430           0.71909690
## 163           1.52642702 -0.93409710  1.77352271           0.54790615
## 164           2.10223158 -1.52642702  2.80216172           1.56855670
```

```
## 165            0.76945312  0.14042416  1.41400510            0.80413364
## 166           -0.57772207  0.53318051  0.85805346            1.83849262
## 167            1.99828954 -0.65465430  1.83849262            0.53318051
## 168           -0.36416334  1.31706374  0.78667510            1.25874673
## 169            0.87658763 -0.11476746  1.48684468            1.52642702
## 170            0.35060018  2.80216172  0.53318051            1.03752256
## 171            0.41912210  0.65465430  1.10528634            1.08214564
## 172           -0.50406856 -0.15328619  1.20442230            1.91230127
## 173           -0.89542793  0.39149488  0.95396468            1.28735798
## 174            0.95396468 -1.28735798  2.42690063            0.91459156
## 175           -0.87658763  1.91230127  0.44707302            2.80216172
## 176           -2.10223158 -1.05957037  1.17854682            2.42690063
## 177            0.93409710  1.15343724  1.05957037            1.41400510
## 178           -0.37779383  0.44707302  0.70271480            0.65465430
## 179            0.19203379 -1.66232963  1.61367018            0.03818128
## 180            0.53318051 -0.07641832  1.03752256            0.27046566
## 181            0.85805346 -1.56855670  1.71527720            0.23107198
## 182            0.97421613 -1.77352271  1.91230127            1.66232963
## 183           -1.38024023 -0.59282318  0.93409710            1.77352271
## 184           -0.85805346 -1.34797950  1.44946373            1.20442230
## 185            0.68651916 -0.44707302  1.38024023            1.48684468
## 186            0.02545075 -0.51856960  1.15343724            0.57772207
## 187            0.12758531 -0.02545075  0.97421613            0.06366298
## 188           -0.02545075 -0.14042416  1.01596791            0.15328619
## 189            0.70271480 -1.15343724  1.28735798           -1.01596791
## 190            0.57772207 -0.99487522  1.08214564           -1.08214564
## 191            1.83849262 -1.01596791  1.25874673           -1.10528634
## 192            0.91459156 -0.41912210  0.87658763           -0.46117919
## 193           -0.08918610 -1.99828954  1.56855670           -1.15343724
## 194           -0.53318051 -0.70271480  0.71909690           -0.73567430
## 195            0.24416040 -0.95396468  0.89542793           -1.23113036
## 196            1.03752256 -0.33710120  0.68651916           -1.05957037
## 197            0.25729077 -0.87658763  0.91459156           -1.17854682
##     Contrast_vdif.W.PET Busyness_vdif.W.PET Complexity_vdif.W.PET
## 1            0.08918610         -0.43305527           -0.10196844
## 2            1.05957037         -1.05957037            0.56275157
## 3           -1.03752256          0.54790615           -1.23113036
## 4           -0.80413364          0.07641832            0.17908874
## 5           -1.41400510          0.80413364           -1.20442230
## 6           -1.38024023          1.01596791           -1.83849262
## 7            1.03752256         -1.31706374            0.99487522
## 8           -0.07641832          0.14042416           -0.60806071
## 9           -0.41912210         -1.20442230           -0.63896971
## 10           0.46117919         -0.97421613           -0.02545075
## 11          -0.91459156          1.23113036           -0.46117919
## 12          -1.31706374          0.57772207           -1.31706374
## 13           0.65465430         -0.50406856            0.48967276
## 14           1.23113036         -0.78667510           -0.51856960
## 15           0.67050162         -0.32366339            1.61367018
## 16          -0.99487522         -0.59282318           -0.71909690
## 17          -0.75245638          0.44707302           -0.32366339
## 18          -0.24416040          0.17908874            0.47537773
## 19           0.16617364         -0.57772207            0.36416334
## 20          -0.10196844         -0.91459156            0.21802303
## 21          -0.25729077         -0.16617364           -0.23107198
```

```
## 22          0.47537773         -0.35060018          -0.80413364
## 23          0.83980946         -0.19203379          -0.06366298
## 24         -0.15328619          0.01272434           0.39149488
## 25         -0.57772207         -0.93409710          -1.05957037
## 26         -1.71527720          0.99487522          -0.65465430
## 27          0.89542793         -1.91230127           0.31028376
## 28         -0.67050162          0.08918610          -0.53318051
## 29         -1.15343724          0.23107198          -1.77352271
## 30          0.44707302         -0.54790615           0.40526982
## 31         -0.60806071          1.44946373          -1.38024023
## 32         -0.31028376          0.20501110          -0.17908874
## 33         -0.03818128         -0.36416334           0.03818128
## 34          0.43305527         -0.40526982           0.33710120
## 35          0.19203379         -0.75245638           0.89542793
## 36         -0.37779383          0.40526982          -1.15343724
## 37         -0.53318051          1.61367018          -0.87658763
## 38          0.53318051         -1.61367018           0.07641832
## 39         -0.17908874         -0.12758531          -0.31028376
## 40          1.25874673         -1.66232963           0.67050162
## 41          1.10528634         -0.63896971           1.10528634
## 42          0.62344075         -1.17854682           0.23107198
## 43         -1.83849262          1.08214564          -0.78667510
## 44         -0.63896971          1.41400510          -1.41400510
## 45         -1.99828954          0.75245638          -2.42690063
## 46          0.63896971         -1.41400510           2.80216172
## 47         -1.34797950          1.12903457          -2.23555842
## 48         -0.16617364         -0.03818128           0.63896971
## 49          0.82184079         -0.95396468          -0.19203379
## 50          0.23107198         -0.23107198          -0.44707302
## 51          0.41912210         -0.06366298          -0.16617364
## 52          0.71909690         -1.34797950           0.06366298
## 53         -1.17854682          0.62344075          -0.93409710
## 54          0.59282318         -1.23113036           0.46117919
## 55         -0.51856960          0.03818128          -0.50406856
## 56         -0.39149488         -0.07641832          -1.61367018
## 57         -0.46117919         -0.11476746          -0.14042416
## 58          0.57772207         -1.12903457           0.91459156
## 59         -1.01596791          1.15343724          -1.66232963
## 60          0.27046566         -1.03752256           1.77352271
## 61         -1.20442230         -0.29695946          -0.03818128
## 62         -0.97421613          0.70271480          -0.83980946
## 63         -1.12903457         -0.02545075           0.50406856
## 64         -0.68651916          0.05091800           0.97421613
## 65          1.44946373         -2.10223158           1.17854682
## 66         -0.11476746         -1.38024023           0.93409710
## 67         -0.56275157         -0.39149488          -0.67050162
## 68          0.01272434          0.35060018           1.15343724
## 69         -0.08918610          0.11476746          -0.56275157
## 70          1.20442230         -1.77352271           0.80413364
## 71          0.68651916         -0.10196844           0.11476746
## 72         -0.50406856         -0.20501110           0.10196844
## 73         -0.71909690         -0.41912210          -0.59282318
## 74         -0.87658763          0.46117919          -0.95396468
## 75         -0.62344075         -0.14042416           0.35060018
## 76          0.29695946         -0.62344075          -0.89542793
```

```
## 77          -1.08214564          0.31028376           -2.80216172
## 78           1.17854682         -1.15343724            0.54790615
## 79          -0.14042416          0.10196844           -0.57772207
## 80          -1.23113036         -0.25729077            0.16617364
## 81           0.40526982         -0.21802303           -0.07641832
## 82          -0.65465430         -0.47537773            0.19203379
## 83           0.91459156         -1.83849262            0.32366339
## 84          -1.10528634          0.24416040           -1.71527720
## 85          -0.59282318          1.48684468           -1.34797950
## 86           0.56275157         -1.52642702            0.08918610
## 87          -0.78667510          0.00000000           -0.36416334
## 88           0.03818128          0.32366339           -0.24416040
## 89          -0.01272434          0.16617364           -0.29695946
## 90          -0.06366298         -0.33710120            0.25729077
## 91          -0.23107198         -0.01272434            0.15328619
## 92           0.24416040         -0.70271480            1.38024023
## 93           1.08214564         -1.28735798            0.53318051
## 94          -1.61367018          0.82184079           -0.39149488
## 95          -0.43305527          0.97421613           -0.75245638
## 96          -0.47537773          0.91459156            0.01272434
## 97           0.54790615         -0.24416040            0.83980946
## 98          -0.44707302          0.93409710            0.02545075
## 99          -0.93409710          0.71909690           -0.82184079
## 100          0.87658763         -1.99828954            0.29695946
## 101         -0.73567430          1.34797950           -1.48684468
## 102          0.21802303         -0.71909690            1.34797950
## 103          0.28368767         -0.67050162            1.44946373
## 104         -1.56855670          0.83980946           -0.37779383
## 105          0.31028376         -0.65465430            1.48684468
## 106         -1.91230127          1.91230127           -1.91230127
## 107          0.78667510         -2.42690063            0.87658763
## 108         -1.66232963          1.56855670           -1.25874673
## 109         -0.95396468         -1.01596791           -0.97421613
## 110         -0.28368767          0.41912210           -1.12903457
## 111          1.34797950         -1.44946373            0.68651916
## 112          1.12903457         -0.60806071            1.12903457
## 113          0.25729077         -0.68651916            1.41400510
## 114         -0.02545075          0.29695946           -0.25729077
## 115          0.14042416         -0.73567430           -0.91459156
## 116         -0.70271480          1.38024023           -1.44946373
## 117         -0.89542793          0.43305527           -0.33710120
## 118         -1.05957037          1.20442230           -0.47537773
## 119          0.51856960         -1.56855670            2.42690063
## 120         -0.27046566         -0.37779383            0.24416040
## 121         -0.48967276         -0.05091800            0.14042416
## 122          0.05091800         -0.87658763            1.23113036
## 123          0.95396468         -1.48684468            0.51856960
## 124         -2.23555842          0.76945312           -0.41912210
## 125         -0.76945312          0.95396468           -0.76945312
## 126         -0.83980946          0.87658763           -0.01272434
## 127          0.48967276         -0.28368767            0.82184079
## 128         -0.82184079          0.89542793            0.00000000
## 129         -1.48684468          0.68651916           -0.85805346
## 130          0.73567430         -2.23555842            0.28368767
## 131         -1.28735798          1.28735798           -1.56855670
```

```
## 132          0.02545075         -0.89542793          1.20442230
## 133          0.07641832         -0.83980946          1.28735798
## 134         -2.10223158          0.78667510         -0.40526982
## 135          0.11476746         -0.82184079          1.31706374
## 136         -2.80216172          1.83849262         -1.99828954
## 137          0.70271480         -2.80216172          0.85805346
## 138         -2.42690063          1.52642702         -1.28735798
## 139         -1.52642702         -1.08214564         -0.99487522
## 140         -0.54790615          0.36416334         -1.17854682
## 141          1.15343724         -1.71527720          0.65465430
## 142          1.01596791         -0.76945312          1.08214564
## 143          0.06366298         -0.85805346          1.25874673
## 144         -0.21802303          0.27046566         -0.27046566
## 145         -1.25874673          1.31706374         -1.52642702
## 146         -1.44946373          0.39149488         -0.35060018
## 147         -1.77352271          1.17854682         -0.48967276
## 148          1.91230127         -0.27046566          0.12758531
## 149          1.28735798          0.25729077         -0.12758531
## 150          1.52642702          0.51856960          0.20501110
## 151          1.83849262         -0.53318051          0.57772207
## 152         -0.35060018          1.66232963         -0.70271480
## 153          1.71527720         -0.48967276          0.95396468
## 154          0.32366339          0.60806071         -0.15328619
## 155          0.50406856          0.50406856         -1.03752256
## 156          0.36416334          0.47537773          0.27046566
## 157          1.66232963         -0.44707302          1.66232963
## 158         -0.20501110          2.42690063         -1.08214564
## 159          1.38024023         -0.31028376          2.23555842
## 160         -0.36416334          0.15328619          0.41912210
## 161         -0.19203379          1.71527720         -0.62344075
## 162         -0.33710120          0.53318051          1.01596791
## 163          0.10196844          0.63896971          1.83849262
## 164          2.80216172         -1.25874673          1.99828954
## 165          0.76945312         -0.56275157          1.71527720
## 166          0.20501110          0.06366298         -0.43305527
## 167          0.97421613          1.10528634          1.91230127
## 168          0.80413364          0.67050162         -0.20501110
## 169          2.42690063         -0.99487522          1.52642702
## 170          1.77352271          0.48967276          0.62344075
## 171          0.33710120          0.33710120          0.60806071
## 172          0.00000000          0.02545075         -0.28368767
## 173         -0.12758531          1.25874673         -0.73567430
## 174          0.15328619          0.37779383          0.78667510
## 175          1.41400510         -0.15328619         -0.68651916
## 176         -0.29695946          1.03752256         -2.10223158
## 177          2.23555842         -0.46117919          1.05957037
## 178          0.75245638          0.65465430         -0.21802303
## 179         -0.40526982          0.19203379          0.71909690
## 180          1.48684468          0.28368767          0.37779383
## 181          0.12758531         -0.08918610          0.73567430
## 182          1.99828954         -1.10528634          0.76945312
## 183         -0.32366339          0.85805346         -1.10528634
## 184          0.17908874          2.80216172         -1.01596791
## 185          1.61367018         -0.80413364          0.59282318
## 186         -0.05091800          0.59282318         -0.08918610
```

```
## 187          0.99487522          1.05957037            0.05091800
## 188          0.93409710          0.73567430           -0.05091800
## 189          0.85805346          0.12758531            0.75245638
## 190          0.60806071          0.56275157            0.70271480
## 191          1.31706374         -0.17908874            2.10223158
## 192          2.10223158         -0.51856960            1.03752256
## 193         -0.85805346          1.77352271           -0.11476746
## 194          0.39149488          2.23555842           -0.54790615
## 195          0.35060018          1.99828954            0.43305527
## 196          1.56855670          0.21802303            1.56855670
## 197          0.37779383          2.10223158            0.44707302
##     Strength_vdif.W.PET SRE_align.W.PET LRE_align.W.PET GLNU_align.W.PET
## 1            0.39149488      0.11476746     -0.51856960      -0.76945312
## 2            1.01596791      0.40526982     -1.28735798      -1.23113036
## 3           -1.44946373     -0.97421613      0.36416334      -0.11476746
## 4           -0.41912210     -0.28368767     -0.15328619       1.08214564
## 5           -0.65465430     -1.25874673      0.41912210      -0.03818128
## 6           -1.61367018     -1.52642702      0.54790615       0.10196844
## 7            0.85805346      0.37779383     -1.23113036      -0.87658763
## 8           -0.21802303     -0.07641832     -0.33710120      -0.63896971
## 9            0.56275157     -0.25729077     -0.16617364      -1.17854682
## 10           1.15343724      0.02545075     -0.53318051      -1.41400510
## 11          -2.10223158     -0.62344075      0.12758531       1.99828954
## 12          -1.48684468     -1.31706374      0.44707302       0.00000000
## 13          -0.28368767      0.25729077     -0.82184079      -0.20501110
## 14           1.08214564      0.03818128     -0.54790615      -2.23555842
## 15          -0.17908874      0.43305527     -1.41400510       0.47537773
## 16           0.20501110     -0.51856960      0.00000000      -0.71909690
## 17          -1.15343724     -1.15343724      0.53318051       0.82184079
## 18          -0.23107198     -0.17908874     -0.25729077       0.83980946
## 19           0.29695946      0.24416040     -0.73567430      -0.36416334
## 20           0.40526982      0.16617364     -0.70271480      -0.40526982
## 21           0.02545075     -0.15328619     -0.32366339      -0.31028376
## 22           0.31028376      0.08918610     -0.59282318      -2.10223158
## 23          -0.56275157      0.23107198     -0.75245638      -0.35060018
## 24          -0.37779383      0.20501110     -0.71909690       0.54790615
## 25           0.17908874     -0.50406856     -0.07641832      -1.38024023
## 26          -0.33710120     -1.17854682      0.43305527       0.85805346
## 27           1.83849262      0.29695946     -0.95396468      -1.71527720
## 28          -0.76945312     -0.43305527      0.01272434       0.16617364
## 29          -1.08214564     -1.05957037      0.37779383      -0.67050162
## 30          -0.08918610      0.21802303     -0.65465430      -0.25729077
## 31          -0.97421613     -0.87658763      0.33710120      -0.46117919
## 32           0.16617364     -0.27046566     -0.19203379       0.03818128
## 33          -0.40526982      0.06366298     -0.50406856      -0.07641832
## 34           0.59282318      0.01272434     -0.40526982      -0.57772207
## 35           0.80413364      0.33710120     -0.99487522      -0.32366339
## 36          -0.53318051     -0.63896971      0.06366298      -0.97421613
## 37          -1.38024023     -0.54790615      0.11476746       0.07641832
## 38           1.28735798      0.36416334     -1.25874673      -1.61367018
## 39          -0.91459156     -0.33710120     -0.11476746       0.14042416
## 40           0.71909690      0.46117919     -1.48684468      -1.28735798
## 41           0.91459156      0.50406856     -1.56855670      -0.80413364
## 42           0.54790615      0.27046566     -0.87658763      -1.01596791
## 43          -0.75245638     -1.41400510      0.56275157       1.12903457
```

```
## 44          -0.99487522     -0.95396468      0.32366339      -0.47537773
## 45          -0.80413364     -2.10223158      0.97421613      -0.15328619
## 46           1.52642702      0.48967276     -0.63896971      -0.05091800
## 47          -2.23555842     -1.77352271      0.59282318       0.15328619
## 48          -0.54790615      0.19203379     -0.29695946       1.01596791
## 49           0.27046566      0.54790615     -0.93409710      -1.34797950
## 50          -0.63896971     -0.02545075     -0.14042416      -0.29695946
## 51          -0.59282318      0.35060018     -0.47537773      -0.27046566
## 52           0.36416334      0.44707302     -0.62344075      -1.05957037
## 53          -0.39149488     -0.99487522      0.46117919       0.19203379
## 54           0.95396468      0.51856960     -0.76945312      -1.03752256
## 55           0.19203379     -0.20501110     -0.01272434      -0.19203379
## 56          -0.73567430     -0.47537773      0.07641832      -1.20442230
## 57          -0.14042416     -0.05091800     -0.12758531       0.27046566
## 58           0.21802303      0.53318051     -0.78667510      -0.21802303
## 59          -1.41400510     -1.01596791      0.48967276       0.08918610
## 60           0.43305527      0.47537773     -0.60806071       0.28368767
## 61           0.32366339     -0.40526982      0.17908874       0.71909690
## 62          -1.28735798     -0.56275157      0.27046566       0.51856960
## 63           1.20442230     -0.19203379     -0.06366298       1.03752256
## 64           0.24416040      0.14042416     -0.27046566       1.56855670
## 65           2.23555842      0.59282318     -1.03752256      -1.48684468
## 66           0.53318051      0.28368767     -0.37779383       0.17908874
## 67           0.11476746     -0.29695946     -0.02545075      -0.75245638
## 68          -0.70271480      0.41912210     -0.56275157       1.61367018
## 69          -0.10196844      0.10196844     -0.17908874      -0.60806071
## 70           1.25874673      0.63896971     -1.31706374      -1.52642702
## 71          -0.31028376      0.56275157     -0.83980946      -0.28368767
## 72           0.48967276      0.17908874     -0.24416040      -0.08918610
## 73           0.87658763     -0.41912210      0.20501110      -0.73567430
## 74          -1.23113036     -0.70271480      0.40526982       0.01272434
## 75          -0.06366298     -0.01272434     -0.10196844       0.95396468
## 76           0.37779383      0.32366339     -0.43305527      -2.42690063
## 77          -1.34797950     -1.48684468      0.51856960      -0.91459156
## 78           0.78667510      0.60806071     -0.97421613      -1.10528634
## 79          -0.11476746     -0.16617364     -0.23107198      -0.62344075
## 80           0.65465430     -0.57772207      0.16617364       0.70271480
## 81          -0.24416040      0.15328619     -0.57772207      -0.39149488
## 82           0.51856960     -0.23107198     -0.20501110       0.06366298
## 83           1.91230127      0.31028376     -0.91459156      -1.66232963
## 84          -1.05957037     -1.03752256      0.39149488      -0.65465430
## 85          -0.95396468     -0.85805346      0.35060018      -0.44707302
## 86           1.31706374      0.39149488     -1.20442230      -1.56855670
## 87           0.62344075     -0.39149488      0.02545075      -0.37779383
## 88          -0.85805346     -0.06366298     -0.36416334       0.24416040
## 89          -0.87658763     -0.12758531     -0.35060018       0.05091800
## 90          -0.35060018     -0.36416334     -0.46117919       0.12758531
## 91          -0.60806071     -0.35060018     -0.48967276       0.62344075
## 92           0.05091800     -0.08918610     -1.15343724       0.41912210
## 93           0.75245638      0.12758531     -1.38024023      -1.12903457
## 94          -0.47537773     -0.83980946      0.14042416       1.20442230
## 95          -0.71909690     -0.59282318     -0.08918610      -0.16617364
## 96          -1.56855670     -0.48967276     -0.31028376       1.41400510
## 97           0.14042416      0.05091800     -1.52642702      -0.23107198
## 98          -1.52642702     -0.46117919     -0.28368767       1.44946373
```

```
## 99          -1.25874673     -0.53318051      0.29695946       0.53318051
## 100          1.77352271     -0.10196844     -1.12903457      -1.77352271
## 101         -1.03752256     -1.28735798      0.28368767      -0.50406856
## 102          0.03818128     -0.14042416     -1.17854682       0.40526982
## 103          0.07641832      0.00000000     -1.08214564       0.44707302
## 104         -0.46117919     -0.82184079      0.15328619       1.23113036
## 105          0.08918610      0.07641832     -1.01596791       0.46117919
## 106         -1.77352271     -2.42690063      1.52642702       0.65465430
## 107          1.61367018      0.57772207     -1.05957037      -1.83849262
## 108         -1.83849262     -1.71527720      0.80413364       1.31706374
## 109         -0.19203379     -0.60806071      0.21802303      -0.68651916
## 110         -0.48967276     -0.44707302      0.08918610      -0.95396468
## 111          0.73567430      0.62344075     -1.34797950      -1.25874673
## 112          0.93409710      0.65465430     -1.44946373      -0.78667510
## 113          0.06366298     -0.03818128     -1.10528634       0.43305527
## 114         -0.89542793     -0.37779383     -0.39149488       0.23107198
## 115          0.35060018     -0.32366339     -0.67050162      -2.80216172
## 116         -1.01596791     -1.23113036      0.31028376      -0.48967276
## 117         -1.17854682     -1.44946373      0.50406856       0.80413364
## 118         -2.42690063     -0.80413364      0.10196844       1.91230127
## 119          1.48684468     -0.11476746     -0.89542793      -0.06366298
## 120         -0.36416334     -0.91459156     -0.80413364       0.11476746
## 121         -0.67050162     -0.89542793     -0.85805346       0.60806071
## 122         -0.03818128     -0.75245638     -1.91230127       0.35060018
## 123          0.70271480     -0.65465430     -2.23555842      -1.15343724
## 124         -0.51856960     -1.66232963      0.03818128       1.15343724
## 125         -0.78667510     -1.34797950     -0.21802303      -0.17908874
## 126         -1.71527720     -1.12903457     -0.44707302       1.34797950
## 127          0.12758531     -0.68651916     -2.80216172      -0.24416040
## 128         -1.66232963     -1.10528634     -0.41912210       1.38024023
## 129         -1.31706374     -1.20442230      0.24416040       0.50406856
## 130          1.71527720     -0.76945312     -1.83849262      -1.91230127
## 131         -1.12903457     -1.91230127      0.23107198      -0.54790615
## 132         -0.05091800     -0.78667510     -1.99828954       0.33710120
## 133         -0.01272434     -0.71909690     -1.71527720       0.37779383
## 134         -0.50406856     -1.61367018      0.05091800       1.17854682
## 135          0.00000000     -0.67050162     -1.61367018       0.39149488
## 136         -1.91230127     -2.80216172      1.44946373       0.63896971
## 137          1.56855670     -0.31028376     -1.66232963      -1.99828954
## 138         -1.99828954     -2.23555842      0.71909690       1.28735798
## 139         -0.20501110     -1.38024023      0.19203379      -0.70271480
## 140         -0.57772207     -1.08214564     -0.05091800      -0.99487522
## 141          0.68651916     -0.24416040     -2.10223158      -1.31706374
## 142          0.89542793     -0.21802303     -2.42690063      -0.82184079
## 143         -0.02545075     -0.73567430     -1.77352271       0.36416334
## 144         -0.93409710     -0.93409710     -0.68651916       0.21802303
## 145         -1.10528634     -1.83849262      0.25729077      -0.53318051
## 146         -1.20442230     -1.99828954      0.47537773       0.78667510
## 147         -2.80216172     -1.56855670     -0.03818128       1.83849262
## 148          0.82184079      1.99828954      0.70271480      -0.83980946
## 149         -0.07641832      1.20442230      1.23113036       0.29695946
## 150          0.10196844      1.56855670      0.91459156       0.32366339
## 151          0.97421613      1.71527720      0.82184079      -0.43305527
## 152          0.23107198      0.71909690      2.23555842       0.91459156
## 153          1.44946373      1.83849262      0.78667510      -0.41912210
```

```
## 154          0.63896971      1.03752256      1.41400510       0.57772207
## 155         -0.16617364      0.85805346      1.56855670      -0.59282318
## 156          0.41912210      1.17854682      1.25874673       0.97421613
## 157          0.67050162      1.91230127      0.76945312       0.56275157
## 158         -0.68651916      0.70271480      2.42690063       0.76945312
## 159          1.03752256      1.77352271      0.83980946       0.99487522
## 160          0.83980946      0.91459156      1.71527720       1.52642702
## 161         -0.44707302      0.82184079      1.83849262       1.10528634
## 162          1.66232963      1.05957037      1.34797950       1.71527720
## 163          0.76945312      1.34797950      1.10528634       2.42690063
## 164          2.80216172      2.23555842      0.67050162      -0.85805346
## 165          1.12903457      1.44946373      0.99487522       0.89542793
## 166          0.57772207      0.99487522      1.38024023      -0.14042416
## 167         -0.12758531      1.66232963      0.87658763       2.80216172
## 168          0.46117919      1.28735798      1.20442230      -0.01272434
## 169          1.99828954      2.80216172      0.62344075      -0.89542793
## 170          0.28368767      2.10223158      0.75245638       0.31028376
## 171          1.05957037      1.41400510      1.12903457       0.67050162
## 172          1.41400510      0.89542793      1.77352271      -0.12758531
## 173         -0.43305527      0.76945312      2.10223158       0.68651916
## 174          0.47537773      1.23113036      1.28735798       1.66232963
## 175          0.99487522      1.52642702      0.95396468      -1.44946373
## 176         -0.62344075      0.67050162      2.80216172      -0.33710120
## 177          1.38024023      2.42690063      0.68651916      -0.51856960
## 178          0.44707302      1.08214564      1.15343724      -0.02545075
## 179          1.23113036      0.80413364      1.66232963       1.48684468
## 180          0.33710120      1.38024023      0.85805346       0.20501110
## 181          1.10528634      1.01596791      1.17854682       0.75245638
## 182          2.42690063      1.48684468      0.73567430      -1.08214564
## 183         -0.32366339      0.68651916      1.99828954      -0.10196844
## 184         -0.29695946      0.73567430      1.91230127       0.02545075
## 185          2.10223158      1.61367018      0.63896971      -0.93409710
## 186          1.17854682      0.93409710      1.48684468       0.25729077
## 187         -0.25729077      1.15343724      1.01596791       0.93409710
## 188         -0.27046566      1.10528634      1.03752256       0.73567430
## 189          0.25729077      0.95396468      0.93409710       0.87658763
## 190          0.01272434      0.97421613      0.89542793       1.25874673
## 191          0.50406856      1.12903457      0.65465430       1.05957037
## 192          1.34797950      1.31706374      0.60806071      -0.56275157
## 193          0.15328619      0.75245638      1.61367018       1.77352271
## 194         -0.15328619      0.78667510      1.31706374       0.59282318
## 195         -0.83980946      0.83980946      1.05957037       2.10223158
## 196          0.60806071      1.25874673      0.57772207       0.48967276
## 197         -0.82184079      0.87658763      1.08214564       2.23555842
##     RLNU_align.W.PET RP_align.W.PET LGRE_align.W.PET HGRE_align.W.PET
## 1        -0.32366339     0.07641832      -0.14042416       0.00000000
## 2        -0.63896971     0.41912210      -0.29695946       0.37779383
## 3        -0.59282318    -1.12903457       0.54790615      -1.23113036
## 4         1.20442230    -0.32366339      -0.75245638       0.16617364
## 5        -0.97421613    -1.34797950       1.38024023      -2.42690063
## 6        -0.65465430    -1.56855670       0.89542793      -1.83849262
## 7        -0.20501110     0.39149488      -1.41400510       0.97421613
## 8        -0.76945312    -0.12758531       0.37779383      -0.67050162
## 9        -0.91459156    -0.25729077      -0.23107198      -0.23107198
## 10       -1.23113036     0.02545075       0.19203379      -0.27046566
```

```
## 11        1.83849262    -0.73567430      -0.51856960      -0.19203379
## 12       -0.54790615    -1.41400510       0.44707302      -1.25874673
## 13        0.40526982     0.27046566      -1.05957037       0.85805346
## 14       -2.23555842     0.08918610       1.10528634      -0.73567430
## 15        1.23113036     0.47537773      -1.83849262       1.66232963
## 16       -0.95396468    -0.54790615      -0.50406856      -0.70271480
## 17        0.67050162    -0.87658763      -0.19203379      -0.35060018
## 18        0.83980946    -0.23107198      -0.44707302       0.24416040
## 19        0.03818128     0.25729077      -0.43305527       0.28368767
## 20        0.05091800     0.17908874      -0.53318051       0.31028376
## 21       -0.21802303    -0.19203379      -0.01272434      -0.33710120
## 22       -2.10223158     0.11476746       0.40526982      -0.82184079
## 23        0.11476746     0.24416040      -0.54790615       0.29695946
## 24        0.60806071     0.21802303      -0.60806071       0.07641832
## 25       -1.56855670    -0.44707302      -0.08918610      -0.71909690
## 26       -0.03818128    -1.38024023       1.03752256      -1.15343724
## 27       -1.44946373     0.29695946       0.21802303       0.11476746
## 28        0.12758531    -0.51856960      -0.25729077      -0.46117919
## 29       -1.28735798    -1.15343724       0.43305527      -1.56855670
## 30        0.21802303     0.19203379      -1.15343724       0.70271480
## 31       -1.08214564    -0.95396468       1.05957037      -1.31706374
## 32        0.15328619    -0.28368767       0.06366298      -0.14042416
## 33        0.33710120     0.03818128      -0.95396468       0.35060018
## 34       -0.24416040     0.00000000      -0.03818128       0.17908874
## 35        0.14042416     0.35060018      -0.40526982       0.40526982
## 36       -1.71527720    -0.65465430       1.20442230      -1.66232963
## 37       -0.28368767    -0.67050162       0.68651916      -1.03752256
## 38       -1.34797950     0.37779383      -0.48967276       0.01272434
## 39        0.27046566    -0.37779383      -0.73567430       0.05091800
## 40       -0.43305527     0.50406856      -0.93409710       0.91459156
## 41       -0.14042416     0.53318051      -0.56275157       0.82184079
## 42       -0.36416334     0.28368767      -0.59282318       0.41912210
## 43        0.23107198    -1.52642702       0.76945312      -0.97421613
## 44       -1.10528634    -0.99487522       1.01596791      -1.34797950
## 45       -1.91230127    -2.10223158       2.42690063      -2.80216172
## 46        0.78667510     0.46117919      -0.68651916       1.99828954
## 47       -0.83980946    -1.91230127       0.82184079      -1.91230127
## 48        1.34797950     0.12758531      -0.67050162       0.54790615
## 49       -0.93409710     0.54790615      -0.41912210       0.06366298
## 50       -0.16617364    -0.11476746      -0.11476746      -0.15328619
## 51        0.02545075     0.31028376      -0.24416040      -0.06366298
## 52       -0.46117919     0.40526982      -0.63896971       0.43305527
## 53       -0.56275157    -1.10528634       1.17854682      -1.77352271
## 54       -0.57772207     0.48967276      -1.31706374       0.67050162
## 55       -0.25729077    -0.31028376       0.35060018      -0.51856960
## 56       -1.61367018    -0.41912210       0.41912210      -1.08214564
## 57        0.17908874    -0.16617364      -0.05091800      -0.32366339
## 58        0.47537773     0.51856960      -0.97421613       1.20442230
## 59       -0.40526982    -1.25874673       0.67050162      -1.20442230
## 60        0.89542793     0.43305527      -1.03752256       1.71527720
## 61        0.62344075    -0.48967276      -0.10196844      -0.24416040
## 62       -0.06366298    -0.76945312       0.53318051      -0.91459156
## 63        0.41912210    -0.27046566       0.59282318      -0.78667510
## 64        1.56855670     0.05091800      -0.47537773       0.33710120
## 65       -0.89542793     0.59282318      -0.07641832       0.75245638
```

```
## 66        0.59282318     0.20501110      -1.08214564       0.76945312
## 67       -0.85805346    -0.36416334       0.00000000      -0.68651916
## 68        2.23555842     0.36416334      -0.78667510       0.99487522
## 69       -0.67050162    -0.03818128       0.29695946      -0.56275157
## 70       -1.01596791     0.63896971      -0.16617364       0.39149488
## 71        0.10196844     0.56275157      -0.15328619       0.14042416
## 72       -0.08918610     0.10196844       0.14042416      -0.41912210
## 73       -1.03752256    -0.53318051       0.93409710      -0.95396468
## 74       -0.35060018    -0.83980946       0.62344075      -1.05957037
## 75        0.85805346    -0.14042416      -0.37779383       0.21802303
## 76       -2.42690063     0.32366339       0.56275157      -0.99487522
## 77       -1.99828954    -1.44946373       0.85805346      -2.23555842
## 78       -0.47537773     0.60806071      -0.36416334       0.50406856
## 79       -0.68651916    -0.21802303       0.24416040      -0.57772207
## 80        0.46117919    -0.71909690      -0.02545075      -0.44707302
## 81       -0.02545075     0.16617364      -0.62344075       0.20501110
## 82        0.20501110    -0.24416040      -0.33710120       0.03818128
## 83       -1.41400510     0.33710120       0.25729077       0.12758531
## 84       -1.25874673    -1.08214564       0.46117919      -1.52642702
## 85       -1.05957037    -0.93409710       1.12903457      -1.28735798
## 86       -1.31706374     0.44707302      -0.46117919       0.02545075
## 87       -0.78667510    -0.43305527       0.80413364      -0.75245638
## 88        0.31028376    -0.08918610      -0.17908874      -0.08918610
## 89        0.19203379    -0.15328619      -0.21802303      -0.12758531
## 90        0.50406856    -0.33710120      -0.89542793       0.46117919
## 91        0.73567430    -0.29695946      -1.10528634       0.27046566
## 92        1.08214564    -0.01272434      -1.56855670       1.44946373
## 93       -0.48967276     0.23107198      -0.70271480       0.48967276
## 94        0.56275157    -0.91459156       0.17908874      -0.60806071
## 95       -0.37779383    -0.60806071       0.51856960      -0.83980946
## 96        1.44946373    -0.40526982      -0.76945312      -0.02545075
## 97        0.25729077     0.15328619      -1.17854682       0.57772207
## 98        1.48684468    -0.39149488      -0.71909690      -0.01272434
## 99       -0.05091800    -0.70271480       0.57772207      -0.89542793
## 100      -1.48684468    -0.02545075       0.12758531       0.10196844
## 101      -1.15343724    -1.23113036       0.95396468      -1.41400510
## 102       1.05957037    -0.05091800      -1.66232963       1.41400510
## 103       1.12903457     0.06366298      -1.44946373       1.52642702
## 104       0.57772207    -0.89542793       0.20501110      -0.59282318
## 105       1.15343724     0.14042416      -1.38024023       1.56855670
## 106      -0.51856960    -2.42690063       1.15343724      -1.99828954
## 107      -0.80413364     0.57772207      -0.85805346       1.17854682
## 108       0.36416334    -1.99828954       0.48967276      -1.10528634
## 109      -0.73567430    -0.75245638      -0.99487522      -0.29695946
## 110      -1.66232963    -0.46117919       1.23113036      -1.61367018
## 111      -0.41912210     0.62344075      -0.82184079       0.93409710
## 112      -0.12758531     0.65465430      -0.39149488       0.83980946
## 113       1.10528634     0.01272434      -1.48684468       1.48684468
## 114       0.29695946    -0.35060018      -0.35060018      -0.10196844
## 115      -2.80216172    -0.20501110       0.32366339      -1.01596791
## 116      -1.12903457    -1.20442230       0.99487522      -1.38024023
## 117       0.65465430    -1.05957037      -0.32366339      -0.36416334
## 118       1.77352271    -0.80413364      -0.65465430      -0.20501110
## 119       0.76945312    -0.07641832      -1.01596791       1.91230127
## 120       0.48967276    -0.82184079      -1.61367018       0.44707302
```

```
## 121       0.71909690    -0.78667510      -1.77352271       0.25729077
## 122       0.97421613    -0.62344075      -2.42690063       1.28735798
## 123      -0.50406856    -0.47537773      -1.23113036       0.47537773
## 124       0.53318051    -1.66232963       0.02545075      -0.63896971
## 125      -0.39149488    -1.17854682       0.16617364      -0.85805346
## 126       1.38024023    -1.01596791      -1.28735798      -0.05091800
## 127       0.24416040    -0.50406856      -1.91230127       0.56275157
## 128       1.41400510    -0.97421613      -1.25874673      -0.03818128
## 129      -0.07641832    -1.28735798       0.23107198      -0.93409710
## 130      -1.52642702    -0.63896971      -0.06366298       0.08918610
## 131      -1.20442230    -1.83849262       0.73567430      -1.48684468
## 132       0.95396468    -0.68651916      -2.80216172       1.25874673
## 133       1.01596791    -0.57772207      -2.10223158       1.34797950
## 134       0.54790615    -1.61367018       0.03818128      -0.62344075
## 135       1.03752256    -0.56275157      -1.99828954       1.38024023
## 136      -0.53318051    -2.80216172       0.97421613      -2.10223158
## 137      -0.82184079    -0.17908874      -1.52642702       1.15343724
## 138       0.35060018    -2.23555842       0.15328619      -1.12903457
## 139      -0.75245638    -1.31706374      -1.71527720      -0.31028376
## 140      -1.77352271    -1.03752256       1.08214564      -1.71527720
## 141      -0.44707302    -0.10196844      -1.34797950       0.89542793
## 142      -0.15328619    -0.06366298      -0.91459156       0.80413364
## 143       0.99487522    -0.59282318      -2.23555842       1.31706374
## 144       0.28368767    -0.85805346      -0.87658763      -0.11476746
## 145      -1.17854682    -1.77352271       0.75245638      -1.44946373
## 146       0.63896971    -1.71527720      -0.83980946      -0.37779383
## 147       1.71527720    -1.48684468      -1.20442230      -0.21802303
## 148      -0.31028376     1.99828954       0.31028376       0.68651916
## 149       0.32366339     1.17854682       0.70271480       0.36416334
## 150       0.44707302     1.48684468       0.47537773       0.59282318
## 151       0.01272434     1.66232963       0.10196844       1.05957037
## 152      -0.10196844     0.70271480       2.80216172      -0.87658763
## 153      -0.11476746     1.83849262      -0.80413364       1.61367018
## 154       0.16617364     0.99487522       1.44946373      -0.07641832
## 155      -0.99487522     0.89542793       1.48684468      -0.54790615
## 156       0.68651916     1.10528634       0.83980946       0.23107198
## 157       0.93409710     1.91230127      -0.20501110       2.23555842
## 158       0.06366298     0.68651916       1.83849262      -0.65465430
## 159       1.66232963     1.71527720      -0.27046566       2.80216172
## 160       1.31706374     0.85805346       0.71909690       0.32366339
## 161       0.39149488     0.78667510       1.61367018      -0.47537773
## 162       0.87658763     1.03752256       1.71527720      -0.40526982
## 163       2.42690063     1.28735798       0.27046566       1.01596791
## 164      -0.29695946     2.23555842       0.78667510       1.77352271
## 165       1.28735798     1.41400510      -0.28368767       1.83849262
## 166      -0.27046566     0.95396468       0.91459156      -0.28368767
## 167       2.80216172     1.61367018       0.01272434       2.10223158
## 168      -0.17908874     1.23113036       1.41400510      -0.16617364
## 169      -0.33710120     2.80216172       0.63896971       1.03752256
## 170       0.51856960     2.10223158       0.65465430       0.73567430
## 171       0.37779383     1.31706374       1.25874673       0.19203379
## 172      -0.60806071     0.83980946       2.10223158      -0.48967276
## 173       0.08918610     0.76945312       1.77352271      -0.53318051
## 174       1.61367018     1.15343724       0.33710120       0.87658763
## 175      -1.83849262     1.52642702       1.66232963      -0.50406856
```

```
## 176      -1.38024023     0.67050162       1.99828954      -1.17854682
## 177       0.00000000     2.42690063       0.36416334       1.12903457
## 178      -0.19203379     1.08214564       1.31706374      -0.17908874
## 179       0.91459156     0.80413364       0.87658763       0.15328619
## 180       0.43305527     1.38024023       0.11476746       0.78667510
## 181       0.75245638     1.05957037       0.39149488       0.65465430
## 182      -0.87658763     1.56855670       1.34797950       0.71909690
## 183      -0.70271480     0.71909690       1.52642702      -0.80413364
## 184      -0.62344075     0.73567430       2.23555842      -0.76945312
## 185      -0.71909690     1.77352271       0.28368767       0.63896971
## 186      -0.23107198     0.87658763       1.91230127      -0.39149488
## 187       0.82184079     1.20442230       0.60806071       0.53318051
## 188       0.70271480     1.12903457       0.50406856       0.51856960
## 189       1.17854682     0.97421613      -0.12758531       1.08214564
## 190       1.52642702     1.01596791      -0.31028376       0.95396468
## 191       1.91230127     1.25874673      -1.12903457       2.42690063
## 192      -0.01272434     1.44946373       0.08918610       1.10528634
## 193       1.25874673     0.75245638       1.28735798      -0.25729077
## 194       0.07641832     0.82184079       1.56855670      -0.43305527
## 195       1.99828954     0.91459156       0.05091800       0.60806071
## 196       0.80413364     1.34797950      -0.57772207       1.23113036
## 197       2.10223158     0.93409710       0.07641832       0.62344075
##     LGSRE_align.W.PET HGSRE_align.W.PET LGHRE_align.W.PET HGLRE_align.W.PET
## 1         -0.12758531        0.00000000       -0.14042416       -0.12758531
## 2         -0.29695946        0.37779383       -0.36416334        0.32366339
## 3          0.48967276       -1.20442230        0.62344075       -1.05957037
## 4         -0.75245638        0.11476746       -0.67050162        0.17908874
## 5          1.25874673       -1.91230127        1.61367018       -2.42690063
## 6          0.85805346       -1.83849262        1.08214564       -1.83849262
## 7         -1.38024023        0.99487522       -1.52642702        0.93409710
## 8          0.41912210       -0.59282318        0.35060018       -0.80413364
## 9         -0.25729077       -0.24416040       -0.19203379       -0.28368767
## 10         0.21802303       -0.23107198        0.19203379       -0.36416334
## 11        -0.56275157       -0.19203379       -0.35060018       -0.08918610
## 12         0.35060018       -1.25874673        0.67050162       -1.17854682
## 13        -1.05957037        0.80413364       -1.12903457        0.89542793
## 14         1.15343724       -0.70271480        0.73567430       -0.93409710
## 15        -1.77352271        1.71527720       -1.83849262        1.66232963
## 16        -0.54790615       -0.68651916       -0.37779383       -0.67050162
## 17        -0.27046566       -0.39149488        0.03818128       -0.03818128
## 18        -0.46117919        0.24416040       -0.33710120        0.23107198
## 19        -0.40526982        0.28368767       -0.47537773        0.21802303
## 20        -0.51856960        0.32366339       -0.51856960        0.29695946
## 21         0.01272434       -0.31028376       -0.08918610       -0.37779383
## 22         0.47537773       -0.78667510        0.25729077       -1.01596791
## 23        -0.50406856        0.29695946       -0.56275157        0.31028376
## 24        -0.62344075        0.07641832       -0.62344075        0.11476746
## 25        -0.08918610       -0.71909690       -0.03818128       -0.68651916
## 26         0.97421613       -1.10528634        1.38024023       -1.20442230
## 27         0.24416040        0.15328619        0.16617364        0.06366298
## 28        -0.28368767       -0.46117919       -0.21802303       -0.47537773
## 29         0.29695946       -1.71527720        0.70271480       -1.71527720
## 30        -1.12903457        0.70271480       -1.23113036        0.73567430
## 31         1.08214564       -1.31706374        1.10528634       -1.41400510
## 32         0.06366298       -0.14042416        0.05091800       -0.27046566
```

```
## 33        -0.93409710        0.36416334       -1.01596791        0.41912210
## 34        -0.03818128        0.17908874        0.01272434        0.14042416
## 35        -0.39149488        0.47537773       -0.44707302        0.36416334
## 36         1.20442230       -1.48684468        0.97421613       -1.99828954
## 37         0.71909690       -1.03752256        0.65465430       -1.15343724
## 38        -0.44707302        0.02545075       -0.57772207       -0.24416040
## 39        -0.71909690        0.05091800       -0.75245638        0.16617364
## 40        -0.91459156        0.91459156       -1.03752256        0.83980946
## 41        -0.53318051        0.83980946       -0.65465430        0.78667510
## 42        -0.59282318        0.43305527       -0.68651916        0.43305527
## 43         0.62344075       -1.01596791        1.20442230       -0.87658763
## 44         1.03752256       -1.34797950        1.05957037       -1.44946373
## 45         1.99828954       -2.80216172        2.80216172       -2.80216172
## 46        -0.68651916        2.10223158       -0.71909690        1.91230127
## 47         0.73567430       -2.10223158        1.17854682       -1.28735798
## 48        -0.65465430        0.54790615       -0.73567430        0.62344075
## 49        -0.36416334        0.06366298       -0.53318051        0.08918610
## 50        -0.10196844       -0.17908874       -0.15328619       -0.14042416
## 51        -0.23107198       -0.06366298       -0.31028376       -0.07641832
## 52        -0.63896971        0.41912210       -0.78667510        0.44707302
## 53         1.17854682       -1.77352271        1.41400510       -1.77352271
## 54        -1.25874673        0.67050162       -1.31706374        0.60806071
## 55         0.31028376       -0.51856960        0.47537773       -0.54790615
## 56         0.43305527       -1.08214564        0.41912210       -1.12903457
## 57         0.00000000       -0.29695946       -0.10196844       -0.35060018
## 58        -0.95396468        1.20442230       -1.10528634        1.17854682
## 59         0.54790615       -1.23113036        0.76945312       -1.03752256
## 60        -0.97421613        1.66232963       -1.15343724        1.77352271
## 61        -0.16617364       -0.25729077       -0.05091800       -0.25729077
## 62         0.50406856       -0.97421613        0.56275157       -0.97421613
## 63         0.60806071       -0.76945312        0.53318051       -0.82184079
## 64        -0.47537773        0.33710120       -0.40526982        0.35060018
## 65        -0.05091800        0.75245638       -0.12758531        0.71909690
## 66        -1.01596791        0.76945312       -1.17854682        0.91459156
## 67         0.02545075       -0.67050162       -0.01272434       -0.70271480
## 68        -0.78667510        0.97421613       -0.82184079        0.95396468
## 69         0.28368767       -0.53318051        0.32366339       -0.73567430
## 70        -0.14042416        0.46117919       -0.28368767        0.33710120
## 71        -0.15328619        0.10196844       -0.25729077        0.12758531
## 72         0.14042416       -0.37779383        0.12758531       -0.48967276
## 73         0.91459156       -0.93409710        0.87658763       -1.08214564
## 74         0.63896971       -1.05957037        0.57772207       -0.91459156
## 75        -0.41912210        0.21802303       -0.29695946        0.27046566
## 76         0.59282318       -0.89542793        0.39149488       -1.23113036
## 77         0.78667510       -1.99828954        1.03752256       -2.23555842
## 78        -0.33710120        0.51856960       -0.46117919        0.40526982
## 79         0.23107198       -0.54790615        0.27046566       -0.75245638
## 80        -0.07641832       -0.44707302        0.06366298       -0.40526982
## 81        -0.60806071        0.20501110       -0.70271480        0.19203379
## 82        -0.37779383        0.01272434       -0.23107198        0.10196844
## 83         0.25729077        0.16617364        0.17908874        0.07641832
## 84         0.33710120       -1.66232963        0.71909690       -1.66232963
## 85         1.12903457       -1.28735798        1.15343724       -1.38024023
## 86        -0.43305527        0.03818128       -0.54790615       -0.23107198
## 87         0.83980946       -0.75245638        0.80413364       -0.89542793
```

```
## 88        -0.19203379       -0.08918610       -0.20501110       -0.16617364
## 89        -0.20501110       -0.12758531       -0.27046566       -0.15328619
## 90        -0.87658763        0.40526982       -0.89542793        0.47537773
## 91        -1.10528634        0.27046566       -0.99487522        0.25729077
## 92        -1.56855670        1.44946373       -1.66232963        1.44946373
## 93        -0.70271480        0.50406856       -0.76945312        0.39149488
## 94         0.16617364       -0.62344075        0.43305527       -0.62344075
## 95         0.51856960       -0.80413364        0.54790615       -0.83980946
## 96        -0.76945312       -0.02545075       -0.60806071        0.01272434
## 97        -1.17854682        0.62344075       -1.28735798        0.51856960
## 98        -0.73567430       -0.01272434       -0.59282318        0.02545075
## 99         0.53318051       -0.95396468        0.59282318       -0.95396468
## 100        0.12758531        0.14042416        0.14042416        0.05091800
## 101        0.93409710       -1.41400510        0.95396468       -1.52642702
## 102       -1.61367018        1.41400510       -1.77352271        1.41400510
## 103       -1.44946373        1.52642702       -1.56855670        1.52642702
## 104        0.19203379       -0.60806071        0.44707302       -0.60806071
## 105       -1.41400510        1.56855670       -1.44946373        1.56855670
## 106        1.01596791       -2.23555842        2.23555842       -1.31706374
## 107       -0.83980946        1.17854682       -0.91459156        1.12903457
## 108        0.37779383       -1.15343724        0.91459156       -0.57772207
## 109       -0.99487522       -0.33710120       -0.93409710       -0.20501110
## 110        1.23113036       -1.44946373        1.01596791       -1.91230127
## 111       -0.82184079        0.93409710       -0.85805346        0.85805346
## 112       -0.32366339        0.85805346       -0.50406856        0.80413364
## 113       -1.48684468        1.48684468       -1.61367018        1.48684468
## 114       -0.35060018       -0.10196844       -0.32366339       -0.17908874
## 115        0.32366339       -0.91459156        0.24416040       -1.25874673
## 116        0.99487522       -1.38024023        0.99487522       -1.48684468
## 117       -0.48967276       -0.40526982        0.00000000       -0.05091800
## 118       -0.67050162       -0.20501110       -0.48967276       -0.10196844
## 119       -1.08214564        1.99828954       -0.95396468        1.83849262
## 120       -1.66232963        0.39149488       -1.38024023        0.46117919
## 121       -1.83849262        0.25729077       -1.71527720        0.24416040
## 122       -2.42690063        1.28735798       -2.42690063        1.28735798
## 123       -1.23113036        0.48967276       -1.25874673        0.37779383
## 124       -0.02545075       -0.65465430        0.21802303       -0.65465430
## 125        0.17908874       -0.83980946        0.40526982       -0.85805346
## 126       -1.31706374       -0.05091800       -1.08214564       -0.01272434
## 127       -1.91230127        0.60806071       -1.91230127        0.50406856
## 128       -1.28735798       -0.03818128       -1.05957037        0.00000000
## 129        0.20501110       -0.99487522        0.48967276       -0.99487522
## 130       -0.06366298        0.12758531       -0.06366298        0.03818128
## 131        0.65465430       -1.56855670        0.83980946       -1.61367018
## 132       -2.80216172        1.25874673       -2.80216172        1.25874673
## 133       -2.10223158        1.34797950       -2.10223158        1.34797950
## 134       -0.01272434       -0.63896971        0.23107198       -0.63896971
## 135       -1.99828954        1.38024023       -1.99828954        1.38024023
## 136        0.68651916       -2.42690063        1.91230127       -1.34797950
## 137       -1.52642702        1.15343724       -1.41400510        1.10528634
## 138        0.10196844       -1.17854682        0.78667510       -0.59282318
## 139       -1.71527720       -0.35060018       -1.48684468       -0.21802303
## 140        1.10528634       -1.61367018        0.89542793       -2.10223158
## 141       -1.34797950        0.89542793       -1.34797950        0.82184079
## 142       -0.85805346        0.82184079       -0.97421613        0.76945312
```

```
## 143       -2.23555842        1.31706374       -2.23555842        1.31706374
## 144       -0.89542793       -0.11476746       -0.80413364       -0.19203379
## 145        0.67050162       -1.52642702        0.85805346       -1.56855670
## 146       -1.03752256       -0.41912210       -0.17908874       -0.06366298
## 147       -1.20442230       -0.21802303       -0.87658763       -0.11476746
## 148        0.44707302        0.68651916        0.11476746        0.68651916
## 149        0.82184079        0.35060018        0.50406856        0.57772207
## 150        0.56275157        0.56275157        0.28368767        0.59282318
## 151        0.11476746        1.05957037       -0.07641832        1.15343724
## 152        2.80216172       -0.87658763        2.42690063       -0.78667510
## 153       -0.80413364        1.61367018       -0.83980946        1.61367018
## 154        1.44946373       -0.07641832        1.34797950       -0.02545075
## 155        1.52642702       -0.57772207        1.28735798       -0.53318051
## 156        0.95396468        0.23107198        0.60806071        0.28368767
## 157       -0.17908874        2.23555842       -0.39149488        2.23555842
## 158        1.66232963       -0.73567430        1.71527720       -0.50406856
## 159       -0.21802303        2.80216172       -0.41912210        2.80216172
## 160        0.75245638        0.31028376        0.63896971        0.48967276
## 161        1.56855670       -0.50406856        1.52642702       -0.46117919
## 162        1.77352271       -0.36416334        1.44946373       -0.39149488
## 163        0.27046566        1.01596791        0.20501110        1.03752256
## 164        0.89542793        1.77352271        0.51856960        1.71527720
## 165       -0.24416040        1.83849262       -0.43305527        1.99828954
## 166        1.05957037       -0.28368767        0.68651916       -0.31028376
## 167        0.03818128        1.91230127       -0.11476746        2.10223158
## 168        1.41400510       -0.15328619        1.23113036       -0.32366339
## 169        0.80413364        1.08214564        0.31028376        1.01596791
## 170        0.76945312        0.71909690        0.36416334        0.75245638
## 171        1.28735798        0.19203379        0.82184079        0.15328619
## 172        2.23555842       -0.48967276        1.83849262       -0.51856960
## 173        1.83849262       -0.56275157        1.56855670       -0.44707302
## 174        0.39149488        0.87658763        0.29695946        0.99487522
## 175        1.71527720       -0.47537773        1.25874673       -0.56275157
## 176        1.91230127       -1.12903457        1.99828954       -1.10528634
## 177        0.46117919        1.12903457        0.15328619        1.08214564
## 178        1.34797950       -0.16617364        1.12903457       -0.33710120
## 179        0.87658763        0.08918610        0.75245638        0.20501110
## 180        0.15328619        0.78667510        0.02545075        0.87658763
## 181        0.40526982        0.63896971        0.37779383        0.70271480
## 182        1.38024023        0.73567430        0.93409710        0.67050162
## 183        1.48684468       -0.85805346        1.66232963       -0.76945312
## 184        2.42690063       -0.82184079        2.10223158       -0.71909690
## 185        0.36416334        0.65465430        0.10196844        0.53318051
## 186        2.10223158       -0.32366339        1.77352271       -0.43305527
## 187        0.70271480        0.53318051        0.46117919        0.54790615
## 188        0.57772207        0.44707302        0.33710120        0.56275157
## 189       -0.11476746        1.03752256       -0.16617364        1.20442230
## 190       -0.31028376        0.95396468       -0.24416040        0.97421613
## 191       -1.15343724        2.42690063       -1.20442230        2.42690063
## 192        0.08918610        1.10528634       -0.02545075        1.05957037
## 193        1.31706374       -0.27046566        1.31706374       -0.29695946
## 194        1.61367018       -0.43305527        1.48684468       -0.41912210
## 195        0.05091800        0.57772207        0.07641832        0.63896971
## 196       -0.57772207        1.23113036       -0.63896971        1.23113036
## 197        0.07641832        0.59282318        0.08918610        0.65465430
```

```
##     GLNU_norm_align.W.PET RLNU_norm_align.W.PET GLVAR_align.W.PET
## 1             -0.37779383            0.05091800        0.03818128
## 2             -0.60806071            0.48967276        0.68651916
## 3              0.59282318           -1.15343724       -1.56855670
## 4             -0.50406856           -0.37779383        0.02545075
## 5              1.48684468           -1.52642702       -1.91230127
## 6              1.10528634           -1.66232963       -1.83849262
## 7             -0.97421613            0.47537773        0.91459156
## 8              0.19203379           -0.10196844       -0.62344075
## 9             -0.21802303           -0.33710120       -0.27046566
## 10            -0.02545075           -0.03818128       -0.02545075
## 11            -0.23107198           -0.78667510       -0.35060018
## 12             0.71909690           -1.56855670       -1.61367018
## 13            -0.99487522            0.27046566        0.70271480
## 14             0.75245638           -0.01272434       -0.46117919
## 15            -1.10528634            0.51856960        1.56855670
## 16             0.28368767           -0.65465430       -0.87658763
## 17            -0.11476746           -0.59282318       -0.37779383
## 18            -0.62344075           -0.23107198        0.33710120
## 19            -0.63896971            0.23107198        0.23107198
## 20            -0.65465430            0.14042416        0.29695946
## 21            -0.08918610           -0.14042416       -0.24416040
## 22             0.43305527            0.00000000       -0.71909690
## 23            -0.67050162            0.20501110        0.17908874
## 24            -0.48967276            0.17908874        0.00000000
## 25             0.23107198           -0.56275157       -0.89542793
## 26             0.93409710           -1.48684468       -0.91459156
## 27            -0.07641832            0.33710120        0.39149488
## 28             0.00000000           -0.54790615       -0.48967276
## 29             0.91459156           -1.28735798       -1.71527720
## 30            -0.93409710            0.19203379        0.59282318
## 31             1.01596791           -1.10528634       -1.20442230
## 32            -0.17908874           -0.40526982        0.01272434
## 33            -0.68651916           -0.02545075        0.08918610
## 34            -0.39149488           -0.05091800        0.31028376
## 35            -0.73567430            0.40526982        0.63896971
## 36             1.12903457           -0.80413364       -1.48684468
## 37             0.47537773           -0.70271480       -1.01596791
## 38            -0.19203379            0.43305527        0.11476746
## 39            -0.44707302           -0.47537773       -0.19203379
## 40            -1.01596791            0.53318051        0.82184079
## 41            -0.89542793            0.60806071        1.34797950
## 42            -0.78667510            0.28368767        0.41912210
## 43             0.50406856           -1.61367018       -0.85805346
## 44             0.99487522           -1.12903457       -1.23113036
## 45             2.80216172           -2.10223158       -2.80216172
## 46            -0.95396468            0.39149488        2.42690063
## 47             1.34797950           -1.99828954       -2.23555842
## 48            -0.53318051           -0.06366298        0.44707302
## 49            -0.10196844            0.54790615       -0.01272434
## 50            -0.05091800           -0.17908874       -0.29695946
## 51            -0.15328619            0.21802303       -0.14042416
## 52            -0.40526982            0.35060018        0.25729077
## 53             1.15343724           -1.34797950       -1.25874673
## 54            -0.25729077            0.41912210        0.60806071
```

```
## 55          0.20501110          -0.46117919       -0.44707302
## 56          0.68651916          -0.73567430       -1.41400510
## 57          0.02545075          -0.24416040       -0.28368767
## 58         -0.75245638           0.46117919        0.85805346
## 59          0.80413364          -1.38024023       -1.15343724
## 60         -0.91459156           0.37779383        1.71527720
## 61         -0.03818128          -0.60806071       -0.25729077
## 62          0.53318051          -0.87658763       -0.95396468
## 63          0.41912210          -0.44707302       -0.63896971
## 64         -0.36416334          -0.08918610        0.47537773
## 65         -0.32366339           0.56275157        1.41400510
## 66         -0.51856960           0.03818128        0.43305527
## 67          0.32366339          -0.51856960       -0.80413364
## 68         -0.76945312           0.32366339        0.93409710
## 69          0.29695946          -0.12758531       -0.51856960
## 70         -0.29695946           0.63896971        0.57772207
## 71         -0.16617364           0.50406856        0.07641832
## 72          0.14042416          -0.07641832       -0.21802303
## 73          0.83980946          -0.71909690       -0.83980946
## 74          0.70271480          -0.99487522       -1.08214564
## 75         -0.24416040          -0.27046566        0.19203379
## 76          0.62344075           0.11476746       -1.03752256
## 77          1.44946373          -1.77352271       -2.42690063
## 78         -0.33710120           0.59282318        0.51856960
## 79          0.15328619          -0.21802303       -0.53318051
## 80         -0.01272434          -0.76945312       -0.33710120
## 81         -0.56275157           0.07641832        0.10196844
## 82         -0.31028376          -0.32366339        0.06366298
## 83         -0.06366298           0.36416334        0.40526982
## 84          0.97421613          -1.23113036       -1.66232963
## 85          1.03752256          -1.05957037       -1.17854682
## 86         -0.14042416           0.44707302        0.12758531
## 87          0.54790615          -0.53318051       -0.47537773
## 88         -0.28368767          -0.11476746       -0.15328619
## 89         -0.27046566          -0.15328619       -0.20501110
## 90         -1.12903457          -0.28368767        0.28368767
## 91         -1.05957037          -0.25729077        0.15328619
## 92         -1.28735798           0.10196844        1.15343724
## 93         -1.03752256           0.29695946        0.50406856
## 94          0.06366298          -0.97421613       -0.56275157
## 95          0.17908874          -0.57772207       -0.70271480
## 96         -0.87658763          -0.50406856       -0.06366298
## 97         -1.15343724           0.31028376        0.67050162
## 98         -0.85805346          -0.48967276       -0.05091800
## 99          0.56275157          -0.82184079       -0.93409710
## 100        -0.43305527           0.08918610        0.37779383
## 101         0.73567430          -1.31706374       -1.31706374
## 102        -1.38024023           0.06366298        1.12903457
## 103        -1.20442230           0.16617364        1.20442230
## 104         0.07641832          -0.93409710       -0.54790615
## 105        -1.17854682           0.24416040        1.23113036
## 106         1.25874673          -2.42690063       -1.99828954
## 107        -0.82184079           0.57772207        0.99487522
## 108         0.65465430          -1.91230127       -1.10528634
## 109         0.12758531          -0.89542793       -0.67050162
```

```
## 110            1.17854682           -0.68651916       -1.44946373
## 111           -0.71909690            0.62344075        0.83980946
## 112           -0.59282318            0.65465430        1.38024023
## 113           -1.23113036            0.12758531        1.17854682
## 114           -0.70271480           -0.29695946       -0.16617364
## 115            0.31028376           -0.16617364       -1.05957037
## 116            0.78667510           -1.25874673       -1.28735798
## 117           -0.46117919           -0.75245638       -0.40526982
## 118           -0.57772207           -0.91459156       -0.36416334
## 119           -1.34797950            0.01272434        2.23555842
## 120           -1.83849262           -0.63896971        0.27046566
## 121           -1.77352271           -0.62344075        0.14042416
## 122           -2.42690063           -0.39149488        1.03752256
## 123           -1.71527720           -0.20501110        0.48967276
## 124           -0.83980946           -1.44946373       -0.59282318
## 125           -0.35060018           -0.95396468       -0.73567430
## 126           -1.66232963           -0.85805346       -0.08918610
## 127           -1.91230127           -0.19203379        0.65465430
## 128           -1.61367018           -0.83980946       -0.07641832
## 129            0.11476746           -1.08214564       -0.99487522
## 130           -1.25874673           -0.41912210        0.36416334
## 131            0.21802303           -1.83849262       -1.38024023
## 132           -2.80216172           -0.43305527        1.01596791
## 133           -2.10223158           -0.35060018        1.08214564
## 134           -0.80413364           -1.41400510       -0.57772207
## 135           -1.99828954           -0.31028376        1.10528634
## 136            0.89542793           -2.80216172       -2.10223158
## 137           -1.56855670            0.02545075        0.97421613
## 138            0.16617364           -2.23555842       -1.12903457
## 139           -0.54790615           -1.17854682       -0.68651916
## 140            0.76945312           -1.01596791       -1.52642702
## 141           -1.52642702            0.15328619        0.80413364
## 142           -1.44946373            0.25729077        1.31706374
## 143           -2.23555842           -0.36416334        1.05957037
## 144           -1.48684468           -0.67050162       -0.17908874
## 145            0.24416040           -1.71527720       -1.34797950
## 146           -1.31706374           -1.03752256       -0.41912210
## 147           -1.41400510           -1.20442230       -0.39149488
## 148            0.67050162            2.10223158        0.62344075
## 149            0.85805346            1.15343724        0.20501110
## 150            0.60806071            1.44946373        0.53318051
## 151            0.33710120            1.61367018        0.89542793
## 152            2.23555842            0.70271480       -0.78667510
## 153            0.48967276            1.77352271        1.66232963
## 154            1.31706374            0.97421613        0.05091800
## 155            1.71527720            0.82184079       -0.82184079
## 156            1.05957037            1.10528634        0.21802303
## 157            0.10196844            1.91230127        1.83849262
## 158            1.83849262            0.68651916       -0.75245638
## 159            0.01272434            1.71527720        2.80216172
## 160            0.87658763            0.85805346        0.24416040
## 161            1.56855670            0.78667510       -0.50406856
## 162            1.52642702            0.99487522       -0.23107198
## 163            0.35060018            1.25874673        1.44946373
## 164            0.37779383            2.23555842        2.10223158
```

```
## 165            0.27046566            1.31706374        1.28735798
## 166            1.41400510            0.91459156       -0.32366339
## 167            0.08918610            1.56855670        1.91230127
## 168            1.38024023            1.20442230       -0.10196844
## 169            0.40526982            2.80216172        1.61367018
## 170            0.57772207            1.99828954        0.73567430
## 171            1.20442230            1.28735798        0.32366339
## 172            1.91230127            0.83980946       -0.43305527
## 173            1.77352271            0.75245638       -0.65465430
## 174            0.51856960            1.05957037        0.87658763
## 175            1.66232963            1.41400510       -0.60806071
## 176            2.42690063            0.67050162       -1.77352271
## 177            0.36416334            2.42690063        1.52642702
## 178            1.23113036            1.12903457       -0.11476746
## 179            0.95396468            0.80413364        0.16617364
## 180            0.25729077            1.34797950        0.75245638
## 181            0.39149488            1.01596791        0.71909690
## 182            0.82184079            1.66232963        1.25874673
## 183            1.99828954            0.71909690       -0.97421613
## 184            2.10223158            0.73567430       -0.76945312
## 185            0.63896971            1.83849262        0.76945312
## 186            1.61367018            0.89542793       -0.03818128
## 187            0.44707302            1.23113036        0.46117919
## 188            0.46117919            1.17854682        0.35060018
## 189           -0.41912210            1.03752256        0.95396468
## 190           -0.20501110            1.08214564        0.78667510
## 191           -1.08214564            1.38024023        1.99828954
## 192           -0.12758531            1.48684468        1.48684468
## 193            1.08214564            0.76945312       -0.12758531
## 194            1.28735798            0.87658763       -0.31028376
## 195            0.03818128            0.93409710        0.54790615
## 196           -0.47537773            1.52642702        1.77352271
## 197            0.05091800            0.95396468        0.56275157
##     RLVAR_align.W.PET Entropy_align.W.PET  SZSE.W.PET  LZSE.W.PET LGLZE.W.PET
## 1         -0.43305527         -0.24416040 -0.10196844 -0.44707302 -0.24416040
## 2         -0.99487522         -0.03818128  0.60806071 -1.48684468 -0.33710120
## 3          0.93409710         -1.12903457 -0.93409710  0.67050162  0.76945312
## 4         -0.02545075          0.06366298 -0.48967276  0.20501110 -0.70271480
## 5          0.99487522         -2.23555842 -1.20442230  0.76945312  1.34797950
## 6          1.25874673         -1.25874673 -1.31706374  1.28735798  0.91459156
## 7         -1.01596791          0.37779383  0.47537773 -1.20442230 -1.38024023
## 8         -0.21802303         -0.83980946  0.10196844 -0.48967276  0.29695946
## 9         -0.07641832         -0.43305527 -0.71909690  0.12758531 -0.19203379
## 10        -0.47537773         -0.59282318  0.19203379 -0.41912210  0.11476746
## 11         0.44707302         -0.20501110 -0.68651916  0.05091800 -0.50406856
## 12         1.03752256         -1.15343724 -1.15343724  0.65465430  0.63896971
## 13        -0.76945312          0.39149488 -0.03818128 -0.54790615 -1.01596791
## 14        -0.59282318         -1.77352271  0.65465430 -1.17854682  0.95396468
## 15        -1.12903457          0.53318051  0.53318051 -1.52642702 -1.83849262
## 16         0.16617364         -0.82184079 -0.82184079  0.29695946 -0.51856960
## 17         0.89542793         -0.33710120 -2.23555842  1.71527720 -0.08918610
## 18        -0.17908874          0.19203379 -0.27046566 -0.37779383 -0.43305527
## 19        -0.73567430          0.00000000  0.02545075 -0.68651916 -0.44707302
## 20        -0.65465430          0.10196844 -0.14042416 -0.65465430 -0.46117919
## 21        -0.25729077         -0.44707302 -0.24416040 -0.32366339  0.02545075
```

```
## 22        -0.67050162         -1.28735798  0.23107198 -1.56855670  0.32366339
## 23        -0.75245638         -0.02545075  0.00000000 -0.50406856 -0.54790615
## 24        -0.60806071         -0.14042416  0.06366298 -0.71909690 -0.63896971
## 25         0.01272434         -0.99487522 -0.76945312 -0.25729077 -0.21802303
## 26         1.08214564         -0.97421613 -1.03752256  1.23113036  0.85805346
## 27        -0.85805346         -0.48967276  0.40526982 -0.89542793  0.07641832
## 28         0.27046566         -0.56275157 -0.60806071  0.31028376 -0.16617364
## 29         0.82184079         -1.34797950 -1.01596791  0.43305527  0.46117919
## 30        -0.56275157          0.28368767 -0.06366298 -0.43305527 -1.10528634
## 31         0.68651916         -1.41400510 -1.48684468  1.17854682  1.08214564
## 32        -0.12758531         -0.21802303 -0.47537773 -0.24416040  0.15328619
## 33        -0.41912210          0.12758531  0.17908874 -0.82184079 -0.99487522
## 34        -0.36416334         -0.08918610 -0.02545075 -0.51856960 -0.02545075
## 35        -0.89542793          0.15328619  0.50406856 -1.41400510 -0.39149488
## 36         0.19203379         -1.99828954 -0.41912210 -0.19203379  1.01596791
## 37         0.41912210         -1.08214564 -0.80413364  0.40526982  0.71909690
## 38        -1.08214564         -0.50406856  0.33710120 -1.05957037 -0.41912210
## 39         0.00000000         -0.10196844 -0.36416334 -0.23107198 -0.71909690
## 40        -1.20442230          0.35060018  0.14042416 -0.97421613 -1.03752256
## 41        -1.23113036          0.31028376  0.57772207 -2.23555842 -0.56275157
## 42        -0.83980946          0.08918610  0.05091800 -0.70271480 -0.57772207
## 43         1.38024023         -0.73567430 -1.38024023  1.38024023  0.51856960
## 44         0.67050162         -1.44946373 -1.52642702  1.15343724  1.03752256
## 45         1.99828954         -2.80216172 -1.71527720  2.23555842  1.91230127
## 46        -0.39149488          0.65465430  0.48967276 -0.80413364 -0.78667510
## 47         1.66232963         -1.56855670 -1.28735798  2.10223158  1.05957037
## 48        -0.14042416          0.32366339  0.12758531 -0.53318051 -0.68651916
## 49        -0.71909690         -0.39149488  0.08918610 -0.67050162 -0.35060018
## 50         0.06366298         -0.40526982 -0.51856960 -0.12758531 -0.07641832
## 51        -0.33710120         -0.25729077  0.35060018 -0.75245638 -0.27046566
## 52        -0.44707302          0.01272434  0.54790615 -0.99487522 -0.62344075
## 53         1.10528634         -1.20442230 -1.25874673  0.97421613  1.23113036
## 54        -0.54790615          0.05091800  0.37779383 -0.85805346 -1.28735798
## 55         0.40526982         -0.62344075 -0.53318051  0.17908874  0.27046566
## 56         0.31028376         -1.23113036 -0.83980946  0.57772207  0.44707302
## 57         0.08918610         -0.37779383 -0.35060018 -0.07641832 -0.05091800
## 58        -0.48967276          0.43305527  0.44707302 -0.78667510 -0.95396468
## 59         1.34797950         -0.95396468 -1.56855670  1.25874673  0.57772207
## 60        -0.40526982          0.62344075  0.29695946 -0.59282318 -1.05957037
## 61         0.54790615         -0.19203379 -0.54790615  0.47537773 -0.06366298
## 62         0.80413364         -0.87658763 -1.08214564  0.89542793  0.47537773
## 63         0.25729077         -0.80413364 -0.59282318  0.27046566  0.54790615
## 64        -0.11476746          0.24416040  0.01272434 -0.46117919 -0.47537773
## 65        -0.78667510          0.14042416  0.59282318 -1.91230127 -0.11476746
## 66        -0.24416040          0.29695946  0.03818128 -0.33710120 -0.97421613
## 67         0.23761110         -0.78667510 -0.62344075  0.46117919  0.10196844
## 68        -0.37779383          0.44707302  0.41912210 -0.73567430 -0.80413364
## 69         0.02545075         -0.75245638 -0.40526982 -0.14042416  0.40526982
## 70        -0.87658763         -0.05091800  0.56275157 -0.95396468 -0.14042416
## 71        -0.51856960         -0.15328619  0.51856960 -0.76945312 -0.20501110
## 72        -0.05091800         -0.53318051  0.07641832 -0.47537773  0.17908874
## 73         0.59282318         -1.05957037 -0.05091800 -0.11476746  0.99487522
## 74         1.05957037         -1.01596791 -0.91459156  1.34797950  0.89542793
## 75         0.11476746          0.23107198 -0.12758531 -0.31028376 -0.53318051
## 76        -0.35060018         -1.71527720 -0.07641832 -0.27046566  0.25729077
```

```
## 77         1.12903457         -2.42690063 -1.17854682  1.44946373  0.82184079
## 78        -0.68651916          0.07641832  0.46117919 -1.10528634 -0.32366339
## 79        -0.08918610         -0.76945312 -0.46117919 -0.15328619  0.35060018
## 80         0.48967276         -0.35060018 -0.73567430  0.37779383 -0.01272434
## 81        -0.53318051         -0.06366298 -0.01272434 -0.56275157 -0.60806071
## 82        -0.10196844         -0.07641832 -0.44707302 -0.08918610 -0.40526982
## 83        -0.82184079         -0.46117919  0.43305527 -0.87658763  0.08918610
## 84         0.87658763         -1.31706374 -0.99487522  0.44707302  0.48967276
## 85         0.70271480         -1.38024023 -1.44946373  1.20442230  1.10528634
## 86        -1.05957037         -0.47537773  0.36416334 -1.03752256 -0.36416334
## 87         0.39149488         -0.89542793 -0.16617364  0.78667510  0.60806071
## 88        -0.27046566         -0.27046566 -0.43305527  0.08918610 -0.12758531
## 89        -0.29695946         -0.31028376 -0.17908874 -0.28368767 -0.29695946
## 90        -0.63896971          0.20501110 -0.19203379 -0.57772207 -0.91459156
## 91        -0.70271480          0.11476746 -0.08918610 -0.60806071 -1.08214564
## 92        -1.28735798          0.56275157  0.21802303 -1.31706374 -1.56855670
## 93        -1.38024023          0.03818128  0.11476746 -1.15343724 -0.67050162
## 94         0.35060018         -0.65465430 -0.87658763  0.24416040  0.23107198
## 95        -0.01272434         -0.93409710 -0.63896971 -0.03818128  0.33710120
## 96        -0.32366339         -0.12758531 -0.37779383 -0.36416334 -0.76945312
## 97        -1.44946373          0.21802303  0.39149488 -1.99828954 -1.20442230
## 98        -0.31028376         -0.11476746 -0.33710120 -0.35060018 -0.73567430
## 99         0.85805346         -0.85805346 -1.05957037  0.91459156  0.53318051
## 100       -1.31706374         -0.51856960  0.16617364 -0.91459156 -0.03818128
## 101        0.60806071         -1.52642702 -1.66232963  1.10528634  0.93409710
## 102       -1.41400510          0.54790615  0.20501110 -1.34797950 -1.61367018
## 103       -1.15343724          0.59282318  0.28368767 -1.25874673 -1.48684468
## 104        0.36416334         -0.63896971 -0.85805346  0.25729077  0.24416040
## 105       -1.10528634          0.60806071  0.32366339 -1.23113036 -1.41400510
## 106        2.80216172         -1.10528634 -1.77352271  2.80216172  1.28735798
## 107       -0.80413364          0.41912210  0.63896971 -1.12903457 -0.82184079
## 108        2.10223158         -0.67050162 -1.41400510  1.52642702  0.59282318
## 109        0.65465430         -0.57772207 -0.97421613  0.60806071 -0.89542793
## 110        0.33710120         -1.91230127 -0.31028376 -0.16617364  1.12903457
## 111       -0.91459156          0.36416334  0.31028376 -0.93409710 -0.87658763
## 112       -0.93409710          0.33710120  0.62344075 -2.10223158 -0.37779383
## 113       -1.17854682          0.57772207  0.25729077 -1.28735798 -1.52642702
## 114       -0.46117919         -0.29695946 -0.56275157  0.07641832 -0.28368767
## 115       -0.97421613         -1.83849262 -0.39149488 -0.29695946  0.12758531
## 116        0.62344075         -1.48684468 -1.61367018  1.12903457  0.97421613
## 117        0.76945312         -0.36416334 -2.42690063  1.66232963 -0.25729077
## 118        0.29695946         -0.23107198 -0.75245638  0.03818128 -0.65465430
## 119       -1.03752256          0.63896971  0.15328619 -0.83980946 -1.12903457
## 120       -1.52642702          0.16617364 -0.57772207 -0.62344075 -1.71527720
## 121       -1.56855670          0.02545075 -0.50406856 -0.63896971 -1.77352271
## 122       -1.99828954          0.47537773 -0.25729077 -1.77352271 -2.42690063
## 123       -2.23555842         -0.01272434 -0.32366339 -1.44946373 -1.23113036
## 124       -0.19203379         -0.70271480 -1.12903457  0.21802303  0.00000000
## 125       -0.57772207         -1.03752256 -0.89542793 -0.05091800  0.14042416
## 126       -1.34797950         -0.17908874 -0.70271480 -0.40526982 -1.31706374
## 127       -2.80216172          0.17908874 -0.11476746 -2.42690063 -1.91230127
## 128       -1.25874673         -0.16617364 -0.67050162 -0.39149488 -1.25874673
## 129        0.56275157         -0.91459156 -1.34797950  0.87658763  0.21802303
## 130       -2.10223158         -0.54790615 -0.29695946 -1.01596791 -0.48967276
## 131        0.17908874         -1.66232963 -1.99828954  1.05957037  0.70271480
```

```
## 132       -2.42690063          0.46117919 -0.28368767 -1.83849262 -2.80216172
## 133       -1.83849262          0.50406856 -0.21802303 -1.66232963 -2.10223158
## 134       -0.16617364         -0.68651916 -1.10528634  0.23107198  0.01272434
## 135       -1.77352271          0.51856960 -0.15328619 -1.61367018 -1.99828954
## 136        2.42690063         -1.17854682 -2.10223158  2.42690063  1.20442230
## 137       -1.61367018          0.40526982  0.27046566 -1.38024023 -1.34797950
## 138        1.71527720         -0.71909690 -1.83849262  1.48684468  0.28368767
## 139        0.23761110         -0.60806071 -1.23113036  0.59282318 -1.66232963
## 140       -0.20501110         -2.10223158 -0.65465430 -0.21802303  0.80413364
## 141       -1.66232963          0.27046566 -0.20501110 -1.08214564 -1.44946373
## 142       -1.71527720          0.25729077  0.24416040 -2.80216172 -0.93409710
## 143       -1.91230127          0.48967276 -0.23107198 -1.71527720 -2.23555842
## 144       -1.48684468         -0.32366339 -0.78667510  0.02545075 -0.85805346
## 145        0.21802303         -1.61367018 -1.91230127  1.08214564  0.73567430
## 146        0.51856960         -0.41912210 -2.80216172  1.61367018 -0.75245638
## 147       -0.23107198         -0.28368767 -0.95396468  0.00000000 -1.17854682
## 148        0.03818128          1.08214564  1.41400510  0.28368767  0.41912210
## 149        0.95396468          1.05957037  0.93409710  0.68651916  0.75245638
## 150        0.46117919          1.20442230  1.56855670  0.16617364  0.56275157
## 151        0.28368767          1.44946373  2.23555842  0.01272434  0.19203379
## 152        1.83849262          0.75245638  0.70271480  1.56855670  2.80216172
## 153        0.12758531          1.52642702  1.66232963  0.11476746 -0.83980946
## 154        1.31706374          0.97421613  0.91459156  0.82184079  1.41400510
## 155        1.20442230          0.73567430  0.80413364  1.03752256  1.56855670
## 156        0.97421613          1.10528634  1.05957037  0.73567430  0.83980946
## 157        0.20501110          2.10223158  1.91230127  0.14042416 -0.15328619
## 158        2.23555842          0.80413364  0.67050162  1.83849262  1.77352271
## 159        0.32366339          2.80216172  1.52642702  0.33710120 -0.23107198
## 160        1.44946373          1.23113036  0.89542793  1.01596791  0.78667510
## 161        1.56855670          0.85805346  0.73567430  1.41400510  1.61367018
## 162        1.17854682          0.87658763  0.87658763  0.85805346  1.71527720
## 163        0.71909690          1.91230127  1.31706374  0.41912210  0.36416334
## 164       -0.03818128          1.66232963  2.80216172 -0.17908874  0.68651916
## 165        0.63896971          1.99828954  1.34797950  0.51856960 -0.17908874
## 166        1.15343724          0.89542793  0.85805346  0.99487522  1.17854682
## 167        0.37779383          2.23555842  1.77352271  0.19203379  0.03818128
## 168        0.91459156          0.93409710  1.01596791  0.63896971  1.52642702
## 169       -0.15328619          1.41400510  2.42690063  0.06366298  0.65465430
## 170        0.15328619          1.25874673  2.10223158  0.15328619  0.62344075
## 171        0.78667510          0.99487522  1.38024023  0.39149488  1.25874673
## 172        1.48684468          0.76945312  1.25874673  0.70271480  2.23555842
## 173        1.77352271          0.78667510  0.76945312  1.91230127  2.10223158
## 174        1.01596791          1.83849262  1.17854682  0.53318051  0.31028376
## 175        0.43305527          0.68651916  1.23113036  0.56275157  1.38024023
## 176        1.91230127          0.67050162  0.71909690  1.99828954  1.99828954
## 177        0.07641832          1.56855670  1.99828954 -0.02545075  0.43305527
## 178        0.75245638          0.91459156  0.95396468  0.62344075  1.48684468
## 179        1.41400510          1.12903457  0.82184079  0.93409710  0.87658763
## 180        0.14042416          1.38024023  1.28735798  0.36416334  0.20501110
## 181        0.73567430          1.34797950  0.97421613  0.71909690  0.37779383
## 182       -0.06366298          1.03752256  1.83849262  0.10196844  1.15343724
## 183        1.61367018          0.71909690  0.75245638  0.95396468  1.66232963
## 184        1.52642702          0.70271480  0.68651916  1.77352271  2.42690063
## 185       -0.28368767          1.01596791  1.61367018 -0.01272434  0.39149488
## 186        1.28735798          0.83980946  1.15343724  1.31706374  1.83849262
```

```
## 187        0.57772207          1.17854682  0.99487522  0.80413364  0.67050162
## 188        0.53318051          1.15343724  1.12903457  0.54790615  0.50406856
## 189        0.10196844          1.71527720  1.10528634  0.35060018 -0.10196844
## 190        0.05091800          1.61367018  1.20442230  0.32366339 -0.31028376
## 191       -0.50406856          2.42690063  1.48684468 -0.10196844 -1.15343724
## 192       -0.62344075          1.48684468  1.44946373 -0.06366298  0.16617364
## 193        1.23113036          0.95396468  0.78667510  0.83980946  1.31706374
## 194        0.83980946          0.82184079  0.83980946  0.75245638  1.44946373
## 195        0.47537773          1.28735798  1.03752256  0.48967276  0.05091800
## 196       -0.95396468          1.77352271  1.71527720 -0.20501110 -0.59282318
## 197        0.50406856          1.31706374  1.08214564  0.50406856  0.06366298
##     HGLZE.W.PET SZLGE.W.PET SZHGE.W.PET LZLGE.W.PET LZHGE.W.PET GLNU_area.W.PET
## 1    0.00000000 -0.25729077  0.01272434 -0.01272434 -0.41912210     -0.57772207
## 2    0.39149488 -0.20501110  0.46117919 -0.53318051 -0.21802303     -1.03752256
## 3   -1.23113036  0.80413364 -1.31706374  0.54790615 -0.63896971     -0.11476746
## 4    0.11476746 -0.78667510  0.11476746 -0.27046566  0.43305527      1.10528634
## 5   -1.91230127  1.20442230 -1.83849262  1.20442230 -2.10223158     -0.25729077
## 6   -1.83849262  0.95396468 -1.91230127  1.61367018 -0.89542793     -0.15328619
## 7    0.99487522 -1.25874673  0.99487522 -1.56855670  0.62344075     -0.68651916
## 8   -0.56275157  0.47537773 -0.46117919  0.27046566 -1.71527720     -0.44707302
## 9   -0.32366339 -0.21802303 -0.37779383 -0.06366298  0.32366339     -1.17854682
## 10  -0.23107198  0.19203379 -0.14042416  0.37779383 -0.97421613     -1.41400510
## 11  -0.19203379 -0.50406856 -0.21802303 -0.20501110 -0.01272434      1.99828954
## 12  -1.28735798  0.56275157 -1.44946373  0.70271480 -1.20442230     -0.06366298
## 13   0.75245638 -0.85805346  0.71909690 -1.15343724  1.01596791     -0.05091800
## 14  -0.73567430  1.34797950 -0.54790615  0.33710120 -1.99828954     -2.23555842
## 15   1.66232963 -1.66232963  1.71527720 -1.91230127  1.44946373      0.70271480
## 16  -0.65465430 -0.57772207 -0.62344075 -0.14042416 -0.95396468     -0.73567430
## 17  -0.33710120 -1.20442230 -1.17854682  0.89542793  2.23555842      0.15328619
## 18   0.28368767 -0.43305527  0.29695946 -0.32366339  0.03818128      0.91459156
## 19   0.24416040 -0.39149488  0.21802303 -0.47537773 -0.10196844     -0.33710120
## 20   0.31028376 -0.37779383  0.33710120 -0.59282318  0.15328619     -0.36416334
## 21  -0.37779383  0.11476746 -0.33710120 -0.03818128 -0.54790615     -0.29695946
## 22  -0.85805346  0.44707302 -0.68651916  0.00000000 -1.77352271     -1.77352271
## 23   0.21802303 -0.41912210  0.15328619 -0.51856960  0.44707302     -0.31028376
## 24   0.07641832 -0.59282318  0.07641832 -0.63896971 -0.43305527      0.68651916
## 25  -0.75245638 -0.62344075 -0.75245638  0.06366298 -1.25874673     -1.34797950
## 26  -1.05957037  0.63896971 -0.97421613  1.71527720 -1.23113036      0.44707302
## 27   0.17908874  0.06366298  0.25729077  0.16617364 -0.67050162     -1.91230127
## 28  -0.46117919 -0.19203379 -0.40526982 -0.05091800 -0.33710120      0.19203379
## 29  -1.44946373  0.29695946 -1.41400510  0.50406856 -1.61367018     -0.63896971
## 30   0.68651916 -1.03752256  0.63896971 -1.03752256  0.65465430     -0.20501110
## 31  -1.52642702  0.82184079 -1.52642702  1.52642702 -0.76945312     -0.76945312
## 32  -0.16617364  0.16617364 -0.19203379  0.05091800 -0.19203379      0.11476746
## 33   0.35060018 -0.87658763  0.36416334 -1.12903457  0.01272434      0.20501110
## 34   0.14042416  0.07641832  0.14042416 -0.10196844 -0.28368767     -0.43305527
## 35   0.44707302 -0.33710120  0.51856960 -0.71909690 -0.20501110     -0.27046566
## 36  -1.34797950  1.08214564 -1.03752256  0.73567430 -2.42690063     -1.12903457
## 37  -1.03752256  0.60806071 -0.95396468  0.63896971 -1.41400510      0.01272434
## 38   0.01272434 -0.28368767  0.05091800 -0.78667510 -0.73567430     -1.56855670
## 39   0.03818128 -0.71909690  0.00000000 -0.41912210  0.17908874      0.33710120
## 40   0.93409710 -0.99487522  0.95396468 -1.08214564  0.59282318     -1.25874673
## 41   0.83980946 -0.46117919  0.80413364 -0.87658763  0.35060018     -0.51856960
## 42   0.36416334 -0.51856960  0.35060018 -0.73567430  0.41912210     -0.91459156
## 43  -0.89542793  0.20501110 -0.87658763  1.83849262 -0.44707302      0.80413364
```

```
## 44  -1.56855670  0.76945312 -1.56855670  1.48684468 -0.78667510     -0.78667510
## 45  -2.80216172  1.38024023 -2.80216172  2.80216172 -1.66232963     -1.08214564
## 46   2.10223158 -0.68651916  2.10223158 -0.57772207  1.61367018      0.17908874
## 47  -2.42690063  0.91459156 -2.10223158  1.38024023  0.78667510     -0.07641832
## 48   0.54790615 -0.60806071  0.54790615 -0.65465430  0.47537773      1.25874673
## 49   0.05091800 -0.23107198  0.03818128 -0.68651916 -0.32366339     -1.38024023
## 50  -0.24416040 -0.05091800 -0.29695946 -0.07641832  0.08918610     -0.32366339
## 51  -0.06366298 -0.12758531 -0.06366298 -0.46117919 -0.53318051     -0.12758531
## 52   0.40526982 -0.44707302  0.44707302 -0.99487522  0.05091800     -0.93409710
## 53  -1.25874673  0.83980946 -1.28735798  1.25874673 -1.31706374     -0.14042416
## 54   0.70271480 -1.15343724  0.75245638 -1.44946373  0.29695946     -0.95396468
## 55  -0.51856960  0.28368767 -0.48967276  0.56275157 -0.93409710     -0.19203379
## 56  -1.12903457  0.54790615 -1.08214564  0.68651916 -1.12903457     -1.31706374
## 57  -0.29695946  0.00000000 -0.24416040  0.10196844 -0.48967276      0.27046566
## 58   1.20442230 -0.82184079  1.08214564 -1.28735798  1.41400510     -0.03818128
## 59  -1.20442230  0.24416040 -1.34797950  1.08214564 -0.08918610     -0.17908874
## 60   1.61367018 -0.91459156  1.61367018 -1.17854682  1.66232963      0.40526982
## 61  -0.25729077 -0.01272434 -0.27046566  0.32366339  0.28368767      0.83980946
## 62  -0.95396468  0.31028376 -0.91459156  0.97421613 -0.59282318      0.24416040
## 63  -0.78667510  0.51856960 -0.65465430  0.48967276 -1.28735798      1.03752256
## 64   0.37779383 -0.40526982  0.37779383 -0.44707302  0.10196844      1.56855670
## 65   0.78667510 -0.11476746  0.85805346 -0.39149488  0.19203379     -1.44946373
## 66   0.73567430 -0.83980946  0.70271480 -1.20442230  1.48684468      0.28368767
## 67  -0.70271480  0.15328619 -0.63896971  0.19203379 -0.56275157     -0.71909690
## 68   0.89542793 -0.70271480  0.87658763 -0.91459156  0.73567430      1.71527720
## 69  -0.53318051  0.50406856 -0.50406856  0.25729077 -1.15343724     -0.47537773
## 70   0.50406856  0.02545075  0.53318051 -0.54790615 -0.16617364     -1.48684468
## 71   0.08918610 -0.07641832  0.12758531 -0.43305527 -0.46117919     -0.16617364
## 72  -0.39149488  0.33710120 -0.32366339  0.03818128 -1.10528634      0.06366298
## 73  -1.01596791  1.23113036 -0.85805346  0.60806071 -1.52642702     -0.54790615
## 74  -1.17854682  1.05957037 -1.15343724  0.80413364  0.63896971     -0.10196844
## 75   0.23107198 -0.47537773  0.19203379 -0.28368767  0.20501110      0.99487522
## 76  -0.91459156  0.14042416 -0.78667510  0.36416334 -1.83849262     -2.42690063
## 77  -1.99828954  0.57772207 -1.99828954  1.28735798 -0.99487522     -1.23113036
## 78   0.48967276 -0.16617364  0.50406856 -0.80413364 -0.05091800     -0.97421613
## 79  -0.54790615  0.41912210 -0.51856960  0.23107198 -1.17854682     -0.48967276
## 80  -0.41912210 -0.02545075 -0.36416334  0.24416040 -0.40526982      0.78667510
## 81   0.10196844 -0.53318051  0.10196844 -0.67050162 -0.14042416     -0.35060018
## 82   0.06366298 -0.54790615  0.02545075 -0.12758531  0.00000000      0.07641832
## 83   0.19203379  0.08918610  0.27046566  0.17908874 -0.65465430     -1.83849262
## 84  -1.41400510  0.32366339 -1.38024023  0.53318051 -1.56855670     -0.62344075
## 85  -1.48684468  0.87658763 -1.48684468  1.56855670 -0.75245638     -0.75245638
## 86   0.02545075 -0.24416040  0.06366298 -0.75245638 -0.71909690     -1.52642702
## 87  -0.67050162  0.62344075 -0.53318051  1.17854682 -1.38024023     -0.46117919
## 88  -0.08918610 -0.10196844 -0.10196844 -0.08918610  0.24416040      0.32366339
## 89  -0.12758531 -0.36416334 -0.07641832 -0.25729077 -0.17908874      0.21802303
## 90   0.43305527 -0.93409710  0.41912210 -0.85805346  0.39149488      0.36416334
## 91   0.27046566 -1.01596791  0.32366339 -0.95396468 -0.11476746      0.76945312
## 92   1.44946373 -1.44946373  1.41400510 -1.66232963  1.23113036      0.62344075
## 93   0.47537773 -0.56275157  0.48967276 -0.93409710 -0.06366298     -0.99487522
## 94  -0.60806071  0.21802303 -0.57772207  0.41912210 -1.03752256      1.20442230
## 95  -0.82184079  0.25729077 -0.71909690  0.51856960 -1.44946373     -0.21802303
## 96  -0.02545075 -0.76945312 -0.02545075 -0.36416334 -0.36416334      1.48684468
## 97   0.59282318 -1.10528634  0.62344075 -1.34797950  0.07641832     -0.01272434
## 98  -0.01272434 -0.73567430 -0.01272434 -0.35060018 -0.35060018      1.52642702
```

```
## 99  -0.93409710  0.35060018 -0.89542793  0.99487522 -0.57772207      0.25729077
## 100  0.16617364 -0.15328619  0.24416040  0.15328619 -0.68651916     -1.99828954
## 101 -1.66232963  0.70271480 -1.66232963  1.41400510 -0.82184079     -0.82184079
## 102  1.41400510 -1.52642702  1.38024023 -1.71527720  1.20442230      0.60806071
## 103  1.52642702 -1.31706374  1.48684468 -1.52642702  1.28735798      0.65465430
## 104 -0.59282318  0.23107198 -0.56275157  0.43305527 -1.01596791      1.23113036
## 105  1.56855670 -1.28735798  1.52642702 -1.48684468  1.31706374      0.67050162
## 106 -2.10223158  1.17854682 -2.23555842  2.42690063  0.14042416      0.10196844
## 107  1.10528634 -0.63896971  1.17854682 -1.25874673  0.93409710     -1.66232963
## 108 -1.08214564  0.27046566 -1.10528634  1.12903457  0.51856960      1.08214564
## 109 -0.43305527 -0.97421613 -0.43305527 -0.56275157  0.68651916     -0.65465430
## 110 -1.31706374  1.12903457 -1.01596791  0.75245638 -2.23555842     -1.10528634
## 111  0.95396468 -0.80413364  0.97421613 -0.97421613  0.60806071     -1.20442230
## 112  0.85805346 -0.29695946  0.82184079 -0.82184079  0.36416334     -0.50406856
## 113  1.48684468 -1.34797950  1.44946373 -1.61367018  1.25874673      0.63896971
## 114 -0.10196844 -0.35060018 -0.11476746 -0.16617364  0.23107198      0.31028376
## 115 -0.97421613 -0.17908874 -0.80413364  0.35060018 -1.91230127     -2.80216172
## 116 -1.61367018  0.71909690 -1.61367018  1.44946373 -0.80413364     -0.80413364
## 117 -0.35060018 -1.56855670 -1.20442230  0.87658763  2.10223158      0.14042416
## 118 -0.20501110 -0.65465430 -0.23107198 -0.21802303 -0.02545075      1.91230127
## 119  1.99828954 -1.08214564  1.99828954 -0.83980946  1.56855670      0.16617364
## 120  0.41912210 -1.61367018  0.40526982 -1.10528634  0.37779383      0.35060018
## 121  0.25729077 -1.77352271  0.31028376 -1.38024023 -0.12758531      0.75245638
## 122  1.28735798 -2.23555842  1.25874673 -2.42690063  1.10528634      0.54790615
## 123  0.46117919 -1.12903457  0.47537773 -1.31706374 -0.07641832     -1.01596791
## 124 -0.63896971 -0.31028376 -0.60806071  0.39149488 -1.08214564      1.15343724
## 125 -0.83980946 -0.14042416 -0.73567430  0.46117919 -1.48684468     -0.23107198
## 126 -0.05091800 -1.41400510 -0.05091800 -0.50406856 -0.39149488      1.41400510
## 127  0.57772207 -1.83849262  0.60806071 -1.83849262  0.06366298     -0.02545075
## 128 -0.03818128 -1.38024023 -0.03818128 -0.48967276 -0.37779383      1.44946373
## 129 -0.99487522  0.01272434 -0.93409710  0.95396468 -0.60806071      0.23107198
## 130  0.15328619 -0.75245638  0.23107198  0.07641832 -0.70271480     -2.10223158
## 131 -1.77352271  0.37779383 -1.77352271  1.31706374 -0.85805346     -0.85805346
## 132  1.25874673 -2.42690063  1.23113036 -2.80216172  1.08214564      0.53318051
## 133  1.34797950 -1.99828954  1.31706374 -2.10223158  1.15343724      0.57772207
## 134 -0.62344075 -0.27046566 -0.59282318  0.40526982 -1.05957037      1.17854682
## 135  1.38024023 -1.91230127  1.34797950 -1.99828954  1.17854682      0.59282318
## 136 -2.23555842  0.73567430 -2.42690063  2.23555842  0.12758531      0.08918610
## 137  1.08214564 -1.17854682  1.15343724 -1.77352271  0.91459156     -1.71527720
## 138 -1.10528634 -0.06366298 -1.12903457  1.10528634  0.50406856      1.05957037
## 139 -0.44707302 -1.71527720 -0.44707302 -0.89542793  0.67050162     -0.67050162
## 140 -1.38024023  0.67050162 -1.05957037  0.71909690 -2.80216172     -1.15343724
## 141  0.91459156 -1.48684468  0.93409710 -1.41400510  0.57772207     -1.28735798
## 142  0.82184079 -0.89542793  0.78667510 -1.05957037  0.33710120     -0.53318051
## 143  1.31706374 -2.10223158  1.28735798 -2.23555842  1.12903457      0.56275157
## 144 -0.11476746 -0.95396468 -0.12758531 -0.23107198  0.21802303      0.29695946
## 145 -1.71527720  0.39149488 -1.71527720  1.34797950 -0.83980946     -0.83980946
## 146 -0.36416334 -2.80216172 -1.25874673  0.83980946  1.99828954      0.12758531
## 147 -0.21802303 -1.23113036 -0.25729077 -0.33710120 -0.03818128      1.83849262
## 148  0.65465430  0.68651916  0.67050162 -0.15328619  0.56275157     -0.60806071
## 149  0.33710120  0.97421613  0.17908874  0.31028376  0.95396468      0.39149488
## 150  0.56275157  0.78667510  0.56275157  0.01272434  0.31028376      0.50406856
## 151  1.03752256  0.48967276  1.05957037 -0.40526982  0.87658763     -0.37779383
## 152 -0.76945312  2.10223158 -0.76945312  1.91230127 -0.50406856      0.48967276
## 153  1.71527720 -0.67050162  1.77352271 -1.01596791  1.38024023     -0.39149488
```

```
## 154 -0.07641832  1.48684468 -0.08918610  1.01596791 -0.15328619      0.43305527
## 155 -0.57772207  1.83849262 -0.67050162  1.05957037 -0.27046566     -0.59282318
## 156  0.29695946  1.03752256  0.28368767  0.47537773  0.40526982      0.93409710
## 157  2.23555842  0.05091800  2.23555842 -0.70271480  1.91230127      0.71909690
## 158 -0.71909690  1.41400510 -0.82184079  1.66232963  0.80413364      0.46117919
## 159  2.80216172 -0.03818128  2.80216172 -0.60806071  2.80216172      1.12903457
## 160  0.32366339  1.01596791  0.20501110  0.76945312  1.34797950      1.38024023
## 161 -0.48967276  1.52642702 -0.47537773  1.23113036  0.25729077      0.89542793
## 162 -0.31028376  1.77352271 -0.31028376  0.85805346 -0.47537773      1.66232963
## 163  1.01596791  0.53318051  1.01596791  0.02545075  0.97421613      2.42690063
## 164  1.83849262  0.85805346  1.83849262  0.11476746  0.99487522     -0.70271480
## 165  1.77352271  0.03818128  1.66232963 -0.62344075  2.42690063      0.95396468
## 166 -0.28368767  1.28735798 -0.28368767  0.59282318  0.27046566     -0.24416040
## 167  1.91230127  0.17908874  1.91230127 -0.29695946  1.77352271      2.80216172
## 168 -0.14042416  1.71527720 -0.15328619  0.67050162 -0.29695946      0.03818128
## 169  1.17854682  1.10528634  1.20442230 -0.02545075  0.71909690     -0.87658763
## 170  0.71909690  0.93409710  0.76945312  0.08918610  0.46117919      0.47537773
## 171  0.20501110  1.61367018  0.16617364  0.44707302 -0.25729077      0.82184079
## 172 -0.50406856  2.80216172 -0.41912210  1.03752256 -0.87658763      0.00000000
## 173 -0.68651916  2.42690063 -0.70271480  1.15343724  1.71527720      0.51856960
## 174  0.87658763  0.46117919  0.83980946  0.20501110  1.03752256      1.61367018
## 175 -0.47537773  1.25874673 -0.39149488  0.78667510 -1.34797950     -1.61367018
## 176 -1.15343724  1.91230127 -1.23113036  1.99828954 -0.23107198     -0.56275157
## 177  1.15343724  0.75245638  1.12903457 -0.19203379  0.83980946     -0.40526982
## 178 -0.15328619  1.66232963 -0.16617364  0.62344075 -0.31028376      0.02545075
## 179  0.12758531  0.99487522  0.08918610  0.65465430  0.48967276      1.34797950
## 180  0.76945312  0.43305527  0.73567430 -0.11476746  0.75245638      0.37779383
## 181  0.67050162  0.40526982  0.65465430  0.28368767  0.85805346      0.85805346
## 182  0.80413364  1.15343724  0.89542793  0.57772207  0.16617364     -1.05957037
## 183 -0.80413364  1.56855670 -0.83980946  0.93409710 -0.91459156     -0.08918610
## 184 -0.87658763  2.23555842 -0.99487522  2.10223158  0.02545075     -0.28368767
## 185  0.63896971  0.65465430  0.68651916 -0.17908874  0.11476746     -0.89542793
## 186 -0.27046566  1.99828954 -0.17908874  1.77352271 -0.51856960      0.05091800
## 187  0.53318051  0.89542793  0.39149488  0.29695946  1.05957037      0.97421613
## 188  0.51856960  0.59282318  0.43305527  0.21802303  0.70271480      0.87658763
## 189  1.05957037 -0.08918610  1.03752256 -0.24416040  1.52642702      1.01596791
## 190  0.97421613 -0.32366339  0.91459156 -0.37779383  0.76945312      1.31706374
## 191  2.42690063 -1.05957037  2.42690063 -1.23113036  1.83849262      1.28735798
## 192  1.12903457  0.36416334  1.10528634 -0.31028376  0.82184079     -0.41912210
## 193 -0.17908874  1.31706374 -0.20501110  0.82184079 -0.24416040      1.77352271
## 194 -0.40526982  1.44946373 -0.35060018  0.91459156 -0.62344075      0.41912210
## 195  0.60806071  0.10196844  0.57772207  0.12758531  0.53318051      2.10223158
## 196  1.23113036 -0.48967276  1.56855670 -0.76945312  0.89542793      0.73567430
## 197  0.62344075  0.12758531  0.59282318  0.14042416  0.54790615      2.23555842
##      ZSNU.W.PET   ZSP.W.PET GLNU_norm.W.PET ZSNU_norm.W.PET GLVAR_area.W.PET
## 1   -0.23107198 -0.21802303     -0.40526982     -0.20501110       0.03818128
## 2   -0.32366339  0.59282318     -0.59282318      0.68651916       0.62344075
## 3   -0.68651916 -1.03752256      0.73567430     -0.97421613      -1.28735798
## 4    0.89542793 -0.59282318     -0.51856960     -0.53318051       0.06366298
## 5   -1.17854682 -1.15343724      1.34797950     -1.31706374      -1.77352271
## 6   -0.97421613 -1.48684468      1.17854682     -1.44946373      -1.83849262
## 7   -0.03818128  0.50406856     -0.97421613      0.50406856       0.95396468
## 8   -0.57772207 -0.12758531      0.16617364      0.11476746      -0.60806071
## 9   -0.87658763 -0.65465430     -0.07641832     -0.71909690      -0.37779383
## 10  -0.85805346 -0.10196844     -0.06366298      0.17908874      -0.03818128
```

```
## 11   1.66232963 -0.63896971     -0.20501110     -0.70271480      -0.39149488
## 12  -0.73567430 -1.08214564      0.76945312     -1.25874673      -1.34797950
## 13   0.47537773 -0.06366298     -0.99487522     -0.12758531       0.70271480
## 14  -1.99828954  0.62344075      0.65465430      0.70271480      -0.47537773
## 15   1.31706374  0.57772207     -1.10528634      0.59282318       1.44946373
## 16  -0.95396468 -0.80413364      0.20501110     -0.85805346      -0.83980946
## 17   0.02545075 -1.91230127     -0.10196844     -0.78667510      -0.33710120
## 18   0.83980946 -0.27046566     -0.60806071     -0.31028376       0.41912210
## 19   0.11476746  0.05091800     -0.62344075     -0.01272434       0.20501110
## 20   0.08918610  0.00000000     -0.67050162     -0.24416040       0.29695946
## 21  -0.11476746 -0.25729077     -0.05091800     -0.29695946      -0.27046566
## 22  -1.44946373  0.47537773      0.46117919      0.20501110      -0.76945312
## 23   0.20501110 -0.15328619     -0.63896971     -0.07641832       0.11476746
## 24   0.68651916  0.10196844     -0.47537773      0.03818128       0.01272434
## 25  -1.38024023 -0.56275157      0.32366339     -0.80413364      -1.01596791
## 26  -0.24416040 -1.20442230      0.68651916     -1.15343724      -0.87658763
## 27  -1.08214564  0.25729077     -0.24416040      0.41912210       0.37779383
## 28  -0.02545075 -0.70271480      0.00000000     -0.63896971      -0.48967276
## 29  -1.25874673 -0.93409710      0.83980946     -1.10528634      -1.71527720
## 30   0.36416334 -0.20501110     -0.93409710     -0.17908874       0.57772207
## 31  -1.52642702 -1.31706374      1.08214564     -1.61367018      -1.41400510
## 32   0.10196844 -0.43305527     -0.12758531     -0.50406856      -0.01272434
## 33   0.53318051  0.17908874     -0.68651916      0.12758531       0.08918610
## 34  -0.10196844 -0.11476746     -0.41912210     -0.10196844       0.31028376
## 35   0.35060018  0.54790615     -0.71909690      0.56275157       0.63896971
## 36  -1.31706374 -0.46117919      0.97421613     -0.43305527      -1.20442230
## 37  -0.56275157 -0.87658763      0.47537773     -0.89542793      -0.97421613
## 38  -0.93409710  0.37779383     -0.17908874      0.31028376       0.15328619
## 39   0.39149488 -0.36416334     -0.43305527     -0.37779383      -0.20501110
## 40  -0.35060018  0.21802303     -1.03752256      0.10196844       0.82184079
## 41   0.15328619  0.65465430     -0.91459156      0.62344075       1.31706374
## 42  -0.25729077  0.07641832     -0.73567430      0.01272434       0.33710120
## 43  -0.07641832 -1.41400510      0.35060018     -1.48684468      -0.78667510
## 44  -1.56855670 -1.34797950      1.03752256     -1.66232963      -1.44946373
## 45  -2.80216172 -2.23555842      1.99828954     -1.91230127      -2.80216172
## 46   0.87658763  0.43305527     -0.95396468      0.44707302       2.80216172
## 47  -1.20442230 -1.77352271      1.56855670     -1.41400510      -2.23555842
## 48   1.48684468  0.08918610     -0.50406856      0.06366298       0.43305527
## 49  -0.71909690  0.12758531     -0.15328619     -0.02545075      -0.02545075
## 50  -0.15328619 -0.50406856     -0.03818128     -0.57772207      -0.31028376
## 51   0.21802303  0.29695946     -0.11476746      0.24416040      -0.14042416
## 52  -0.20501110  0.53318051     -0.39149488      0.54790615       0.23107198
## 53  -0.83980946 -1.25874673      1.12903457     -1.34797950      -1.10528634
## 54  -0.37779383  0.35060018     -0.27046566      0.25729077       0.60806071
## 55  -0.31028376 -0.57772207      0.19203379     -0.59282318      -0.44707302
## 56  -1.91230127 -1.01596791      0.75245638     -0.93409710      -1.31706374
## 57   0.24416040 -0.39149488      0.01272434     -0.41912210      -0.25729077
## 58   0.60806071  0.39149488     -0.78667510      0.40526982       0.85805346
## 59  -0.89542793 -1.38024023      0.82184079     -1.71527720      -1.25874673
## 60   0.97421613  0.14042416     -0.85805346      0.19203379       1.66232963
## 61   0.54790615 -0.71909690     -0.01272434     -0.62344075      -0.24416040
## 62  -0.40526982 -1.12903457      0.48967276     -1.20442230      -0.93409710
## 63   0.37779383 -0.60806071      0.41912210     -0.67050162      -0.62344075
## 64   1.71527720 -0.08918610     -0.36416334     -0.15328619       0.48967276
## 65  -0.60806071  0.63896971     -0.37779383      0.60806071       1.41400510
```

```
## 66   0.63896971 -0.19203379     -0.53318051     -0.06366298       0.44707302
## 67  -0.78667510 -0.76945312      0.31028376     -0.68651916      -0.68651916
## 68   2.23555842  0.28368767     -0.75245638      0.28368767       0.89542793
## 69  -0.62344075 -0.41912210      0.25729077     -0.44707302      -0.51856960
## 70  -0.67050162  0.56275157     -0.32366339      0.57772207       0.59282318
## 71   0.27046566  0.46117919     -0.16617364      0.48967276       0.05091800
## 72   0.03818128 -0.02545075      0.14042416     -0.03818128      -0.21802303
## 73  -0.76945312 -0.33710120      0.95396468     -0.19203379      -0.80413364
## 74  -0.70271480 -1.17854682      0.93409710     -0.99487522      -1.08214564
## 75   0.91459156 -0.23107198     -0.23107198     -0.28368767       0.21802303
## 76  -2.10223158 -0.24416040      0.59282318     -0.25729077      -1.03752256
## 77  -2.42690063 -1.56855670      1.48684468     -1.23113036      -2.42690063
## 78  -0.27046566  0.51856960     -0.31028376      0.36416334       0.53318051
## 79  -0.63896971 -0.47537773      0.15328619     -0.48967276      -0.53318051
## 80   0.40526982 -0.78667510     -0.02545075     -0.76945312      -0.29695946
## 81   0.06366298 -0.03818128     -0.48967276     -0.11476746       0.07641832
## 82   0.25729077 -0.48967276     -0.33710120     -0.47537773       0.10196844
## 83  -1.05957037  0.31028376     -0.21802303      0.43305527       0.39149488
## 84  -1.23113036 -0.91459156      0.87658763     -1.05957037      -1.66232963
## 85  -1.48684468 -1.28735798      1.10528634     -1.56855670      -1.38024023
## 86  -0.91459156  0.41912210     -0.14042416      0.33710120       0.16617364
## 87  -0.65465430 -0.75245638      0.33710120     -0.23107198      -0.46117919
## 88   0.33710120 -0.44707302     -0.28368767     -0.46117919      -0.15328619
## 89   0.29695946 -0.28368767     -0.25729077     -0.27046566      -0.23107198
## 90   0.59282318 -0.17908874     -1.12903457     -0.21802303       0.27046566
## 91   0.80413364 -0.14042416     -1.05957037     -0.08918610       0.14042416
## 92   1.20442230  0.24416040     -1.25874673      0.32366339       1.10528634
## 93  -0.28368767  0.20501110     -1.01596791      0.14042416       0.51856960
## 94   0.44707302 -0.85805346      0.05091800     -0.91459156      -0.56275157
## 95  -0.46117919 -0.62344075      0.12758531     -0.65465430      -0.70271480
## 96   1.41400510 -0.31028376     -0.87658763     -0.35060018      -0.10196844
## 97   0.50406856  0.48967276     -1.15343724      0.51856960       0.68651916
## 98   1.44946373 -0.29695946     -0.82184079     -0.32366339      -0.08918610
## 99  -0.39149488 -1.10528634      0.56275157     -1.17854682      -0.91459156
## 100 -1.10528634  0.16617364     -0.65465430      0.27046566       0.36416334
## 101 -1.66232963 -1.52642702      0.78667510     -1.83849262      -1.52642702
## 102  1.17854682  0.23107198     -1.34797950      0.29695946       1.08214564
## 103  1.25874673  0.32366339     -1.20442230      0.37779383       1.15343724
## 104  0.46117919 -0.83980946      0.06366298     -0.87658763      -0.54790615
## 105  1.28735798  0.36416334     -1.17854682      0.39149488       1.17854682
## 106 -0.99487522 -1.99828954      1.31706374     -2.10223158      -1.99828954
## 107 -0.50406856  0.60806071     -0.80413364      0.67050162       1.25874673
## 108 -0.05091800 -1.61367018      0.71909690     -1.52642702      -1.12903457
## 109 -0.80413364 -0.95396468      0.23107198     -1.03752256      -0.73567430
## 110 -1.28735798 -0.40526982      1.15343724     -0.39149488      -1.17854682
## 111 -0.33710120  0.40526982     -0.76945312      0.16617364       0.83980946
## 112  0.16617364  0.68651916     -0.57772207      0.65465430       1.34797950
## 113  1.23113036  0.27046566     -1.23113036      0.35060018       1.12903457
## 114  0.32366339 -0.54790615     -0.70271480     -0.56275157      -0.16617364
## 115 -2.23555842 -0.37779383      0.21802303     -0.36416334      -1.05957037
## 116 -1.61367018 -1.44946373      0.80413364     -1.77352271      -1.48684468
## 117  0.01272434 -2.10223158     -0.44707302     -0.83980946      -0.35060018
## 118  1.61367018 -0.68651916     -0.54790615     -0.75245638      -0.40526982
## 119  0.85805346  0.15328619     -1.31706374      0.21802303       2.42690063
## 120  0.57772207 -0.35060018     -1.83849262     -0.40526982       0.25729077
```

```
## 121  0.78667510 -0.32366339     -1.77352271     -0.33710120       0.12758531
## 122  1.08214564 -0.01272434     -2.42690063      0.02545075       0.99487522
## 123 -0.29695946 -0.07641832     -1.71527720     -0.16617364       0.50406856
## 124  0.41912210 -0.99487522     -0.89542793     -1.12903457      -0.59282318
## 125 -0.47537773 -0.82184079     -0.56275157     -0.82184079      -0.71909690
## 126  1.34797950 -0.53318051     -1.66232963     -0.54790615      -0.12758531
## 127  0.48967276  0.11476746     -1.91230127      0.15328619       0.65465430
## 128  1.38024023 -0.51856960     -1.61367018     -0.51856960      -0.11476746
## 129 -0.41912210 -1.23113036      0.08918610     -1.38024023      -0.95396468
## 130 -1.12903457 -0.16617364     -1.44946373     -0.05091800       0.35060018
## 131 -1.77352271 -1.71527720      0.27046566     -2.42690063      -1.61367018
## 132  1.05957037 -0.05091800     -2.80216172      0.00000000       0.97421613
## 133  1.12903457  0.02545075     -2.10223158      0.07641832       1.03752256
## 134  0.43305527 -0.97421613     -0.83980946     -1.08214564      -0.57772207
## 135  1.15343724  0.03818128     -1.99828954      0.08918610       1.05957037
## 136 -1.01596791 -2.42690063      1.01596791     -2.80216172      -2.10223158
## 137 -0.51856960  0.19203379     -1.56855670      0.53318051       1.23113036
## 138 -0.06366298 -1.83849262      0.17908874     -1.99828954      -1.15343724
## 139 -0.82184079 -1.05957037     -0.29695946     -1.28735798      -0.75245638
## 140 -1.34797950 -0.67050162      0.51856960     -0.60806071      -1.23113036
## 141 -0.36416334  0.06366298     -1.52642702     -0.14042416       0.80413364
## 142  0.14042416  0.44707302     -1.41400510      0.47537773       1.28735798
## 143  1.10528634  0.01272434     -2.23555842      0.05091800       1.01596791
## 144  0.31028376 -0.73567430     -1.48684468     -0.73567430      -0.17908874
## 145 -1.71527720 -1.66232963      0.29695946     -2.23555842      -1.56855670
## 146  0.00000000 -2.80216172     -1.28735798     -1.01596791      -0.36416334
## 147  1.56855670 -0.89542793     -1.38024023     -0.95396468      -0.41912210
## 148 -0.21802303  1.41400510      0.63896971      1.41400510       0.67050162
## 149  0.28368767  0.95396468      0.85805346      0.93409710       0.17908874
## 150  0.62344075  1.61367018      0.70271480      1.52642702       0.47537773
## 151  0.23107198  2.23555842      0.36416334      2.23555842       0.91459156
## 152 -0.48967276  0.71909690      2.42690063      0.63896971      -0.67050162
## 153  0.07641832  1.71527720      0.53318051      1.56855670       1.71527720
## 154  0.12758531  0.93409710      1.28735798      0.91459156       0.02545075
## 155 -1.15343724  0.76945312      1.71527720      0.78667510      -0.85805346
## 156  0.65465430  1.05957037      0.99487522      1.03752256       0.24416040
## 157  1.01596791  1.77352271      0.10196844      1.83849262       1.83849262
## 158 -0.53318051  0.67050162      1.77352271      0.23107198      -0.82184079
## 159  1.83849262  1.44946373      0.03818128      1.48684468       2.23555842
## 160  0.95396468  0.87658763      0.91459156      0.89542793       0.28368767
## 161  0.05091800  0.75245638      1.61367018      0.73567430      -0.50406856
## 162  0.75245638  0.91459156      1.52642702      0.85805346      -0.19203379
## 163  2.42690063  1.31706374      0.39149488      1.25874673       1.48684468
## 164 -0.08918610  2.80216172      0.37779383      2.80216172       2.10223158
## 165  1.03752256  1.23113036      0.24416040      1.34797950       1.38024023
## 166 -0.44707302  0.83980946      1.41400510      0.83980946      -0.28368767
## 167  2.80216172  1.56855670      0.11476746      1.61367018       1.91230127
## 168 -0.12758531  1.03752256      1.38024023      1.01596791      -0.05091800
## 169 -0.17908874  2.42690063      0.43305527      2.42690063       1.61367018
## 170  0.70271480  1.91230127      0.62344075      1.99828954       0.71909690
## 171  0.51856960  1.38024023      1.23113036      1.38024023       0.40526982
## 172 -0.43305527  1.08214564      2.10223158      1.23113036      -0.43305527
## 173 -0.19203379  0.73567430      1.91230127      0.76945312      -0.65465430
## 174  1.77352271  1.20442230      0.57772207      1.10528634       0.87658763
## 175 -1.41400510  1.17854682      1.66232963      1.15343724      -0.63896971
```

```
## 176 -1.83849262  0.33710120      2.80216172      0.71909690      -1.91230127
## 177  0.19203379  2.10223158      0.44707302      1.77352271       1.56855670
## 178 -0.14042416  0.99487522      1.25874673      0.95396468      -0.06366298
## 179  0.76945312  0.82184079      0.89542793      0.82184079       0.19203379
## 180  0.56275157  1.34797950      0.28368767      1.28735798       0.73567430
## 181  0.67050162  0.97421613      0.40526982      0.97421613       0.75245638
## 182 -0.59282318  1.66232963      0.60806071      1.91230127       1.20442230
## 183 -0.75245638  0.78667510      1.83849262      0.75245638      -0.99487522
## 184 -1.03752256  0.70271480      2.23555842      0.46117919      -0.89542793
## 185 -0.54790615  1.83849262      0.67050162      1.71527720       0.78667510
## 186 -0.16617364  0.85805346      1.44946373      1.17854682       0.00000000
## 187  0.73567430  1.01596791      0.50406856      0.99487522       0.46117919
## 188  0.71909690  1.15343724      0.54790615      1.12903457       0.32366339
## 189  0.99487522  1.25874673     -0.35060018      1.20442230       0.93409710
## 190  1.52642702  1.28735798     -0.19203379      1.31706374       0.76945312
## 191  1.91230127  1.52642702     -1.08214564      1.66232963       1.99828954
## 192  0.17908874  1.48684468     -0.08918610      1.44946373       1.52642702
## 193  0.82184079  0.80413364      1.05957037      0.80413364      -0.07641832
## 194 -0.01272434  0.89542793      1.20442230      0.87658763      -0.32366339
## 195  1.99828954  1.10528634      0.02545075      1.05957037       0.54790615
## 196  0.93409710  1.99828954     -0.46117919      2.10223158       1.77352271
## 197  2.10223158  1.12903457      0.07641832      1.08214564       0.56275157
##     ZSVAR.W.PET Entropy_area.W.PET Min_hist.ADC Max_hist.ADC Mean_hist.ADC
## 1   -0.33710120        -0.35060018   0.44707302  -0.31028376   -0.05091800
## 2   -1.01596791        -0.44707302  -1.10528634  -0.42607834   -0.31028376
## 3    0.82184079        -1.15343724   0.63896971   0.50406856    0.06366298
## 4    0.40526982         0.37779383  -1.10528634   0.51856960   -0.11476746
## 5    0.80413364        -1.56855670  -1.10528634  -0.06366298   -1.01596791
## 6    1.28735798        -1.01596791  -1.10528634   0.08918610    0.46117919
## 7   -1.10528634         0.27046566  -1.10528634  -0.86728330    0.03818128
## 8   -0.37779383        -1.31706374   1.10528634   0.43305527    0.71909690
## 9    0.23107198        -0.54790615   0.67050162  -0.05091800    0.70271480
## 10  -0.17908874        -0.89542793   0.15328619   0.41912210   -0.71909690
## 11   0.17908874         0.10196844  -1.10528634  -0.21802303   -0.14042416
## 12   0.76945312        -1.05957037  -1.10528634  -0.54790615   -1.77352271
## 13  -0.48967276         0.41912210   0.40526982   0.60806071   -0.99487522
## 14  -0.82184079        -2.80216172  -1.10528634   0.07641832    0.24416040
## 15  -1.38024023         0.51856960  -0.39149488   0.33710120   -1.08214564
## 16   0.39149488        -0.91459156  -1.10528634  -0.37779383   -0.32366339
## 17   1.48684468         0.07641832  -0.14042416  -0.42607834    0.02545075
## 18  -0.23107198         0.28368767  -1.10528634  -0.29031717   -1.44946373
## 19  -0.60806071         0.03818128   0.23107198   0.19203379   -0.76945312
## 20  -0.65465430         0.15328619  -1.10528634   0.37779383   -0.83980946
## 21  -0.08918610        -0.62344075  -1.10528634   0.24416040   -0.25729077
## 22  -1.83849262        -1.91230127   0.98449315  -0.95396468   -0.06366298
## 23  -0.40526982        -0.05091800   0.21802303  -1.77352271   -2.10223158
## 24  -0.68651916        -0.29695946  -1.10528634  -0.03818128   -0.39149488
## 25  -0.19203379        -1.34797950   0.62344075  -1.25874673    0.25729077
## 26   1.25874673        -0.70271480  -1.10528634  -0.29031717   -1.48684468
## 27  -0.89542793        -0.73567430   0.59282318  -0.19203379    0.50406856
## 28   0.47537773        -0.43305527   0.30361487  -1.01596791   -0.82184079
## 29   0.50406856        -1.52642702   0.30361487  -0.86728330   -0.08918610
## 30  -0.29695946         0.39149488   0.17908874  -1.31706374   -2.23555842
## 31   1.17854682        -1.20442230   0.98449315  -1.20442230   -0.36416334
## 32  -0.05091800        -0.21802303  -1.10528634   0.53318051   -0.60806071
```

```
## 33  -0.91459156        -0.10196844  -1.10528634   0.57022085   -0.40526982
## 34  -0.46117919        -0.25729077   1.20442230  -0.08918610    0.54790615
## 35  -1.25874673        -0.07641832   1.17854682  -0.10196844    0.56275157
## 36   0.03818128        -1.99828954  -1.10528634  -0.20501110   -0.12758531
## 37   0.53318051        -0.99487522  -1.10528634   0.40526982   -0.78667510
## 38  -1.12903457        -0.82184079   0.53318051  -0.47537773    0.44707302
## 39   0.02545075        -0.02545075  -1.10528634  -0.01272434   -1.41400510
## 40  -1.15343724         0.32366339   0.01272434  -0.11476746   -1.03752256
## 41  -1.66232963         0.19203379  -1.10528634   0.27046566   -1.20442230
## 42  -0.57772207         0.00000000   0.43305527  -1.71527720   -1.28735798
## 43   1.66232963        -0.14042416  -1.10528634   0.57022085   -0.73567430
## 44   1.15343724        -1.23113036   0.95396468  -1.23113036   -0.37779383
## 45   2.23555842        -2.23555842   1.04848275  -1.17854682   -0.29695946
## 46  -0.75245638         0.65465430  -0.34384286  -0.25729077   -0.85805346
## 47   2.10223158        -1.61367018  -0.65465430   0.36416334    0.15328619
## 48  -0.43305527         0.33710120   0.65465430  -0.32366339   -0.07641832
## 49  -0.63896971        -0.48967276   1.04848275  -2.10223158   -0.70271480
## 50   0.06366298        -0.31028376  -0.65465430  -0.07641832   -0.54790615
## 51  -0.80413364        -0.50406856  -0.05091800   0.48251292   -0.56275157
## 52  -0.99487522        -0.37779383  -0.65465430   0.48251292   -0.28368767
## 53   1.01596791        -0.78667510  -0.65465430   0.59282318   -0.10196844
## 54  -0.95396468        -0.01272434   1.15343724  -1.34797950   -0.27046566
## 55   0.29695946        -0.60806071   1.04848275  -2.80216172   -0.89542793
## 56   0.62344075        -1.44946373   0.57772207  -0.53318051    0.47537773
## 57   0.20501110        -0.32366339  -0.25729077  -0.82184079    0.41912210
## 58  -0.76945312         0.43305527   0.00000000   0.25729077   -0.41912210
## 59   1.23113036        -0.65465430   1.04848275  -1.56855670   -0.53318051
## 60  -0.44707302         0.62344075  -0.65465430   0.73567430   -1.31706374
## 61   0.68651916         0.14042416  -0.65465430  -0.02545075   -1.99828954
## 62   0.93409710        -0.53318051   0.03818128   0.21802303   -0.50406856
## 63   0.46117919        -0.76945312   0.16617364   0.75245638    0.53318051
## 64  -0.35060018         0.36416334   0.33710120  -0.36416334    0.05091800
## 65  -1.52642702        -0.17908874   1.12903457  -0.89542793   -0.03818128
## 66  -0.10196844         0.40526982   0.36416334  -1.08214564   -0.02545075
## 67   0.60806071        -0.85805346   0.39149488  -0.33710120   -0.01272434
## 68  -0.73567430         0.53318051  -0.65465430   0.15328619   -0.75245638
## 69   0.08918610        -0.87658763  -0.34384286  -0.48967276   -1.23113036
## 70  -0.83980946        -0.40526982  -0.29695946  -0.51856960    0.48967276
## 71  -0.71909690        -0.41912210  -0.01272434  -2.32067171   -1.71527720
## 72  -0.36416334        -0.68651916  -0.58525594   0.68651916    0.51856960
## 73   0.21802303        -1.66232963   0.93409710  -0.63896971    0.40526982
## 74   1.77352271        -0.95396468   0.35060018  -0.83980946    0.14042416
## 75  -0.14042416         0.31028376  -0.58525594  -2.32067171   -1.66232963
## 76  -0.07641832        -1.71527720   0.73567430  -0.39149488    0.59282318
## 77   1.52642702        -2.42690063   1.34797950  -1.05957037    0.16617364
## 78  -1.17854682        -0.03818128  -0.17908874  -1.83849262   -1.52642702
## 79   0.07641832        -0.93409710  -0.36416334  -0.50406856   -1.25874673
## 80   0.48967276         0.05091800  -0.85805346  -0.17908874    0.17908874
## 81  -0.51856960        -0.20501110  -0.85805346  -0.97421613   -1.05957037
## 82   0.12758531         0.25729077  -0.85805346   0.54790615   -0.80413364
## 83  -0.87658763        -0.71909690  -0.08918610  -1.10528634   -0.93409710
## 84   0.51856960        -1.48684468   0.41912210  -0.35060018   -0.91459156
## 85   1.20442230        -1.17854682   0.51856960  -1.38024023   -0.62344075
## 86  -1.08214564        -0.80413364   0.54790615   0.39149488    0.82184079
## 87   0.91459156        -1.12903457   0.68651916   0.35060018    0.80413364
```

```
## 88   0.33710120        -0.08918610   0.32366339  -0.56275157    0.12758531
## 89  -0.06366298        -0.36416334   0.70271480  -1.28735798    0.43305527
## 90  -0.47537773         0.23107198   0.27046566  -0.59282318    0.10196844
## 91  -0.50406856         0.12758531   0.12758531  -0.14042416   -0.21802303
## 92  -1.34797950         0.56275157   0.85805346  -0.70271480    0.35060018
## 93  -1.44946373        -0.19203379  -0.19203379  -1.91230127   -1.56855670
## 94   0.27046566        -0.47537773  -1.56855670   0.05091800    0.21802303
## 95   0.19203379        -1.08214564  -1.50634085   0.12758531   -0.44707302
## 96  -0.16617364        -0.12758531  -0.41912210   0.31028376   -1.12903457
## 97  -1.61367018         0.11476746  -0.06366298   0.46117919   -0.57772207
## 98  -0.15328619        -0.11476746  -0.40526982   0.32366339   -1.10528634
## 99   0.95396468        -0.51856960   0.05091800   0.23107198   -0.48967276
## 100 -0.97421613        -0.75245638  -0.10196844  -1.12903457   -0.95396468
## 101  1.10528634        -1.28735798   0.48967276  -1.44946373   -0.65465430
## 102 -1.41400510         0.54790615   0.83980946  -0.71909690    0.33710120
## 103 -1.28735798         0.59282318   0.89542793  -0.67050162    0.37779383
## 104  0.28368767        -0.46117919  -1.50634085   0.06366298    0.23107198
## 105 -1.23113036         0.60806071   0.91459156  -0.65465430    0.39149488
## 106  2.80216172        -0.97421613  -1.41400510   0.14042416   -0.43305527
## 107 -0.93409710         0.24416040  -0.74403915  -0.91459156   -2.42690063
## 108  1.61367018        -0.33710120   0.14042416  -0.12758531   -0.20501110
## 109  0.73567430        -0.56275157  -0.74403915  -1.61367018   -1.34797950
## 110  0.05091800        -1.83849262  -0.74403915   0.01272434   -0.17908874
## 111 -1.03752256         0.35060018  -0.74403915   0.17908874   -1.83849262
## 112 -1.56855670         0.21802303  -0.23107198  -0.99487522   -0.33710120
## 113 -1.31706374         0.57772207   0.87658763  -0.68651916    0.36416334
## 114  0.32366339        -0.16617364   0.28368767  -0.57772207    0.11476746
## 115 -0.11476746        -1.77352271   0.71909690  -0.40526982    0.57772207
## 116  1.12903457        -1.25874673   0.50406856  -1.41400510   -0.63896971
## 117  1.44946373         0.02545075  -0.15328619  -0.44707302    0.01272434
## 118  0.16617364         0.08918610  -1.44946373  -0.23107198   -0.15328619
## 119 -0.85805346         0.63896971  -0.37779383  -0.27046566   -0.87658763
## 120 -0.56275157         0.17908874   0.24416040  -0.62344075    0.07641832
## 121 -0.59282318         0.06366298   0.10196844  -0.16617364   -0.24416040
## 122 -1.99828954         0.46117919   0.76945312  -0.78667510    0.28368767
## 123 -2.23555842        -0.28368767  -0.20501110  -1.99828954   -1.61367018
## 124  0.24416040        -0.59282318  -2.80216172   0.02545075    0.19203379
## 125  0.11476746        -1.10528634  -2.32067171   0.10196844   -0.47537773
## 126 -0.21802303        -0.24416040  -0.44707302   0.28368767   -1.17854682
## 127 -2.80216172         0.01272434  -0.07641832   0.44707302   -0.59282318
## 128 -0.20501110        -0.23107198  -0.43305527   0.29695946   -1.15343724
## 129  0.89542793        -0.63896971   0.02545075   0.20501110   -0.51856960
## 130 -1.20442230        -0.83980946  -0.11476746  -1.15343724   -0.97421613
## 131  1.05957037        -1.41400510   0.46117919  -1.52642702   -0.68651916
## 132 -2.10223158         0.44707302   0.75245638  -0.80413364    0.27046566
## 133 -1.77352271         0.48967276   0.80413364  -0.75245638    0.31028376
## 134  0.25729077        -0.57772207  -2.32067171   0.03818128    0.20501110
## 135 -1.71527720         0.50406856   0.82184079  -0.73567430    0.32366339
## 136  2.42690063        -1.03752256  -1.99828954   0.11476746   -0.46117919
## 137 -1.05957037         0.20501110  -1.80505555  -0.93409710   -2.80216172
## 138  1.56855670        -0.39149488   0.11476746  -0.15328619   -0.23107198
## 139  0.70271480        -0.67050162  -1.80505555  -1.66232963   -1.38024023
## 140  0.00000000        -2.10223158  -1.80505555   0.00000000   -0.19203379
## 141 -1.48684468         0.29695946  -1.80505555   0.16617364   -1.91230127
## 142 -2.42690063         0.16617364  -0.24416040  -1.03752256   -0.35060018
```

```
## 143 -1.91230127         0.47537773   0.78667510  -0.76945312    0.29695946
## 144  0.31028376        -0.27046566   0.25729077  -0.60806071    0.08918610
## 145  1.08214564        -1.38024023   0.47537773  -1.48684468   -0.67050162
## 146  1.41400510        -0.15328619  -0.16617364  -0.46117919    0.00000000
## 147  0.10196844        -0.06366298  -2.10223158  -0.24416040   -0.16617364
## 148 -0.12758531         1.05957037   1.99828954   0.67050162    0.95396468
## 149  0.54790615         1.23113036  -0.52586102   1.31706374    1.03752256
## 150 -0.28368767         1.03752256   0.08918610   1.87412132    1.01596791
## 151 -0.41912210         1.15343724  -0.52586102   1.87412132    1.15343724
## 152  1.38024023         0.89542793  -0.52586102   2.10223158    1.23113036
## 153 -0.39149488         1.48684468   2.42690063   0.80413364    1.17854682
## 154  0.75245638         0.99487522   1.99828954   0.62344075    0.89542793
## 155  0.99487522         0.73567430   1.56855670   1.05957037    1.83849262
## 156  0.65465430         1.20442230  -0.12758531   0.95396468    1.71527720
## 157 -0.27046566         2.10223158   0.20501110   1.52642702    1.12903457
## 158  1.83849262         0.97421613   1.99828954   0.76945312    1.05957037
## 159  0.01272434         2.80216172  -0.52586102   2.42690063    0.68651916
## 160  1.03752256         1.66232963  -0.52586102   1.34797950    0.60806071
## 161  1.34797950         1.01596791   0.37779383   1.48684468    1.08214564
## 162  0.83980946         0.91459156   0.60806071   2.80216172    2.10223158
## 163  0.15328619         1.91230127   1.28735798   1.17854682    1.34797950
## 164 -0.70271480         1.31706374   2.23555842   0.91459156    1.25874673
## 165  0.41912210         1.99828954   1.38024023   0.85805346    1.28735798
## 166  0.97421613         0.85805346   1.41400510   1.23113036    1.31706374
## 167 -0.25729077         2.23555842  -0.52586102   1.44946373    0.93409710
## 168  0.57772207         0.83980946  -0.27046566   1.12903457    0.75245638
## 169 -0.31028376         1.12903457  -0.21802303   1.08214564    1.91230127
## 170 -0.24416040         1.10528634   0.19203379   0.64679211    0.62344075
## 171  0.14042416         0.95396468  -0.46826666   2.23555842    1.99828954
## 172  0.67050162         0.70271480   1.83849262   0.99487522    1.66232963
## 173  1.99828954         0.80413364   1.31706374   0.93409710    1.44946373
## 174  0.37779383         1.83849262  -0.46826666   0.64679211    0.63896971
## 175  0.43305527         0.68651916   1.71527720   1.15343724    2.23555842
## 176  1.91230127         0.67050162   2.80216172   0.87658763    1.48684468
## 177 -0.54790615         1.44946373  -0.02545075   0.71909690    0.67050162
## 178  0.56275157         0.82184079  -0.28368767   1.10528634    0.73567430
## 179  0.85805346         1.52642702  -0.80413364   1.25874673    1.52642702
## 180 -0.03818128         1.25874673  -0.80413364   0.89542793    0.83980946
## 181  0.59282318         1.77352271  -0.80413364   1.99828954    0.91459156
## 182 -0.32366339         0.93409710   0.06366298   0.83980946    0.85805346
## 183  0.87658763         0.71909690   1.44946373   1.20442230    0.87658763
## 184  1.71527720         0.75245638   1.48684468   0.78667510    0.97421613
## 185 -0.53318051         0.87658763   1.52642702   1.71527720    2.80216172
## 186  1.31706374         0.76945312   1.61367018   1.66232963    2.42690063
## 187  0.78667510         1.41400510   1.25874673   1.03752256    1.41400510
## 188  0.44707302         1.17854682   1.66232963   0.82184079    1.77352271
## 189 -0.01272434         1.71527720   1.23113036   1.01596791    1.38024023
## 190 -0.02545075         1.61367018   0.56275157   1.28735798    1.20442230
## 191 -0.62344075         2.42690063   1.77352271   0.97421613    1.61367018
## 192 -0.67050162         1.28735798  -0.03818128   0.70271480    0.65465430
## 193  0.71909690         1.08214564  -1.66232963   1.38024023    1.56855670
## 194  0.63896971         0.78667510  -1.61367018   1.41400510    1.10528634
## 195  0.35060018         1.34797950  -0.32366339   1.56855670    0.76945312
## 196 -0.78667510         1.56855670   0.07641832   1.77352271    0.99487522
## 197  0.36416334         1.38024023  -0.31028376   1.61367018    0.78667510
```

```
##     Variance_hist.ADC Standard_Deviation_hist.ADC Skewness_hist.ADC
## 1          0.43305527                  0.24416040        0.95396468
## 2         -0.21802303                 -0.39149488       -1.56855670
## 3          1.10528634                  0.73567430        1.41400510
## 4          0.70271480                  0.43305527       -0.43305527
## 5          0.36416334                  0.15328619       -0.31028376
## 6          1.77352271                  1.15343724       -1.08214564
## 7          0.59282318                  0.36416334       -1.71527720
## 8         -0.02545075                 -0.19203379       -1.99828954
## 9         -0.25729077                 -0.41912210       -1.83849262
## 10         1.56855670                  0.95396468        1.15343724
## 11         0.01272434                 -0.14042416       -0.91459156
## 12         0.50406856                  0.31028376        0.17908874
## 13        -0.33710120                 -0.46117919        1.71527720
## 14         0.10196844                 -0.07641832       -0.14042416
## 15         0.33710120                  0.14042416        0.76945312
## 16        -0.08918610                 -0.25729077       -1.52642702
## 17        -0.43305527                 -0.51856960       -0.75245638
## 18         0.15328619                 -0.03818128       -0.47537773
## 19         0.76945312                  0.50406856        0.67050162
## 20         0.85805346                  0.59282318       -1.01596791
## 21         0.47537773                  0.28368767        0.00000000
## 22        -0.23107198                 -0.40526982        0.50406856
## 23        -1.44946373                 -1.44946373        1.44946373
## 24         0.48967276                  0.29695946       -0.41912210
## 25        -0.70271480                 -0.75245638       -1.05957037
## 26         0.46117919                  0.27046566       -0.73567430
## 27         0.68651916                  0.41912210       -0.40526982
## 28        -0.07641832                 -0.24416040        0.28368767
## 29         0.24416040                  0.05091800       -0.59282318
## 30        -1.71527720                 -1.71527720        1.23113036
## 31        -0.57772207                 -0.65465430        0.57772207
## 32         0.62344075                  0.37779383        1.05957037
## 33         0.99487522                  0.70271480       -0.63896971
## 34         0.11476746                 -0.06366298       -0.87658763
## 35        -0.16617364                 -0.33710120       -0.83980946
## 36         0.83980946                  0.56275157       -0.68651916
## 37         1.25874673                  0.83980946       -0.82184079
## 38         0.71909690                  0.44707302       -0.39149488
## 39         0.44707302                  0.25729077        0.71909690
## 40        -1.17854682                 -1.17854682        0.89542793
## 41         0.65465430                  0.40526982       -0.99487522
## 42        -0.63896971                 -0.68651916        0.33710120
## 43         0.89542793                  0.62344075       -0.89542793
## 44        -0.59282318                 -0.67050162        0.56275157
## 45        -0.89542793                 -0.91459156        0.68651916
## 46         0.56275157                  0.33710120        0.46117919
## 47         1.66232963                  0.99487522       -0.48967276
## 48        -0.39149488                 -0.48967276       -0.08918610
## 49        -1.38024023                 -1.38024023        0.39149488
## 50         0.16617364                 -0.02545075       -0.29695946
## 51        -0.03818128                 -0.20501110       -0.28368767
## 52         0.57772207                  0.35060018       -0.50406856
## 53         1.31706374                  0.85805346       -0.70271480
## 54        -1.20442230                 -1.20442230        0.43305527
```

```
## 55        -2.23555842                -2.23555842        0.78667510
## 56        -0.10196844                -0.27046566       -0.60806071
## 57         0.17908874                -0.01272434       -1.38024023
## 58         1.03752256                 0.71909690        0.47537773
## 59        -0.87658763                -0.89542793        0.80413364
## 60         0.21802303                 0.02545075        1.28735798
## 61         0.78667510                 0.51856960       -0.80413364
## 62        -0.19203379                -0.36416334        0.62344075
## 63         1.12903457                 0.75245638       -0.24416040
## 64        -2.42690063                -2.42690063        0.85805346
## 65        -0.53318051                -0.60806071        0.40526982
## 66        -0.56275157                -0.63896971        0.35060018
## 67        -0.37779383                -0.47537773       -0.33710120
## 68         1.41400510                 0.91459156       -0.71909690
## 69        -0.28368767                -0.43305527        0.83980946
## 70         0.39149488                 0.17908874       -1.15343724
## 71        -1.66232963                -1.66232963       -0.35060018
## 72         1.20442230                 0.82184079        0.23107198
## 73        -0.91459156                -0.93409710        0.15328619
## 74        -2.80216172                -2.80216172        0.41912210
## 75        -1.61367018                -1.61367018       -0.51856960
## 76        -0.47537773                -0.56275157       -1.20442230
## 77        -1.41400510                -1.41400510        0.53318051
## 78        -1.48684468                -1.48684468       -0.44707302
## 79        -0.29695946                -0.44707302        0.82184079
## 80         0.37779383                 0.16617364       -1.12903457
## 81        -0.40526982                -0.50406856       -0.95396468
## 82         0.14042416                -0.05091800        1.10528634
## 83        -0.65465430                -0.70271480       -0.12758531
## 84         0.20501110                 0.01272434        0.93409710
## 85        -1.23113036                -1.23113036        0.24416040
## 86        -0.54790615                -0.62344075       -2.10223158
## 87        -0.50406856                -0.59282318       -2.23555842
## 88        -1.77352271                -1.77352271        0.14042416
## 89        -0.76945312                -0.80413364       -1.41400510
## 90        -1.91230127                -1.91230127        0.10196844
## 91        -0.80413364                -0.83980946        0.25729077
## 92        -0.99487522                -1.01596791        0.05091800
## 93        -1.52642702                -1.52642702       -0.46117919
## 94         0.07641832                -0.10196844       -0.19203379
## 95         0.95396468                 0.67050162       -1.23113036
## 96         0.31028376                 0.11476746        0.73567430
## 97        -0.05091800                -0.21802303       -0.32366339
## 98         0.32366339                 0.12758531        0.75245638
## 99        -0.17908874                -0.35060018        0.63896971
## 100       -0.67050162                -0.71909690       -0.16617364
## 101       -1.28735798                -1.28735798        0.16617364
## 102       -1.01596791                -1.03752256        0.03818128
## 103       -0.95396468                -0.97421613        0.07641832
## 104        0.08918610                -0.08918610       -0.17908874
## 105       -0.93409710                -0.95396468        0.08918610
## 106        0.97421613                 0.68651916       -1.17854682
## 107        0.27046566                 0.07641832        0.70271480
## 108       -0.78667510                -0.82184079        0.29695946
## 109       -0.71909690                -0.76945312       -1.10528634
```

```
## 110       -0.11476746                 -0.28368767       -0.53318051
## 111       -0.14042416                 -0.31028376        1.17854682
## 112        0.41912210                  0.23107198       -0.56275157
## 113       -0.97421613                 -0.99487522        0.06366298
## 114       -1.83849262                 -1.83849262        0.11476746
## 115       -0.48967276                 -0.57772207       -1.28735798
## 116       -1.25874673                 -1.25874673        0.19203379
## 117       -0.44707302                 -0.53318051       -0.76945312
## 118        0.00000000                 -0.15328619       -0.93409710
## 119        0.54790615                  0.32366339        0.44707302
## 120       -2.10223158                 -2.10223158       -0.02545075
## 121       -0.83980946                 -0.87658763        0.12758531
## 122       -1.10528634                 -1.12903457       -0.10196844
## 123       -1.56855670                 -1.56855670       -0.54790615
## 124        0.05091800                 -0.12758531       -0.27046566
## 125        0.91459156                  0.63896971       -1.34797950
## 126        0.28368767                  0.08918610        0.59282318
## 127       -0.06366298                 -0.23107198       -0.36416334
## 128        0.29695946                  0.10196844        0.60806071
## 129       -0.20501110                 -0.37779383        0.48967276
## 130       -0.68651916                 -0.73567430       -0.23107198
## 131       -1.34797950                 -1.34797950        0.01272434
## 132       -1.12903457                 -1.15343724       -0.11476746
## 133       -1.05957037                 -1.08214564       -0.06366298
## 134        0.06366298                 -0.11476746       -0.25729077
## 135       -1.03752256                 -1.05957037       -0.05091800
## 136        0.93409710                  0.65465430       -1.31706374
## 137        0.25729077                  0.06366298        0.54790615
## 138       -0.82184079                 -0.85805346        0.21802303
## 139       -0.73567430                 -0.78667510       -1.25874673
## 140       -0.12758531                 -0.29695946       -0.57772207
## 141       -0.15328619                 -0.32366339        1.12903457
## 142        0.40526982                  0.21802303       -0.65465430
## 143       -1.08214564                 -1.10528634       -0.07641832
## 144       -1.99828954                 -1.99828954       -0.01272434
## 145       -1.31706374                 -1.31706374        0.02545075
## 146       -0.46117919                 -0.54790615       -0.85805346
## 147       -0.01272434                 -0.16617364       -0.97421613
## 148       -0.31028376                  0.54790615        1.25874673
## 149        1.23113036                  1.41400510        0.32366339
## 150        1.08214564                  1.31706374        0.36416334
## 151        1.71527720                  1.77352271       -0.20501110
## 152        2.42690063                  2.42690063       -0.62344075
## 153       -0.24416040                  0.60806071        1.38024023
## 154       -0.75245638                  0.03818128        1.77352271
## 155        1.01596791                  1.25874673       -0.37779383
## 156        1.28735798                  1.44946373       -1.77352271
## 157        1.99828954                  1.99828954        1.48684468
## 158        0.12758531                  0.80413364        1.83849262
## 159        1.38024023                  1.52642702        2.80216172
## 160        1.83849262                  1.83849262       -0.78667510
## 161        0.87658763                  1.23113036        1.56855670
## 162        2.10223158                  2.10223158        0.37779383
## 163       -0.85805346                  0.00000000        2.10223158
## 164        0.60806071                  1.03752256        1.31706374
```

```
## 165        0.51856960                  0.97421613        1.20442230
## 166        0.75245638                  1.12903457        0.27046566
## 167        2.80216172                  2.80216172       -0.67050162
## 168        0.82184079                  1.20442230        1.99828954
## 169        1.61367018                  1.71527720       -1.48684468
## 170       -0.51856960                  0.39149488        0.20501110
## 171        2.23555842                  2.23555842        1.01596791
## 172        0.03818128                  0.78667510        0.99487522
## 173       -1.15343724                 -0.17908874        1.34797950
## 174       -0.41912210                  0.46117919       -0.21802303
## 175        0.67050162                  1.08214564       -1.61367018
## 176       -0.32366339                  0.53318051        1.52642702
## 177       -0.35060018                  0.48967276       -0.03818128
## 178        0.80413364                  1.17854682        1.91230127
## 179        1.52642702                  1.66232963       -1.44946373
## 180        0.73567430                  1.10528634       -1.03752256
## 181        1.17854682                  1.38024023        2.42690063
## 182        0.35060018                  0.93409710        0.65465430
## 183        1.34797950                  1.48684468        2.23555842
## 184       -0.27046566                  0.57772207        1.03752256
## 185        0.53318051                  1.01596791       -2.42690063
## 186        0.63896971                  1.05957037       -2.80216172
## 187       -0.60806071                  0.20501110        0.97421613
## 188        0.23107198                  0.89542793       -1.91230127
## 189       -0.62344075                  0.19203379        0.91459156
## 190        0.19203379                  0.87658763        1.08214564
## 191        0.02545075                  0.76945312        0.87658763
## 192       -0.36416334                  0.47537773       -0.15328619
## 193        1.15343724                  1.34797950        0.51856960
## 194        1.91230127                  1.91230127       -1.66232963
## 195        1.44946373                  1.56855670        1.61367018
## 196        1.05957037                  1.28735798        0.31028376
## 197        1.48684468                  1.61367018        1.66232963
##     Kurtosis_hist.ADC Energy_hist.ADC Entropy_hist.ADC AUC_hist.ADC  Volume.ADC
## 1         -0.21802303      0.15328619      -1.61367018  -0.21802303 -0.83980946
## 2          0.73567430     -0.07641832      -0.82184079  -0.95396468 -1.23113036
## 3          1.23113036     -0.25072018      -0.01272434   0.37779383 -0.27046566
## 4         -0.47537773     -0.41912210       0.41912210  -0.24416040  0.39149488
## 5         -0.17908874     -0.18555738      -0.20501110  -0.54790615 -0.21802303
## 6         -2.80216172     -0.28368767      -0.02545075  -1.01596791 -0.73567430
## 7         -0.31028376     -0.02545075      -1.23113036  -0.62344075 -0.20501110
## 8         -0.25729077     -0.15328619      -0.29695946  -1.31706374  0.19203379
## 9          0.78667510      0.12758531      -1.56855670  -0.67050162 -0.76945312
## 10         0.70271480     -0.20501110      -0.21802303   0.06366298 -0.60806071
## 11         0.48967276     -0.23107198      -0.10196844  -0.60806071 -0.31028376
## 12        -0.70271480     -0.32366339       0.23107198   0.07641832  0.23107198
## 13         1.91230127     -0.21802303      -0.06366298   0.65465430  0.78667510
## 14         0.31028376     -0.27046566       0.01272434  -0.10196844  0.00000000
## 15        -0.33710120     -0.33710120       0.32366339   0.62344075  1.31706374
## 16         0.80413364     -0.25072018       0.00000000  -0.82184079 -0.17908874
## 17         0.68651916     -0.03818128      -0.87658763  -0.71909690 -0.95396468
## 18        -0.16617364     -0.38463533       0.43305527  -0.33710120  0.97421613
## 19        -0.53318051     -0.29695946       0.21802303   0.53318051  0.06366298
## 20        -0.28368767     -0.46117919       0.54790615  -1.17854682 -0.35060018
## 21        -0.50406856     -0.40526982       0.44707302   0.32366339 -0.63896971
```

```
## 22        -0.73567430      0.17908874      -1.83849262  -0.43305527 -2.80216172
## 23         1.44946373     -0.05091800      -0.80413364   0.35060018 -0.23107198
## 24        -0.76945312     -0.38463533       0.39149488  -0.07641832  0.44707302
## 25        -1.48684468     -0.14042416      -0.50406856  -0.74403915 -1.61367018
## 26        -0.29695946     -0.43305527       0.50406856  -0.89542793 -0.14042416
## 27        -2.42690063     -0.18555738      -0.25729077  -0.47537773 -0.78667510
## 28        -1.44946373     -0.10196844      -0.60806071  -0.01272434 -0.15328619
## 29        -2.10223158     -0.12117390      -0.70271480  -0.37779383 -0.75245638
## 30         1.48684468     -0.06366298      -0.78667510   0.31028376 -0.03818128
## 31        -0.35060018      0.29695946      -2.23555842  -0.20501110 -1.25874673
## 32         1.20442230     -0.31028376       0.25729077   0.51856960  0.47537773
## 33        -0.20501110     -0.50406856       0.60806071  -0.65465430  0.12758531
## 34        -1.83849262     -0.01272434      -1.31706374  -0.87658763 -0.70271480
## 35        -1.38024023     -0.16617364      -0.35060018  -0.78667510 -0.29695946
## 36        -1.61367018     -0.36416334       0.28368767  -0.29695946 -0.11476746
## 37        -0.67050162     -0.47537773       0.56275157  -0.80413364 -0.65465430
## 38        -2.23555842      0.11476746      -1.44946373  -0.59282318 -2.23555842
## 39         0.75245638     -0.35060018       0.40526982   0.39149488  0.14042416
## 40         1.31706374     -0.12117390      -0.40526982   0.28368767 -1.31706374
## 41        -0.02545075     -0.44707302       0.53318051  -0.93409710 -0.62344075
## 42        -1.10528634     -0.08918610      -0.68651916   0.19203379 -0.87658763
## 43        -0.24416040     -0.48967276       0.59282318  -1.12903457  0.41912210
## 44        -0.36416334      0.23107198      -2.42690063  -0.23107198 -1.28735798
## 45        -0.27046566      0.99487522      -2.10223158   0.03818128 -2.42690063
## 46         0.20501110      0.65465430      -0.44707302   0.24416040  0.65465430
## 47        -0.51856960      0.70271480      -0.83980946  -0.36416334 -0.16617364
## 48        -0.85805346      0.62344075       0.02545075   0.17908874  0.93409710
## 49        -1.23113036      0.95396468      -1.91230127  -0.15328619 -1.56855670
## 50        -1.25874673      0.51856960       0.46117919   0.29695946 -0.43305527
## 51        -1.08214564      0.53318051       0.36416334   0.27046566 -0.37779383
## 52        -0.65465430      0.48967276       0.51856960   0.12758531 -1.20442230
## 53        -0.62344075      0.41912210       0.63896971  -0.44707302  0.95396468
## 54        -0.41912210      0.71909690      -0.85805346   0.20501110 -1.34797950
## 55         0.10196844      0.97421613      -1.99828954  -0.05091800 -0.08918610
## 56        -0.82184079      0.89542793      -1.77352271  -0.08918610 -1.52642702
## 57        -0.83980946      0.59282318       0.07641832  -0.53318051  0.01272434
## 58        -0.97421613      0.54790615       0.35060018   0.56275157  0.27046566
## 59         0.16617364      1.01596791      -2.80216172  -0.12758531 -0.12758531
## 60         1.77352271      0.56275157       0.37779383   0.60806071 -0.19203379
## 61        -0.68651916      0.47537773       0.57772207  -1.03752256  0.59282318
## 62         0.43305527      0.60806071       0.08918610   0.43305527  0.03818128
## 63        -1.17854682      0.50406856       0.48967276   0.14042416  0.62344075
## 64         1.56855670      0.67050162      -0.39149488   0.36416334  0.87658763
## 65        -0.75245638      0.68651916      -0.71909690   0.15328619 -1.38024023
## 66        -0.78667510      0.63896971      -0.28368767   0.21802303  0.43305527
## 67        -0.93409710      0.57772207       0.11476746   0.11476746  0.32366339
## 68        -0.99487522      0.43305527       0.62344075  -0.40526982  0.99487522
## 69         1.03752256      0.73567430      -1.25874673   0.16617364 -0.48967276
## 70         0.53318051      0.87658763      -1.71527720  -0.35060018 -1.66232963
## 71         0.41912210      0.83980946      -0.73567430  -0.17908874 -0.36416334
## 72         0.14042416      0.75245638       0.65465430   0.41912210 -0.46117919
## 73         0.12758531      0.85805346      -0.91459156  -0.02545075 -1.91230127
## 74         1.12903457      0.80413364      -0.36416334   0.40526982 -0.68651916
## 75         0.47537773      0.82184079      -0.53318051  -0.14042416 -1.41400510
## 76        -0.91459156      0.91459156      -1.48684468  -0.19203379 -1.99828954
```

```
## 77          0.36416334      0.93409710      -1.66232963  -0.11476746 -1.44946373
## 78          0.39149488      0.78667510      -0.43305527   0.00000000  0.17908874
## 79          1.01596791      0.10196844      -1.28735798  -0.03818128 -0.50406856
## 80         -1.03752256      0.01272434       0.24416040  -1.05957037 -0.67050162
## 81         -0.06366298      0.00000000       0.31028376  -0.76945312 -0.44707302
## 82          1.38024023      0.02545075       0.20501110   0.44707302 -0.25729077
## 83          0.57772207      0.03818128      -0.33710120   0.01272434 -1.71527720
## 84          0.32366339      0.14042416      -1.05957037   0.10196844  0.07641832
## 85          0.07641832      0.08918610      -0.59282318  -0.16617364 -1.03752256
## 86          1.34797950      0.06366298      -0.11476746  -2.80216172 -1.48684468
## 87          1.41400510      0.05091800      -1.34797950  -2.42690063 -0.10196844
## 88          0.97421613      0.07641832      -0.19203379   0.08918610  0.11476746
## 89         -1.31706374      0.16617364      -1.08214564  -0.97421613 -0.01272434
## 90          0.91459156     -0.71909690      -0.24416040  -0.31028376  0.37779383
## 91          0.25729077     -0.76945312       0.15328619   0.25729077  0.68651916
## 92          0.01272434     -0.68651916      -1.01596791  -0.83980946  1.20442230
## 93          0.35060018     -0.54790615      -0.46117919  -0.56275157  0.16617364
## 94          0.27046566     -0.87658763      -0.05091800  -0.48967276  0.51856960
## 95         -0.57772207     -0.82184079      -0.41912210  -1.20442230 -0.89542793
## 96         -0.40526982     -0.89542793      -0.56275157   0.57772207  1.77352271
## 97         -1.12903457     -0.80413364       0.29695946  -0.27046566 -0.05091800
## 98         -0.39149488     -0.78667510      -0.54790615   0.59282318  1.83849262
## 99          0.44707302      0.76945312       0.10196844   0.46117919  0.05091800
## 100         0.54790615     -0.73567430      -0.37779383  -0.39149488 -1.77352271
## 101        -0.05091800     -0.70271480      -0.63896971  -0.51856960 -1.08214564
## 102         0.00000000     -0.85805346      -1.03752256  -0.85805346  1.17854682
## 103         0.05091800     -0.57772207      -0.97421613  -0.70271480  1.25874673
## 104         0.28368767     -0.75245638      -0.03818128  -0.46117919  0.53318051
## 105         0.08918610     -0.53318051      -0.95396468  -0.57772207  1.28735798
## 106        -0.56275157     -0.51856960       0.47537773  -0.99487522 -0.40526982
## 107         0.15328619      0.40526982       0.06366298   0.33710120  0.83980946
## 108         0.29695946      0.37779383       0.17908874   0.50406856  0.21802303
## 109        -0.19203379      0.46117919      -0.15328619  -0.41912210 -0.53318051
## 110        -0.32366339      0.36416334      -1.38024023   0.23107198  1.41400510
## 111         1.15343724      0.39149488       0.19203379   0.63896971  0.73567430
## 112        -1.91230127      0.44707302      -0.16617364   0.05091800 -0.56275157
## 113         0.03818128     -0.59282318      -0.99487522  -0.74403915  1.23113036
## 114         0.93409710     -0.65465430      -0.23107198  -0.25729077  0.10196844
## 115        -0.95396468     -0.56275157      -1.52642702  -0.91459156 -2.10223158
## 116        -0.03818128     -0.62344075      -0.62344075  -0.50406856 -1.05957037
## 117         0.65465430     -0.60806071      -0.89542793  -1.15343724 -0.97421613
## 118         0.46117919     -0.67050162      -0.12758531  -1.10528634 -0.32366339
## 119         0.17908874     -0.63896971      -0.48967276  -0.28368767  0.63896971
## 120         0.85805346     -1.66232963      -0.32366339  -1.28735798  0.36416334
## 121         0.19203379     -1.83849262       0.12758531  -0.63896971  0.67050162
## 122        -0.11476746     -1.56855670      -1.17854682  -1.77352271  1.08214564
## 123         0.33710120     -1.31706374      -0.57772207  -1.56855670  0.15328619
## 124         0.21802303     -2.42690063      -0.08918610  -1.44946373  0.48967276
## 125        -0.63896971     -2.10223158      -0.51856960  -2.23555842 -0.91459156
## 126        -0.46117919     -2.80216172      -0.67050162   0.47537773  1.66232963
## 127        -1.28735798     -1.99828954       0.27046566  -1.25874673 -0.06366298
## 128        -0.44707302     -1.91230127      -0.65465430   0.48967276  1.71527720
## 129         0.37779383     -0.95396468       0.05091800  -0.06366298  0.02545075
## 130         0.50406856     -1.71527720      -0.47537773  -1.34797950 -1.83849262
## 131        -0.15328619     -1.61367018      -0.76945312  -1.52642702 -1.12903457
```

```
## 132       -0.12758531     -2.23555842      -1.20442230  -1.83849262  1.05957037
## 133       -0.08918610     -1.34797950      -1.12903457  -1.66232963  1.12903457
## 134        0.23107198     -1.77352271      -0.07641832  -1.41400510  0.50406856
## 135       -0.07641832     -1.28735798      -1.10528634  -1.61367018  1.15343724
## 136       -0.60806071     -1.25874673       0.33710120  -1.91230127 -0.41912210
## 137        0.11476746     -1.15343724       0.03818128  -0.32366339  0.82184079
## 138        0.24416040     -1.20442230       0.14042416   0.02545075  0.20501110
## 139       -0.23107198     -1.10528634      -0.17908874  -1.38024023 -0.54790615
## 140       -0.43305527     -1.23113036      -1.41400510  -0.68651916  1.38024023
## 141        1.08214564     -1.17854682       0.16617364   0.54790615  0.71909690
## 142       -1.99828954     -1.12903457      -0.27046566  -1.08214564 -0.57772207
## 143       -0.10196844     -1.38024023      -1.15343724  -1.71527720  1.10528634
## 144        0.87658763     -1.48684468      -0.31028376  -1.23113036  0.08918610
## 145       -0.14042416     -1.44946373      -0.75245638  -1.48684468 -1.10528634
## 146        0.60806071     -1.41400510      -0.93409710  -2.10223158 -0.99487522
## 147        0.40526982     -1.52642702      -0.14042416  -1.99828954 -0.33710120
## 148       -1.66232963      2.23555842       0.70271480   1.01596791 -0.85805346
## 149       -1.71527720      1.15343724       1.83849262   1.66232963  0.31028376
## 150       -1.41400510      1.17854682       1.71527720   1.61367018  0.33710120
## 151       -0.54790615      1.10528634       1.99828954   1.34797950 -0.39149488
## 152       -0.48967276      1.03752256       2.42690063   0.85805346  1.99828954
## 153       -0.01272434      1.44946373       0.91459156   1.48684468 -0.47537773
## 154        0.62344075      2.42690063       0.68651916   1.12903457  0.57772207
## 155       -0.87658763      1.91230127       0.71909690   1.10528634 -0.82184079
## 156       -0.89542793      1.28735798       1.34797950   0.82184079  0.75245638
## 157       -1.15343724      1.20442230       1.66232963   2.10223158  1.01596791
## 158        0.71909690      2.80216172       0.67050162   1.05957037  0.54790615
## 159        2.80216172      1.23113036       1.77352271   2.80216172  0.46117919
## 160       -0.59282318      1.08214564       2.10223158   0.73567430  1.52642702
## 161        1.10528634      1.31706374       1.38024023   1.91230127  0.76945312
## 162       -1.56855670      1.12903457       1.91230127   1.38024023  1.56855670
## 163        2.42690063      1.38024023       1.12903457   1.71527720  1.91230127
## 164       -0.71909690      1.41400510       0.95396468   1.41400510 -0.51856960
## 165       -0.80413364      1.34797950       1.20442230   1.52642702  1.44946373
## 166       -1.05957037      1.25874673       1.41400510   1.31706374  1.03752256
## 167       -1.20442230      1.05957037       2.23555842   0.87658763  2.10223158
## 168        1.71527720      1.48684468       0.82184079   1.44946373  0.25729077
## 169        1.25874673      1.83849262       0.73567430   0.89542793 -0.93409710
## 170        1.05957037      1.71527720       0.93409710   0.97421613  0.35060018
## 171        0.67050162      1.52642702       2.80216172   1.83849262  0.28368767
## 172        0.63896971      1.77352271       0.89542793   1.17854682 -1.15343724
## 173        1.83849262      1.61367018       1.15343724   1.77352271 -0.07641832
## 174        1.17854682      1.66232963       1.03752256   1.03752256 -0.59282318
## 175       -1.01596791      1.99828954       0.76945312   0.95396468 -1.17854682
## 176        0.95396468      2.10223158       0.75245638   1.08214564 -0.71909690
## 177        0.99487522      1.56855670       1.08214564   1.20442230  0.91459156
## 178        1.66232963      0.32366339       0.80413364   1.15343724  0.24416040
## 179       -1.34797950      0.20501110       1.52642702   0.71909690 -0.02545075
## 180        0.51856960      0.19203379       1.61367018   0.78667510  0.29695946
## 181        2.10223158      0.21802303       1.48684468   1.99828954  0.40526982
## 182        1.28735798      0.24416040       1.17854682   1.23113036 -1.01596791
## 183        0.83980946      0.33710120       0.85805346   1.28735798  0.80413364
## 184        0.59282318      0.31028376       0.97421613   0.99487522 -0.28368767
## 185        1.99828954      0.27046566       1.28735798   0.67050162 -0.80413364
## 186        2.23555842      0.25729077       0.78667510   0.68651916  0.56275157
```

```
## 187        1.61367018      0.28368767       1.25874673   1.25874673  0.85805346
## 188       -1.77352271      0.35060018       0.83980946   0.75245638  0.70271480
## 189        1.52642702     -0.93409710       1.23113036   0.91459156  1.34797950
## 190        0.76945312     -0.97421613       1.44946373   1.56855670  1.61367018
## 191        0.56275157     -0.91459156       0.87658763   0.76945312  2.23555842
## 192        0.89542793     -0.83980946       1.05957037   0.80413364  0.89542793
## 193        0.82184079     -1.05957037       1.31706374   0.83980946  1.48684468
## 194       -0.37779383     -1.03752256       1.10528634   0.70271480 -0.24416040
## 195        0.02545075     -1.08214564       0.99487522   2.23555842  2.42690063
## 196       -1.52642702     -1.01596791       1.56855670   0.93409710  0.60806071
## 197        0.06366298     -0.99487522       1.01596791   2.42690063  2.80216172
##     X3D_surface.ADC ratio_3ds_vol.ADC ratio_3ds_vol_norm.ADC irregularity.ADC
## 1       -1.31706374        0.76945312             -0.02545075       0.43305527
## 2       -0.95396468        0.15328619             -1.10528634      -0.03818128
## 3       -0.47537773       -0.47537773             -1.52642702      -1.34797950
## 4        0.25729077       -0.50406856              0.29695946      -0.83980946
## 5       -0.46117919       -0.37779383             -1.15343724      -0.99487522
## 6       -0.33710120        0.31028376              0.41912210      -0.27046566
## 7       -1.17854682        0.68651916              0.21802303       0.50406856
## 8       -0.17908874        0.24416040              0.40526982       0.24416040
## 9       -1.41400510        0.73567430             -0.78667510       0.48967276
## 10      -0.73567430       -0.02545075             -1.44946373       0.02545075
## 11      -0.40526982        0.10196844              0.06366298      -0.06366298
## 12       0.11476746       -0.62344075             -0.33710120      -0.31028376
## 13       0.54790615       -0.63896971              0.35060018      -0.25729077
## 14       0.00000000        0.37779383              0.57772207      -0.35060018
## 15       1.66232963       -0.65465430              0.65465430      -0.54790615
## 16      -0.21802303       -0.43305527             -0.44707302       0.25729077
## 17      -1.10528634        0.14042416             -1.23113036      -0.23107198
## 18       0.71909690       -0.87658763              0.25729077      -0.78667510
## 19       0.57772207       -0.99487522              0.02545075      -0.14042416
## 20       0.93409710       -1.12903457              0.27046566      -0.87658763
## 21       0.59282318       -0.80413364              0.15328619      -1.56855670
## 22      -2.10223158        0.80413364             -2.23555842       0.41912210
## 23      -0.08918610        0.06366298              0.39149488       0.35060018
## 24       0.39149488       -0.54790615              0.33710120      -0.97421613
## 25      -0.70271480        0.49685779              0.16617364       0.29695946
## 26       0.99487522       -0.82184079              0.44707302      -1.10528634
## 27      -0.68651916        0.12758531             -0.63896971       0.39149488
## 28      -0.67050162        0.07641832             -0.82184079       0.33710120
## 29      -0.65465430        0.36416334              0.03818128       0.28368767
## 30       0.01272434        0.05091800              0.46117919       0.46117919
## 31      -2.42690063        0.93409710             -2.42690063       0.56275157
## 32       0.56275157       -1.01596791             -0.07641832       0.17908874
## 33       1.01596791       -1.05957037              0.43305527      -1.15343724
## 34      -1.23113036        0.53318051             -0.70271480       0.08918610
## 35      -0.57772207        0.33710120              0.19203379       0.14042416
## 36       0.24416040       -0.46117919              0.32366339      -0.36416334
## 37       0.48967276       -0.93409710              0.00000000      -1.25874673
## 38      -1.38024023        0.65465430             -0.51856960       0.32366339
## 39       0.67050162       -1.28735798             -0.47537773      -1.61367018
## 40      -0.20501110       -0.01272434              0.23107198       0.21802303
## 41       1.03752256       -1.66232963             -0.85805346      -1.66232963
## 42      -0.23107198       -0.16617364              0.05091800      -0.08918610
## 43       0.80413364       -1.34797950             -0.25729077      -1.20442230
```

```
## 44      -2.80216172        0.91459156            -2.80216172       0.54790615
## 45      -1.99828954        0.99487522            -1.77352271       0.59282318
## 46      -0.28368767        0.17908874             0.20501110       0.37779383
## 47      -1.08214564        0.59282318             0.08918610      -0.07641832
## 48      -0.12758531       -0.33710120            -0.29695946      -0.20501110
## 49      -1.91230127        1.08214564            -1.56855670       0.62344075
## 50       0.40526982       -1.15343724            -1.31706374      -0.91459156
## 51       0.47537773       -1.03752256            -0.99487522      -0.29695946
## 52       0.75245638       -1.20442230            -0.56275157      -0.67050162
## 53       1.17854682       -1.17854682             0.31028376      -1.23113036
## 54      -0.56275157        0.41912210             0.24416040       0.27046566
## 55      -1.83849262        1.20442230            -1.38024023       0.51856960
## 56      -1.71527720        1.34797950            -0.05091800       0.60806071
## 57      -0.54790615        0.02545075            -0.62344075      -0.02545075
## 58       0.65465430       -0.76945312             0.10196844       0.12758531
## 59      -2.23555842        1.41400510            -1.34797950       0.65465430
## 60       1.34797950       -1.71527720            -0.80413364      -1.12903457
## 61       1.10528634       -0.89542793             0.50406856      -1.08214564
## 62       0.08918610       -0.44707302            -0.10196844      -0.70271480
## 63       0.63896971       -0.53318051             0.48967276      -1.31706374
## 64       0.21802303       -0.67050162            -0.17908874      -0.32366339
## 65      -0.62344075        0.32366339             0.01272434       0.19203379
## 66      -0.48967276        0.27046566             0.11476746       0.20501110
## 67       0.15328619       -0.48967276            -0.06366298      -0.17908874
## 68       0.95396468       -0.91459156             0.28368767      -1.44946373
## 69      -0.51856960        0.49685779             0.37779383       0.47537773
## 70      -1.77352271        1.12903457            -0.50406856       0.63896971
## 71      -0.44707302        0.01272434            -0.27046566       0.01272434
## 72       1.38024023       -1.56855670            -0.19203379      -1.83849262
## 73      -0.75245638        0.39149488            -0.28368767       0.16617364
## 74       0.23107198       -0.68651916            -0.41912210      -0.37779383
## 75      -0.35060018       -0.06366298            -0.23107198      -0.10196844
## 76      -1.61367018        1.01596791            -0.16617364       0.57772207
## 77      -1.52642702        0.78667510            -0.39149488       0.40526982
## 78      -0.24416040        0.03818128             0.07641832      -0.05091800
## 79      -0.53318051        0.43305527             0.36416334       0.44707302
## 80      -0.11476746       -0.39149488            -0.21802303      -0.51856960
## 81       0.41912210       -0.41912210             0.47537773      -2.80216172
## 82       0.43305527       -1.08214564            -0.67050162       0.00000000
## 83      -0.36416334       -0.10196844            -0.11476746      -1.17854682
## 84      -0.63896971       -0.05091800            -1.08214564       0.10196844
## 85      -0.97421613        0.11476746            -1.48684468      -0.39149488
## 86      -0.19203379       -0.08918610             0.14042416      -1.48684468
## 87      -0.14042416       -0.12758531             0.17908874      -1.52642702
## 88       0.36416334       -0.97421613            -0.31028376      -0.47537773
## 89      -1.28735798        0.54790615            -0.71909690       0.15328619
## 90       0.33710120       -1.25874673            -0.43305527      -0.59282318
## 91       0.89542793       -1.83849262            -0.83980946      -1.77352271
## 92      -0.82184079        0.20501110            -0.57772207       0.05091800
## 93      -0.25729077       -0.24416040            -0.03818128      -0.24416040
## 94      -0.02545075        0.28368767             0.54790615      -0.41912210
## 95       0.05091800       -0.95396468            -0.89542793      -0.56275157
## 96       1.56855670       -0.83980946             0.62344075      -0.68651916
## 97       0.46117919       -1.44946373            -1.20442230      -0.50406856
## 98       1.61367018       -0.78667510             0.63896971      -0.65465430
```

```
## 99       0.10196844       -0.40526982             -0.08918610      -0.63896971
## 100     -0.37779383       -0.29695946             -0.24416040      -1.28735798
## 101     -1.01596791       -0.14042416             -1.71527720      -0.44707302
## 102     -0.83980946        0.16617364             -0.60806071       0.03818128
## 103     -0.78667510        0.23107198             -0.53318051       0.07641832
## 104     -0.01272434        0.29695946              0.56275157      -0.40526982
## 105     -0.76945312        0.25729077             -0.48967276       0.11476746
## 106      0.06366298       -0.70271480             -0.73567430      -0.48967276
## 107     -0.15328619       -0.25729077             -0.20501110      -0.01272434
## 108      0.91459156       -1.38024023             -0.65465430      -1.38024023
## 109     -0.31028376       -0.20501110             -0.36416334      -1.71527720
## 110      0.78667510       -1.10528634             -0.14042416      -0.62344075
## 111      0.70271480       -1.31706374             -1.12903457      -1.41400510
## 112     -0.59282318        0.19203379             -0.35060018       0.36416334
## 113     -0.80413364        0.21802303             -0.54790615       0.06366298
## 114      0.35060018       -1.23113036             -0.40526982      -0.57772207
## 115     -1.66232963        0.95396468             -0.37779383       0.53318051
## 116     -0.99487522       -0.11476746             -1.61367018      -0.43305527
## 117     -1.12903457        0.00000000             -1.41400510      -0.33710120
## 118     -0.41912210       -0.07641832             -0.01272434      -0.12758531
## 119     -0.29695946       -0.15328619              0.12758531       0.31028376
## 120      0.31028376       -1.99828954             -0.91459156      -0.93409710
## 121      0.85805346       -2.80216172             -1.25874673      -2.42690063
## 122     -0.91459156       -0.31028376             -1.01596791      -0.19203379
## 123     -0.27046566       -0.71909690             -0.15328619      -0.53318051
## 124     -0.05091800       -0.19203379              0.51856960      -0.73567430
## 125      0.02545075       -1.61367018             -1.28735798      -0.85805346
## 126      1.48684468       -1.52642702              0.59282318      -1.05957037
## 127      0.44707302       -2.42690063             -1.83849262      -0.82184079
## 128      1.52642702       -1.48684468              0.60806071      -1.03752256
## 129      0.07641832       -0.85805346             -0.32366339      -1.01596791
## 130     -0.39149488       -0.75245638             -0.68651916      -1.91230127
## 131     -1.05957037       -0.59282318             -2.10223158      -0.76945312
## 132     -0.93409710       -0.35060018             -1.03752256      -0.21802303
## 133     -0.87658763       -0.23107198             -0.95396468      -0.15328619
## 134     -0.03818128       -0.17908874              0.53318051      -0.71909690
## 135     -0.85805346       -0.21802303             -0.93409710      -0.11476746
## 136      0.03818128       -1.41400510             -1.17854682      -0.80413364
## 137     -0.16617364       -0.73567430             -0.59282318      -0.28368767
## 138      0.87658763       -2.23555842             -1.05957037      -1.99828954
## 139     -0.32366339       -0.60806071             -0.76945312      -2.23555842
## 140      0.76945312       -1.77352271             -0.46117919      -0.95396468
## 141      0.68651916       -2.10223158             -1.66232963      -2.10223158
## 142     -0.60806071       -0.32366339             -0.75245638       0.23107198
## 143     -0.89542793       -0.27046566             -0.97421613      -0.16617364
## 144      0.32366339       -1.91230127             -0.87658763      -0.89542793
## 145     -1.03752256       -0.57772207             -1.99828954      -0.75245638
## 146     -1.15343724       -0.51856960             -1.91230127      -0.60806071
## 147     -0.43305527       -0.56275157             -0.12758531      -0.46117919
## 148     -1.48684468        1.99828954              0.67050162       2.23555842
## 149      1.20442230        0.46117919              0.73567430       0.85805346
## 150      1.31706374        0.51856960              0.78667510       1.15343724
## 151      1.71527720        0.40526982              0.93409710       0.91459156
## 152      1.99828954        0.44707302              1.71527720       0.78667510
## 153      0.16617364        1.61367018              1.61367018       1.66232963
```

```
## 154     -1.44946373        2.23555842             0.70271480       1.91230127
## 155     -1.25874673        2.42690063             1.31706374       2.10223158
## 156      0.17908874        1.25874673             0.89542793       1.28735798
## 157      1.44946373        0.70271480             1.44946373       1.44946373
## 158     -1.56855670        2.80216172             0.71909690       2.80216172
## 159      2.10223158       -0.28368767             0.83980946       0.82184079
## 160      1.91230127        0.62344075             2.10223158       0.83980946
## 161      0.83980946        0.85805346             1.25874673       0.87658763
## 162      1.41400510        0.82184079             1.99828954       0.76945312
## 163      1.05957037        0.75245638             1.17854682       1.12903457
## 164      0.14042416        1.52642702             1.38024023       1.56855670
## 165      0.27046566        1.44946373             1.48684468       1.61367018
## 166      0.97421613        0.83980946             1.28735798       1.20442230
## 167      1.83849262        0.60806071             1.66232963       0.75245638
## 168      0.20501110        1.71527720             1.83849262       1.83849262
## 169     -1.34797950        2.10223158             0.95396468       2.42690063
## 170      0.28368767        1.23113036             1.08214564       1.34797950
## 171      2.23555842       -0.03818128             1.15343724       0.68651916
## 172     -0.06366298        1.56855670             1.05957037       1.52642702
## 173      1.08214564        0.71909690             0.99487522       1.10528634
## 174      0.37779383        1.15343724             1.10528634       1.23113036
## 175     -1.20442230        1.91230127             1.20442230       1.99828954
## 176     -0.71909690        1.83849262             1.01596791       1.71527720
## 177      0.51856960        1.28735798             1.41400510       1.25874673
## 178      0.19203379        1.66232963             1.77352271       1.77352271
## 179      0.62344075        0.89542793             1.12903457       0.99487522
## 180      1.23113036        0.87658763             1.91230127       0.67050162
## 181      1.25874673        0.47537773             0.87658763       1.31706374
## 182      0.29695946        1.05957037             1.23113036       0.80413364
## 183      0.12758531        1.17854682             0.76945312       1.41400510
## 184     -0.10196844        1.31706374             0.68651916       1.08214564
## 185      0.53318051        1.10528634             1.52642702       0.73567430
## 186      0.60806071        1.03752256             1.56855670       0.71909690
## 187      1.15343724        0.56275157             1.03752256       1.03752256
## 188     -0.50406856        1.77352271             0.85805346       1.48684468
## 189      1.12903457        0.35060018             0.97421613       0.95396468
## 190      1.77352271       -0.36416334             0.82184079       0.70271480
## 191     -0.07641832        1.38024023             0.91459156       1.38024023
## 192      0.50406856        0.97421613             1.34797950       1.17854682
## 193      0.73567430        1.48684468             2.23555842       1.05957037
## 194      0.82184079        0.57772207             0.80413364       0.97421613
## 195      2.42690063        0.63896971             2.42690063       0.89542793
## 196      1.28735798        0.08918610             0.75245638       1.01596791
## 197      2.80216172        0.67050162             2.80216172       0.93409710
##     Compactness_v1.ADC Compactness_v2.ADC Spherical_disproportion.ADC
## 1          -0.24416040        -0.50406856                 -0.02545075
## 2           0.03818128         0.41912210                 -1.10528634
## 3           0.12758531         0.60806071                 -1.52642702
## 4          -0.44707302        -1.08214564                  0.29695946
## 5           0.05091800         0.47537773                 -1.15343724
## 6          -0.53318051        -1.38024023                  0.41912210
## 7          -0.36416334        -0.93409710                  0.21802303
## 8          -0.51856960        -1.34797950                  0.40526982
## 9          -0.01272434         0.28368767                 -0.78667510
## 10          0.11476746         0.59282318                 -1.44946373
```

```
## 11          -0.31028376         -0.63896971                  0.06366298
## 12          -0.14042416         -0.08918610                 -0.33710120
## 13          -0.48967276         -1.20442230                  0.35060018
## 14          -0.59282318         -1.66232963                  0.57772207
## 15          -0.68651916         -1.83849262                  0.65465430
## 16          -0.12758531          0.01272434                 -0.44707302
## 17           0.07641832          0.51856960                 -1.23113036
## 18          -0.40526982         -1.01596791                  0.25729077
## 19          -0.27046566         -0.56275157                  0.02545075
## 20          -0.41912210         -1.03752256                  0.27046566
## 21          -0.32366339         -0.83980946                  0.15328619
## 22           0.37779383          1.03752256                 -2.23555842
## 23          -0.50406856         -1.25874673                  0.39149488
## 24          -0.47537773         -1.15343724                  0.33710120
## 25          -0.33710120         -0.85805346                  0.16617364
## 26          -0.56275157         -1.48684468                  0.44707302
## 27          -0.08918610          0.12758531                 -0.63896971
## 28           0.00000000          0.32366339                 -0.82184079
## 29          -0.28368767         -0.59282318                  0.03818128
## 30          -0.57772207         -1.52642702                  0.46117919
## 31           0.41912210          1.12903457                 -2.42690063
## 32          -0.21802303         -0.39149488                 -0.07641832
## 33          -0.54790615         -1.41400510                  0.43305527
## 34          -0.07641832          0.17908874                 -0.70271480
## 35          -0.35060018         -0.87658763                  0.19203379
## 36          -0.46117919         -1.10528634                  0.32366339
## 37          -0.25729077         -0.51856960                  0.00000000
## 38          -0.10196844          0.06366298                 -0.51856960
## 39          -0.11476746          0.02545075                 -0.47537773
## 40          -0.37779383         -0.95396468                  0.23107198
## 41           0.01272434          0.36416334                 -0.85805346
## 42          -0.29695946         -0.60806071                  0.05091800
## 43          -0.15328619         -0.16617364                 -0.25729077
## 44           0.32366339          1.10528634                 -2.80216172
## 45           0.80413364          0.75245638                 -1.77352271
## 46           0.25729077         -0.68651916                  0.20501110
## 47           0.29695946         -0.44707302                  0.08918610
## 48           0.47537773          0.07641832                 -0.29695946
## 49           0.78667510          0.71909690                 -1.56855670
## 50           0.73567430          0.65465430                 -1.31706374
## 51           0.60806071          0.48967276                 -0.99487522
## 52           0.53318051          0.31028376                 -0.56275157
## 53           0.21802303         -0.99487522                  0.31028376
## 54           0.24416040         -0.78667510                  0.24416040
## 55           0.76945312          0.68651916                 -1.38024023
## 56           0.35060018         -0.29695946                 -0.05091800
## 57           0.54790615          0.35060018                 -0.62344075
## 58           0.28368767         -0.46117919                  0.10196844
## 59           0.75245638          0.67050162                 -1.34797950
## 60           0.56275157          0.43305527                 -0.80413364
## 61           0.16617364         -1.31706374                  0.50406856
## 62           0.40526982         -0.14042416                 -0.10196844
## 63           0.17908874         -1.28735798                  0.48967276
## 64           0.46117919         -0.03818128                 -0.17908874
## 65           0.31028376         -0.35060018                  0.01272434
```

```
## 66          0.27046566        -0.47537773                 0.11476746
## 67          0.36416334        -0.28368767                -0.06366298
## 68          0.23107198        -0.89542793                 0.28368767
## 69          0.20501110        -1.05957037                 0.37779383
## 70          0.51856960         0.27046566                -0.50406856
## 71          0.67050162         0.11476746                -0.27046566
## 72          0.63896971         0.00000000                -0.19203379
## 73          0.68651916         0.14042416                -0.28368767
## 74          0.71909690         0.29695946                -0.41912210
## 75          0.65465430         0.08918610                -0.23107198
## 76          0.62344075        -0.01272434                -0.16617364
## 77          0.70271480         0.24416040                -0.39149488
## 78          0.50406856        -0.40526982                 0.07641832
## 79         -0.39149488        -1.17854682                 0.36416334
## 80         -0.02545075        -0.17908874                -0.21802303
## 81         -0.43305527        -1.44946373                 0.47537773
## 82          0.06366298         0.19203379                -0.67050162
## 83         -0.03818128        -0.27046566                -0.11476746
## 84          0.15328619         0.44707302                -1.08214564
## 85          0.19203379         0.63896971                -1.48684468
## 86         -0.19203379        -0.76945312                 0.14042416
## 87         -0.20501110        -0.80413364                 0.17908874
## 88          0.02545075        -0.05091800                -0.31028376
## 89          0.08918610         0.21802303                -0.71909690
## 90         -0.83980946        -0.25729077                -0.43305527
## 91         -0.80413364         0.03818128                -0.83980946
## 92         -0.82184079        -0.20501110                -0.57772207
## 93         -0.70271480        -0.75245638                -0.03818128
## 94         -0.97421613        -1.77352271                 0.54790615
## 95         -0.78667510         0.05091800                -0.89542793
## 96         -1.10528634        -2.23555842                 0.62344075
## 97         -0.71909690         0.39149488                -1.20442230
## 98         -1.03752256        -2.10223158                 0.63896971
## 99          0.57772207        -0.11476746                -0.08918610
## 100        -0.87658763        -0.41912210                -0.24416040
## 101        -0.65465430         0.53318051                -1.71527720
## 102        -0.91459156        -0.21802303                -0.60806071
## 103        -0.67050162        -0.15328619                -0.53318051
## 104        -0.95396468        -1.71527720                 0.56275157
## 105        -0.60806071        -0.12758531                -0.48967276
## 106        -0.16617364         0.20501110                -0.73567430
## 107         0.39149488        -0.02545075                -0.20501110
## 108         0.48967276         0.33710120                -0.65465430
## 109         0.44707302         0.16617364                -0.36416334
## 110         0.33710120        -0.07641832                -0.14042416
## 111         0.59282318         0.57772207                -1.12903457
## 112         0.43305527         0.15328619                -0.35060018
## 113        -0.73567430        -0.19203379                -0.54790615
## 114        -0.75245638        -0.23107198                -0.40526982
## 115        -0.76945312        -0.31028376                -0.37779383
## 116        -0.62344075         0.54790615                -1.61367018
## 117        -0.63896971         0.46117919                -1.41400510
## 118        -0.85805346        -0.82184079                -0.01272434
## 119        -0.89542793        -0.97421613                 0.12758531
## 120        -1.77352271        -0.73567430                -0.91459156
```

```
## 121        -1.66232963        -0.37779383                 -1.25874673
## 122        -1.71527720        -0.65465430                 -1.01596791
## 123        -1.44946373        -1.12903457                 -0.15328619
## 124        -2.23555842        -1.99828954                  0.51856960
## 125        -1.61367018        -0.36416334                 -1.28735798
## 126        -2.80216172        -2.80216172                  0.59282318
## 127        -1.48684468        -0.06366298                 -1.83849262
## 128        -2.42690063        -2.42690063                  0.60806071
## 129        -1.05957037        -0.53318051                 -0.32366339
## 130        -1.91230127        -0.91459156                 -0.68651916
## 131        -1.38024023         0.23107198                 -2.10223158
## 132        -1.99828954        -0.67050162                 -1.03752256
## 133        -1.41400510        -0.57772207                 -0.95396468
## 134        -2.10223158        -1.91230127                  0.53318051
## 135        -1.28735798        -0.54790615                 -0.93409710
## 136        -1.25874673        -0.24416040                 -1.17854682
## 137        -1.20442230        -0.43305527                 -0.59282318
## 138        -1.12903457        -0.10196844                 -1.05957037
## 139        -1.15343724        -0.32366339                 -0.76945312
## 140        -1.23113036        -0.48967276                 -0.46117919
## 141        -1.01596791         0.37779383                 -1.66232963
## 142        -1.17854682        -0.33710120                 -0.75245638
## 143        -1.52642702        -0.62344075                 -0.97421613
## 144        -1.56855670        -0.70271480                 -0.87658763
## 145        -1.31706374         0.25729077                 -1.99828954
## 146        -1.34797950         0.10196844                 -1.91230127
## 147        -1.83849262        -1.23113036                 -0.12758531
## 148         2.80216172         2.80216172                  0.67050162
## 149         2.10223158         2.10223158                  0.73567430
## 150         1.56855670         1.91230127                  0.78667510
## 151         1.44946373         1.61367018                  0.93409710
## 152         1.10528634         0.73567430                  1.71527720
## 153         1.15343724         0.80413364                  1.61367018
## 154         2.42690063         2.42690063                  0.70271480
## 155         1.25874673         0.93409710                  1.31706374
## 156         1.48684468         1.66232963                  0.89542793
## 157         1.20442230         0.87658763                  1.44946373
## 158         2.23555842         2.23555842                  0.71909690
## 159         1.52642702         1.77352271                  0.83980946
## 160         1.01596791         0.50406856                  2.10223158
## 161         1.31706374         1.08214564                  1.25874673
## 162         1.03752256         0.56275157                  1.99828954
## 163         1.34797950         1.17854682                  1.17854682
## 164         1.23113036         0.91459156                  1.38024023
## 165         1.17854682         0.85805346                  1.48684468
## 166         1.28735798         0.95396468                  1.28735798
## 167         1.12903457         0.76945312                  1.66232963
## 168         1.08214564         0.70271480                  1.83849262
## 169         1.41400510         1.52642702                  0.95396468
## 170         1.77352271         1.34797950                  1.08214564
## 171         1.66232963         1.23113036                  1.15343724
## 172         1.83849262         1.38024023                  1.05957037
## 173         1.99828954         1.56855670                  0.99487522
## 174         1.71527720         1.31706374                  1.10528634
## 175         1.61367018         1.20442230                  1.20442230
```

```
## 176         1.91230127         1.48684468                  1.01596791
## 177         1.38024023         0.89542793                  1.41400510
## 178         0.83980946         0.62344075                  1.77352271
## 179         0.91459156         1.05957037                  1.12903457
## 180         0.82184079         0.40526982                  1.91230127
## 181         0.95396468         1.41400510                  0.87658763
## 182         0.89542793         0.97421613                  1.23113036
## 183         0.99487522         1.83849262                  0.76945312
## 184         1.05957037         1.99828954                  0.68651916
## 185         0.87658763         0.82184079                  1.52642702
## 186         0.85805346         0.78667510                  1.56855670
## 187         0.93409710         1.15343724                  1.03752256
## 188         0.97421613         1.44946373                  0.85805346
## 189        -0.23107198         0.99487522                  0.97421613
## 190        -0.06366298         1.25874673                  0.82184079
## 191        -0.17908874         1.01596791                  0.91459156
## 192         0.14042416         0.83980946                  1.34797950
## 193        -0.93409710        -0.71909690                  2.23555842
## 194        -0.05091800         1.28735798                  0.80413364
## 195        -1.08214564        -1.61367018                  2.42690063
## 196         0.10196844         1.71527720                  0.75245638
## 197        -0.99487522        -1.56855670                  2.80216172
##     Sphericity.ADC Asphericity.ADC Center_of_mass.ADC Max_3D_diam.ADC
## 1      -0.48967276     -0.02545075         0.25729077     -1.38024023
## 2       0.37779383     -1.10528634         0.29695946     -0.76945312
## 3       0.50406856     -1.52642702         0.70271480     -0.59282318
## 4      -1.12903457      0.31028376         0.57772207      0.07641832
## 5       0.41912210     -1.15343724        -0.40526982     -0.68651916
## 6      -1.41400510      0.50406856         0.73567430     -0.50406856
## 7      -0.95396468      0.21802303        -0.67050162     -0.82184079
## 8      -1.38024023      0.48967276        -0.73567430     -0.05091800
## 9       0.24416040     -0.78667510        -0.57772207     -1.66232963
## 10      0.48967276     -1.44946373         1.15343724     -0.83980946
## 11     -0.57772207      0.06366298         0.43305527     -0.37779383
## 12     -0.10196844     -0.33710120        -0.99487522     -0.06366298
## 13     -1.23113036      0.41912210         0.67050162      0.37779383
## 14     -1.66232963      0.91459156        -0.56275157     -0.11476746
## 15     -1.99828954      1.56855670         1.66232963      1.15343724
## 16      0.00000000     -0.44707302        -0.20501110     -0.20501110
## 17      0.46117919     -1.23113036        -0.29695946     -0.85805346
## 18     -1.01596791      0.25729077         0.91459156      0.59282318
## 19     -0.53318051      0.02545075        -0.01272434      0.47537773
## 20     -1.03752256      0.27046566         1.25874673      0.67050162
## 21     -0.75245638      0.15328619        -0.65465430      0.40526982
## 22      0.62344075     -2.23555842        -0.36416334     -2.23555842
## 23     -1.31706374      0.46117919        -0.11476746     -0.10196844
## 24     -1.17854682      0.37779383         0.75245638      0.16617364
## 25     -0.76945312      0.16617364         0.21802303     -0.80413364
## 26     -1.56855670      0.53318051         0.83980946      0.71909690
## 27      0.07641832     -0.63896971         0.62344075     -0.65465430
## 28      0.25729077     -0.82184079         0.37779383     -0.78667510
## 29     -0.54790615      0.03818128         0.51856960     -0.67050162
## 30     -1.61367018      0.54790615        -1.03752256      0.08918610
## 31      0.65465430     -2.42690063        -0.63896971     -2.42690063
## 32     -0.39149488     -0.07641832        -0.24416040      0.24416040
```

```
## 33     -1.48684468      0.51856960         1.20442230      0.75245638
## 34      0.10196844     -0.70271480         0.15328619     -1.41400510
## 35     -0.87658763      0.19203379        -0.48967276     -0.41912210
## 36     -1.15343724      0.35060018        -0.08918610      0.11476746
## 37     -0.50406856      0.00000000         0.63896971      0.23107198
## 38      0.03818128     -0.51856960         0.46117919     -1.44946373
## 39      0.02545075     -0.47537773         1.08214564      0.46117919
## 40     -0.97421613      0.23107198        -1.44946373     -0.07641832
## 41      0.28368767     -0.85805346         1.10528634      0.70271480
## 42     -0.56275157      0.05091800         0.31028376     -0.24416040
## 43     -0.15328619     -0.25729077         1.05957037      0.57772207
## 44      0.63896971     -2.80216172        -0.68651916     -2.80216172
## 45      0.60806071     -1.77352271        -0.83980946     -1.91230127
## 46     -0.63896971      0.20501110         0.82184079     -0.25729077
## 47     -0.43305527      0.08918610        -0.06366298     -0.70271480
## 48      0.08918610     -0.29695946        -0.07641832     -0.17908874
## 49      0.59282318     -1.56855670        -0.95396468     -1.83849262
## 50      0.54790615     -1.31706374        -0.51856960      0.12758531
## 51      0.47537773     -0.99487522         0.28368767      0.21802303
## 52      0.31028376     -0.56275157        -0.05091800      0.44707302
## 53     -0.99487522      0.32366339         1.31706374      0.87658763
## 54     -0.67050162      0.24416040        -0.75245638     -0.53318051
## 55      0.57772207     -1.38024023        -1.41400510     -1.99828954
## 56     -0.21802303     -0.05091800        -0.71909690     -1.71527720
## 57      0.35060018     -0.62344075         0.65465430     -0.60806071
## 58     -0.44707302      0.10196844         1.01596791      0.56275157
## 59      0.56275157     -1.34797950        -1.48684468     -2.10223158
## 60      0.43305527     -0.80413364         0.16617364      0.97421613
## 61     -1.34797950      0.60806071         0.76945312      0.89542793
## 62     -0.12758531     -0.10196844         0.10196844      0.00000000
## 63     -1.28735798      0.59282318         1.38024023      0.27046566
## 64     -0.01272434     -0.17908874        -2.10223158      0.14042416
## 65     -0.32366339      0.01272434        -0.59282318     -0.51856960
## 66     -0.46117919      0.11476746        -0.47537773     -0.43305527
## 67     -0.17908874     -0.06366298        -0.43305527     -0.02545075
## 68     -0.85805346      0.29695946         1.28735798      0.73567430
## 69     -1.10528634      0.44707302        -0.15328619     -0.73567430
## 70      0.29695946     -0.50406856        -1.61367018     -1.77352271
## 71      0.16617364     -0.27046566        -1.77352271     -0.54790615
## 72      0.06366298     -0.19203379         0.85805346      1.17854682
## 73      0.19203379     -0.28368767        -0.80413364     -1.03752256
## 74      0.32366339     -0.41912210        -1.28735798      0.17908874
## 75      0.11476746     -0.23107198        -1.91230127     -0.44707302
## 76      0.05091800     -0.16617364        -0.91459156     -1.56855670
## 77      0.27046566     -0.39149488        -1.25874673     -1.52642702
## 78     -0.36416334      0.07641832        -2.23555842     -0.28368767
## 79     -1.20442230      0.43305527        -0.16617364     -0.75245638
## 80     -0.14042416     -0.21802303         0.54790615     -0.23107198
## 81     -1.52642702      0.57772207        -0.50406856      0.25729077
## 82      0.14042416     -0.67050162        -0.82184079      0.15328619
## 83     -0.24416040     -0.11476746         0.14042416     -0.46117919
## 84      0.39149488     -1.08214564         0.71909690     -0.71909690
## 85      0.53318051     -1.48684468        -0.10196844     -0.91459156
## 86     -0.68651916      0.14042416        -1.99828954     -0.21802303
## 87     -0.71909690      0.17908874        -0.85805346     -0.08918610
```

```
## 88     -0.07641832     -0.31028376        -1.20442230      0.36416334
## 89      0.21802303     -0.71909690        -0.53318051     -1.48684468
## 90     -0.31028376     -0.43305527        -1.34797950      0.33710120
## 91     -0.05091800     -0.83980946        -0.31028376      0.63896971
## 92     -0.25729077     -0.57772207        -0.97421613     -1.12903457
## 93     -0.70271480     -0.03818128        -2.42690063     -0.31028376
## 94     -1.77352271      0.82184079        -0.62344075     -0.14042416
## 95     -0.02545075     -0.89542793         0.97421613      0.05091800
## 96     -2.23555842      1.44946373         1.56855670      1.10528634
## 97      0.23107198     -1.20442230         0.24416040      0.20501110
## 98     -2.10223158      1.48684468         1.61367018      1.12903457
## 99     -0.06366298     -0.08918610         0.12758531      0.01272434
## 100    -0.47537773     -0.24416040         0.08918610     -0.47537773
## 101     0.40526982     -1.71527720        -0.14042416     -0.95396468
## 102    -0.28368767     -0.60806071        -1.01596791     -1.15343724
## 103    -0.20501110     -0.53318051        -0.89542793     -1.08214564
## 104    -1.71527720      0.83980946        -0.60806071     -0.12758531
## 105    -0.16617364     -0.48967276        -0.87658763     -1.05957037
## 106     0.15328619     -0.73567430         0.99487522      0.06366298
## 107     0.01272434     -0.20501110         0.53318051     -0.35060018
## 108     0.33710120     -0.65465430        -0.17908874      0.65465430
## 109     0.20501110     -0.36416334         0.19203379     -0.29695946
## 110    -0.03818128     -0.14042416        -0.23107198      0.54790615
## 111     0.51856960     -1.12903457         1.23113036      0.43305527
## 112     0.17908874     -0.35060018         0.47537773     -0.62344075
## 113    -0.23107198     -0.54790615        -0.93409710     -1.10528634
## 114    -0.29695946     -0.40526982        -1.31706374      0.35060018
## 115    -0.33710120     -0.37779383        -1.05957037     -1.61367018
## 116     0.44707302     -1.61367018        -0.12758531     -0.93409710
## 117     0.36416334     -1.41400510        -0.33710120     -0.87658763
## 118    -0.80413364     -0.01272434         0.40526982     -0.39149488
## 119    -1.05957037      0.12758531         0.78667510     -0.27046566
## 120    -0.93409710     -0.91459156        -1.56855670      0.31028376
## 121    -0.62344075     -1.25874673        -0.41912210      0.60806071
## 122    -0.83980946     -1.01596791        -1.17854682     -1.25874673
## 123    -1.25874673     -0.15328619        -2.80216172     -0.33710120
## 124    -1.91230127      0.70271480        -0.78667510     -0.16617364
## 125    -0.59282318     -1.28735798         0.93409710      0.02545075
## 126    -2.80216172      1.25874673         1.48684468      1.05957037
## 127    -0.35060018     -1.83849262         0.20501110      0.19203379
## 128    -2.42690063      1.28735798         1.52642702      1.08214564
## 129    -0.65465430     -0.32366339         0.06366298     -0.01272434
## 130    -1.08214564     -0.68651916         0.02545075     -0.48967276
## 131    -0.11476746     -2.10223158        -0.28368767     -0.99487522
## 132    -0.89542793     -1.03752256        -1.23113036     -1.28735798
## 133    -0.78667510     -0.95396468        -1.10528634     -1.20442230
## 134    -1.83849262      0.71909690        -0.76945312     -0.15328619
## 135    -0.73567430     -0.93409710        -1.08214564     -1.17854682
## 136    -0.41912210     -1.17854682         0.95396468      0.03818128
## 137    -0.51856960     -0.59282318         0.48967276     -0.36416334
## 138    -0.27046566     -1.05957037        -0.35060018      0.62344075
## 139    -0.37779383     -0.76945312         0.07641832     -0.32366339
## 140    -0.60806071     -0.46117919        -0.37779383      0.53318051
## 141     0.12758531     -1.66232963         1.17854682      0.41912210
## 142    -0.40526982     -0.75245638         0.44707302     -0.63896971
```

```
## 143    -0.82184079     -0.97421613        -1.15343724     -1.23113036
## 144    -0.91459156     -0.87658763        -1.52642702      0.32366339
## 145    -0.08918610     -1.99828954        -0.27046566     -0.97421613
## 146    -0.19203379     -1.91230127        -0.46117919     -0.89542793
## 147    -1.44946373     -0.12758531         0.35060018     -0.40526982
## 148     2.80216172      0.28368767        -0.02545075     -1.01596791
## 149     2.10223158      0.40526982         0.33710120      1.28735798
## 150     1.91230127      0.62344075         1.12903457      1.44946373
## 151     1.61367018      0.78667510         0.68651916      1.66232963
## 152     0.80413364      1.71527720         2.10223158      1.91230127
## 153     0.89542793      1.61367018         0.11476746      0.78667510
## 154     2.42690063      0.36416334        -0.39149488     -1.31706374
## 155     1.05957037      1.17854682         0.17908874     -0.56275157
## 156     1.71527720      0.75245638         1.41400510      0.68651916
## 157     0.93409710      1.34797950         1.91230127      1.71527720
## 158     2.23555842      0.39149488        -0.44707302     -1.34797950
## 159     1.83849262      0.67050162         0.89542793      2.10223158
## 160     0.73567430      2.10223158         1.71527720      1.99828954
## 161     1.12903457      1.12903457         0.80413364      1.23113036
## 162     0.75245638      1.99828954         2.23555842      1.52642702
## 163     1.23113036      1.05957037        -1.66232963      1.31706374
## 164     0.97421613      1.23113036         0.27046566      0.80413364
## 165     0.91459156      1.38024023         0.39149488      0.85805346
## 166     1.08214564      1.15343724         0.41912210      1.20442230
## 167     0.82184079      1.66232963         1.99828954      1.83849262
## 168     0.78667510      1.83849262         0.59282318      0.50406856
## 169     1.56855670      0.80413364        -0.54790615     -0.57772207
## 170     1.38024023      0.97421613        -0.70271480      0.76945312
## 171     1.28735798      1.03752256         1.77352271      2.80216172
## 172     1.41400510      0.95396468         0.05091800      0.29695946
## 173     1.66232963      0.87658763        -0.25729077      1.38024023
## 174     1.31706374      0.99487522        -1.12903457      0.83980946
## 175     1.25874673      1.08214564         0.00000000     -0.19203379
## 176     1.52642702      0.89542793        -0.21802303     -0.03818128
## 177     0.95396468      1.31706374        -1.71527720      0.93409710
## 178     0.76945312      1.77352271         0.56275157      0.48967276
## 179     1.10528634      1.01596791         1.34797950      0.95396468
## 180     0.71909690      1.91230127         0.36416334      1.48684468
## 181     1.34797950      0.73567430         0.03818128      1.34797950
## 182     1.03752256      1.10528634         0.87658763      0.82184079
## 183     1.77352271      0.56275157         1.44946373      0.51856960
## 184     1.99828954      0.33710120         0.60806071      0.39149488
## 185     0.87658763      1.41400510        -1.38024023      0.99487522
## 186     0.83980946      1.52642702         0.01272434      1.03752256
## 187     1.15343724      0.93409710        -0.19203379      1.61367018
## 188     1.44946373      0.68651916         0.32366339      0.10196844
## 189     0.99487522      0.85805346        -0.32366339      1.56855670
## 190     1.17854682      0.65465430         0.50406856      1.77352271
## 191     1.01596791      0.76945312        -0.03818128      0.28368767
## 192     0.85805346      1.20442230        -1.83849262      0.91459156
## 193     0.70271480      2.23555842         0.23107198      1.01596791
## 194     1.20442230      0.63896971         1.83849262      1.25874673
## 195     0.67050162      2.42690063         2.42690063      2.23555842
## 196     1.48684468      0.47537773         1.03752256      1.41400510
## 197     0.68651916      2.80216172         2.80216172      2.42690063
```

```
##     Major_axis_length.ADC Minor_axis_length.ADC Least_axis_length.ADC
## 1             -0.50406856           -1.52642702           -1.48684468
## 2             -1.38024023           -0.75245638           -0.39149488
## 3             -0.97421613           -0.31028376           -0.21802303
## 4             -0.02545075           -0.01272434            0.19203379
## 5             -1.05957037           -0.36416334            0.01272434
## 6             -0.24416040           -0.37779383           -0.53318051
## 7             -0.46117919           -1.01596791           -1.31706374
## 8             -0.01272434            0.12758531           -1.41400510
## 9             -1.61367018           -1.34797950           -1.56855670
## 10            -1.08214564           -0.73567430           -0.76945312
## 11            -0.99487522           -0.32366339           -0.14042416
## 12            -0.44707302           -0.02545075            0.20501110
## 13             0.37779383            0.23107198            0.24416040
## 14             0.10196844           -0.50406856           -0.32366339
## 15             0.62344075            0.97421613            1.15343724
## 16            -0.12758531           -0.47537773           -0.11476746
## 17            -1.15343724           -0.68651916           -0.67050162
## 18             0.65465430            0.51856960            0.17908874
## 19             0.53318051            0.11476746            0.31028376
## 20             0.73567430            0.44707302            0.41912210
## 21             0.01272434            0.47537773            0.63896971
## 22            -2.23555842           -1.83849262           -1.61367018
## 23            -0.16617364           -0.41912210           -0.07641832
## 24            -0.25729077            0.32366339            0.39149488
## 25            -0.05091800           -1.44946373           -1.28735798
## 26             0.82184079            0.65465430            0.36416334
## 27            -0.39149488           -1.31706374           -1.10528634
## 28            -0.54790615           -0.80413364           -0.85805346
## 29            -0.43305527           -0.65465430           -1.34797950
## 30             0.17908874           -0.46117919           -0.08918610
## 31            -2.42690063           -1.99828954           -1.71527720
## 32             0.02545075            0.28368767            0.50406856
## 33             0.80413364            0.63896971            0.40526982
## 34            -1.41400510           -1.38024023           -1.38024023
## 35            -0.07641832           -0.57772207           -1.23113036
## 36            -0.03818128            0.19203379            0.21802303
## 37             0.24416040            0.35060018            0.27046566
## 38            -1.52642702           -0.78667510           -1.52642702
## 39             0.54790615            0.17908874            0.67050162
## 40            -0.48967276            0.01272434           -0.43305527
## 41             0.71909690            0.70271480            0.91459156
## 42             0.16617364           -0.63896971           -0.27046566
## 43             0.83980946            0.33710120            0.28368767
## 44            -2.80216172           -2.10223158           -1.77352271
## 45            -1.77352271           -2.80216172           -1.91230127
## 46            -0.65465430           -0.28368767           -0.19203379
## 47            -0.27046566           -1.41400510           -1.20442230
## 48            -0.63896971           -0.11476746            0.06366298
## 49            -1.99828954           -1.91230127           -1.83849262
## 50             0.00000000            0.20501110            0.65465430
## 51             0.23107198            0.16617364            0.48967276
## 52             0.25729077            0.50406856            0.68651916
## 53             0.87658763            0.73567430            0.60806071
## 54            -0.08918610           -0.91459156           -1.12903457
```

```
## 55          -1.83849262          -2.42690063          -2.23555842
## 56          -1.56855670          -1.61367018          -2.80216172
## 57          -0.40526982          -0.62344075          -0.44707302
## 58           0.63896971           0.21802303           0.32366339
## 59          -2.10223158          -2.23555842          -2.42690063
## 60           0.91459156           0.99487522           1.20442230
## 61           0.89542793           0.71909690           0.59282318
## 62          -0.32366339           0.08918610          -0.03818128
## 63           0.68651916           0.67050162          -0.17908874
## 64           0.11476746           0.31028376           0.08918610
## 65          -0.06366298          -0.93409710          -1.17854682
## 66           0.03818128          -0.95396468          -0.40526982
## 67          -0.14042416          -0.08918610           0.23107198
## 68           0.67050162           0.60806071           0.54790615
## 69          -1.10528634          -0.39149488          -0.29695946
## 70          -1.91230127          -1.77352271          -1.66232963
## 71          -0.95396468          -0.17908874          -0.41912210
## 72           1.05957037           0.83980946           1.28735798
## 73          -0.73567430          -1.03752256          -0.87658763
## 74           0.27046566           0.29695946           0.07641832
## 75          -0.75245638          -0.07641832          -0.28368767
## 76          -1.66232963          -1.66232963          -1.99828954
## 77          -1.48684468          -1.56855670          -1.44946373
## 78          -0.35060018          -0.12758531          -0.23107198
## 79          -1.12903457          -0.40526982          -0.31028376
## 80          -0.28368767          -0.10196844          -0.10196844
## 81           0.41912210          -0.20501110           0.16617364
## 82          -0.10196844           0.24416040           0.53318051
## 83          -0.59282318          -0.24416040          -0.46117919
## 84          -0.41912210          -0.67050162          -0.75245638
## 85          -1.23113036          -0.82184079          -0.54790615
## 86          -0.17908874          -0.03818128          -0.73567430
## 87          -0.11476746          -0.14042416          -0.47537773
## 88           0.33710120           0.43305527           0.15328619
## 89          -1.44946373          -1.48684468          -0.83980946
## 90           0.31028376           0.40526982           0.12758531
## 91           0.47537773           0.78667510           0.75245638
## 92          -0.82184079          -1.12903457          -0.95396468
## 93          -0.36416334          -0.15328619          -0.24416040
## 94           0.07641832          -0.53318051          -0.35060018
## 95          -0.20501110           0.05091800           0.03818128
## 96           0.59282318           0.93409710           1.10528634
## 97           0.21802303           0.15328619           0.46117919
## 98           0.60806071           0.95396468           1.12903457
## 99          -0.31028376           0.10196844          -0.02545075
## 100         -0.60806071          -0.25729077          -0.48967276
## 101         -1.28735798          -0.85805346          -0.57772207
## 102         -0.83980946          -1.15343724          -0.97421613
## 103         -0.78667510          -1.08214564          -0.91459156
## 104          0.08918610          -0.51856960          -0.33710120
## 105         -0.76945312          -1.05957037          -0.89542793
## 106         -0.19203379           0.06366298           0.05091800
## 107         -0.68651916          -0.21802303          -0.01272434
## 108          0.48967276           0.80413364           0.76945312
## 109         -0.56275157          -0.05091800          -0.63896971
```

```
## 110          0.40526982          0.59282318          0.87658763
## 111          0.14042416          0.56275157          0.95396468
## 112         -0.51856960         -0.59282318         -0.80413364
## 113         -0.80413364         -1.10528634         -0.93409710
## 114          0.32366339          0.41912210          0.14042416
## 115         -1.71527720         -1.71527720         -2.10223158
## 116         -1.25874673         -0.83980946         -0.56275157
## 117         -1.17854682         -0.70271480         -0.68651916
## 118         -1.01596791         -0.33710120         -0.15328619
## 119         -0.67050162         -0.29695946         -0.20501110
## 120          0.28368767          0.37779383          0.10196844
## 121          0.44707302          0.75245638          0.71909690
## 122         -0.91459156         -1.25874673         -1.05957037
## 123         -0.37779383         -0.16617364         -0.25729077
## 124          0.05091800         -0.56275157         -0.37779383
## 125         -0.23107198          0.02545075          0.00000000
## 126          0.56275157          0.89542793          1.05957037
## 127          0.20501110          0.14042416          0.44707302
## 128          0.57772207          0.91459156          1.08214564
## 129         -0.33710120          0.07641832         -0.06366298
## 130         -0.62344075         -0.27046566         -0.50406856
## 131         -1.34797950         -0.89542793         -0.62344075
## 132         -0.93409710         -1.28735798         -1.08214564
## 133         -0.87658763         -1.20442230         -1.01596791
## 134          0.06366298         -0.54790615         -0.36416334
## 135         -0.85805346         -1.17854682         -0.99487522
## 136         -0.21802303          0.03818128          0.02545075
## 137         -0.70271480         -0.23107198         -0.05091800
## 138          0.46117919          0.76945312          0.73567430
## 139         -0.57772207         -0.06366298         -0.65465430
## 140          0.39149488          0.57772207          0.85805346
## 141          0.12758531          0.54790615          0.93409710
## 142         -0.53318051         -0.60806071         -0.82184079
## 143         -0.89542793         -1.23113036         -1.03752256
## 144          0.29695946          0.39149488          0.11476746
## 145         -1.31706374         -0.87658763         -0.60806071
## 146         -1.20442230         -0.71909690         -0.70271480
## 147         -1.03752256         -0.35060018         -0.16617364
## 148         -0.47537773         -0.76945312         -0.59282318
## 149          1.25874673          1.38024023          1.83849262
## 150          1.41400510          1.34797950          1.56855670
## 151          1.44946373          1.66232963          1.91230127
## 152          2.10223158          1.91230127          1.77352271
## 153          1.20442230          0.48967276          0.29695946
## 154         -0.15328619         -0.99487522         -0.78667510
## 155          0.19203379         -0.43305527         -1.25874673
## 156          0.95396468          0.68651916          0.62344075
## 157          1.83849262          1.41400510          1.48684468
## 158         -0.71909690         -0.97421613         -1.15343724
## 159          2.42690063          2.80216172          2.42690063
## 160          2.23555842          1.83849262          1.71527720
## 161          1.01596791          1.28735798          1.17854682
## 162          1.99828954          1.77352271          1.01596791
## 163          1.34797950          1.52642702          1.31706374
## 164          1.23113036          0.46117919          0.25729077
```

```
## 165            1.28735798            0.36416334            0.78667510
## 166            1.12903457            1.17854682            1.44946373
## 167            1.91230127            1.71527720            1.66232963
## 168            0.51856960            0.87658763            0.83980946
## 169           -0.29695946           -0.48967276           -0.51856960
## 170            0.70271480            1.05957037            0.70271480
## 171            2.80216172            2.10223158            2.80216172
## 172            0.78667510            0.27046566            0.35060018
## 173            1.48684468            1.48684468            1.25874673
## 174            0.76945312            1.20442230            0.89542793
## 175            0.15328619           -0.44707302           -0.71909690
## 176            0.35060018           -0.19203379           -0.12758531
## 177            0.99487522            1.12903457            0.99487522
## 178            0.50406856            0.85805346            0.82184079
## 179            1.03752256            1.15343724            1.03752256
## 180            1.61367018            1.03752256            1.41400510
## 181            1.17854682            1.44946373            1.61367018
## 182            0.85805346            1.01596791            0.57772207
## 183            0.93409710            0.62344075            0.43305527
## 184            0.43305527            0.53318051            0.51856960
## 185            1.10528634            1.23113036            0.47537773
## 186            1.15343724            1.10528634            0.56275157
## 187            1.56855670            1.61367018            1.38024023
## 188            0.36416334            0.00000000            0.37779383
## 189            1.52642702            1.56855670            1.34797950
## 190            1.66232963            1.99828954            1.99828954
## 191            0.75245638            0.25729077            0.33710120
## 192            0.97421613            1.08214564            0.97421613
## 193            1.31706374            0.82184079            0.80413364
## 194            1.08214564            1.25874673            1.23113036
## 195            1.71527720            2.23555842            2.10223158
## 196            1.38024023            1.31706374            1.52642702
## 197            1.77352271            2.42690063            2.23555842
##     Elongation.ADC Flatness.ADC Max_cooc.L.ADC Average_cooc.L.ADC
## 1      -2.42690063  -2.42690063     0.10196844        -0.71909690
## 2       0.01272434   0.41912210    -0.29695946         0.40526982
## 3       0.28368767   0.17908874    -0.01272434        -2.42690063
## 4      -0.39149488   0.10836573    -0.08918610        -0.40526982
## 5       0.46117919   0.70271480    -0.12758531        -0.31028376
## 6      -0.67050162  -0.97421613    -0.48967276         0.33710120
## 7      -1.25874673  -1.34797950    -0.39149488         0.60806071
## 8      -0.07641832  -2.80216172     0.06366298         0.54790615
## 9      -0.06366298  -1.08214564    -0.37779383         0.68651916
## 10     -0.25729077  -0.21802303     0.00000000        -1.71527720
## 11      0.43305527   0.40526982    -0.35060018         0.37779383
## 12      0.35060018   0.62344075    -0.32366339        -0.83980946
## 13     -0.50406856  -0.24416040     0.87658763        -2.80216172
## 14     -1.17854682  -1.15343724    -0.11476746         0.31028376
## 15      0.37779383   0.57772207     0.40526982        -0.97421613
## 16     -0.85805346  -0.35060018    -0.25729077         0.32366339
## 17      0.08918610   0.05091800    -0.33710120         0.50406856
## 18     -0.59282318  -0.91459156    -0.41912210        -0.67050162
## 19     -0.89542793  -0.31028376     0.05091800        -2.23555842
## 20     -0.82184079  -0.51856960    -0.36416334        -0.65465430
## 21      0.57772207   0.65465430     0.03818128        -0.10196844
```

```
## 22     -0.15328619   0.27046566    -0.10196844        -1.31706374
## 23     -0.70271480  -0.25729077    -0.05091800        -1.91230127
## 24      0.70271480   0.67050162    -0.28368767        -0.06366298
## 25     -2.80216172  -2.10223158    -0.47537773         0.41912210
## 26     -0.56275157  -0.63896971    -0.44707302        -0.70271480
## 27     -1.61367018  -1.23113036    -0.50406856         0.15328619
## 28     -0.80413364  -0.75245638    -0.21802303        -0.78667510
## 29     -0.73567430  -1.61367018    -0.43305527        -0.12758531
## 30     -1.23113036  -0.62344075     0.02545075        -2.10223158
## 31     -0.51856960   0.03818128     0.01272434        -1.44946373
## 32      0.21802303   0.56275157     0.08918610        -0.82184079
## 33     -0.57772207  -0.59282318    -0.27046566        -0.87658763
## 34     -0.60806071  -0.50406856    -0.17908874        -0.29695946
## 35     -0.99487522  -1.99828954    -0.51856960         0.21802303
## 36      0.02545075   0.19203379    -0.23107198         0.24416040
## 37      0.03818128  -0.08918610    -0.46117919        -0.63896971
## 38      0.16617364  -1.44946373    -0.19203379         0.06366298
## 39     -0.83980946   0.10836573    -0.14042416        -0.95396468
## 40      0.67050162  -0.36416334     0.11476746        -0.93409710
## 41     -0.37779383  -0.05091800    -0.16617364        -0.80413364
## 42     -1.66232963  -1.01596791    -0.31028376        -1.77352271
## 43     -0.95396468  -0.89542793    -0.15328619        -1.25874673
## 44     -0.53318051   0.00000000    -0.06366298        -1.48684468
## 45     -2.23555842  -1.05957037     0.68651916        -1.41400510
## 46      0.15328619   0.02545075     0.78667510        -0.23107198
## 47     -1.99828954  -1.48684468     0.39149488         0.05091800
## 48      0.48967276   0.48967276     0.19203379        -1.28735798
## 49     -0.76945312  -0.48967276     0.46117919        -0.62344075
## 50      0.11476746   0.71909690     0.41912210        -0.07641832
## 51     -0.31028376   0.46117919     0.51856960        -1.08214564
## 52      0.31028376   0.59282318     0.48967276        -0.44707302
## 53     -0.43305527  -0.37779383     0.33710120        -0.68651916
## 54     -1.56855670  -1.56855670     0.23107198        -1.17854682
## 55     -1.83849262  -1.12903457     0.54790615        -1.10528634
## 56     -1.12903457  -2.23555842     0.32366339         0.10196844
## 57     -0.75245638  -0.57772207     0.44707302         0.62344075
## 58     -0.78667510  -0.33710120     0.73567430        -0.85805346
## 59     -0.93409710  -0.65465430     0.80413364        -1.52642702
## 60     -0.16617364   0.37779383     0.91459156        -1.99828954
## 61     -0.47537773  -0.41912210     0.31028376        -1.38024023
## 62      0.47537773  -0.01272434     0.67050162        -0.75245638
## 63     -0.33710120  -1.91230127     0.65465430        -0.89542793
## 64      0.32366339  -0.14042416     0.93409710        -0.19203379
## 65     -1.91230127  -1.83849262     0.29695946        -1.34797950
## 66     -2.10223158  -1.03752256     0.35060018         0.08918610
## 67     -0.23107198   0.47537773     0.24416040        -0.32366339
## 68     -0.41912210  -0.15328619     0.21802303        -0.20501110
## 69      0.59282318   0.29695946     0.75245638        -0.41912210
## 70     -0.65465430  -0.70271480     0.47537773         0.63896971
## 71      0.62344075  -0.11476746     0.62344075        -0.08918610
## 72     -0.63896971   0.21802303     0.70271480        -0.17908874
## 73     -0.97421613  -0.56275157     0.53318051        -0.46117919
## 74     -0.08918610  -0.43305527     0.95396468         0.03818128
## 75      0.63896971  -0.06366298     0.71909690         0.39149488
## 76     -1.01596791  -1.52642702     0.59282318         0.57772207
```

```
## 77     -0.91459156  -0.95396468     0.76945312        -1.56855670
## 78      0.06366298  -0.29695946     0.60806071         0.19203379
## 79      0.51856960   0.25729077     0.12758531        -0.43305527
## 80     -0.17908874  -0.16617364    -0.07641832         0.51856960
## 81     -1.20442230  -0.54790615    -0.03818128         0.07641832
## 82      0.41912210   0.68651916     0.14042416        -0.91459156
## 83      0.12758531  -0.40526982    -0.02545075         0.14042416
## 84     -0.87658763  -0.85805346     0.07641832        -1.83849262
## 85     -0.20501110   0.15328619    -0.24416040        -0.33710120
## 86     -0.19203379  -1.10528634     0.56275157         0.75245638
## 87     -0.40526982  -0.99487522     0.50406856         0.70271480
## 88      0.00000000  -0.32366339     0.25729077         0.00000000
## 89     -0.71909690   0.08918610    -0.20501110         0.46117919
## 90     -0.12758531  -0.46117919    -0.60806071        -0.02545075
## 91      0.40526982   0.24416040    -0.80413364        -0.24416040
## 92     -1.10528634  -0.82184079    -0.93409710        -0.51856960
## 93     -0.14042416  -0.39149488    -0.65465430         0.17908874
## 94     -1.34797950  -1.41400510    -0.87658763         0.28368767
## 95      0.19203379  -0.07641832    -0.91459156        -0.14042416
## 96      0.25729077   0.51856960    -0.59282318        -1.01596791
## 97     -0.44707302   0.28368767    -0.76945312        -1.12903457
## 98      0.27046566   0.53318051    -0.56275157        -0.99487522
## 99      0.50406856   0.07641832     0.82184079        -0.73567430
## 100    -0.02545075  -0.53318051    -0.85805346         0.12758531
## 101    -0.29695946  -0.03818128    -0.89542793        -0.36416334
## 102    -1.15343724  -0.83980946    -0.95396468        -0.53318051
## 103    -1.05957037  -0.76945312    -0.73567430        -0.48967276
## 104    -1.31706374  -1.38024023    -0.75245638         0.29695946
## 105    -1.03752256  -0.73567430    -0.67050162        -0.47537773
## 106     0.23107198   0.06366298    -0.54790615        -0.11476746
## 107     0.39149488   0.44707302     0.43305527        -1.20442230
## 108     0.56275157   0.35060018     0.37779383        -0.21802303
## 109     0.53318051  -0.47537773     0.20501110         0.23107198
## 110     0.10196844   0.50406856     0.57772207         0.02545075
## 111     0.60806071   0.83980946     0.83980946        -1.61367018
## 112    -0.54790615  -0.60806071     0.36416334         0.44707302
## 113    -1.08214564  -0.80413364    -0.83980946        -0.50406856
## 114    -0.11476746  -0.44707302    -0.57772207        -0.01272434
## 115    -1.28735798  -1.77352271    -0.71909690         0.56275157
## 116    -0.27046566   0.01272434    -0.82184079        -0.35060018
## 117    -0.05091800  -0.10196844    -0.68651916         0.48967276
## 118     0.36416334   0.31028376    -0.70271480         0.36416334
## 119    -0.03818128  -0.12758531    -0.63896971        -0.25729077
## 120    -0.35060018  -0.71909690    -1.38024023        -0.05091800
## 121     0.20501110  -0.02545075    -1.71527720        -0.28368767
## 122    -1.48684468  -1.28735798    -2.42690063        -0.59282318
## 123    -0.36416334  -0.67050162    -1.41400510         0.16617364
## 124    -1.77352271  -1.71527720    -1.99828954         0.25729077
## 125    -0.10196844  -0.27046566    -2.23555842        -0.16617364
## 126     0.05091800   0.33710120    -1.34797950        -1.05957037
## 127    -0.62344075   0.12758531    -1.66232963        -1.15343724
## 128     0.07641832   0.36416334    -1.28735798        -1.03752256
## 129     0.24416040  -0.17908874    -1.03752256        -0.76945312
## 130    -0.24416040  -0.87658763    -1.91230127         0.11476746
## 131    -0.48967276  -0.23107198    -2.10223158        -0.39149488
```

```
## 132    -1.52642702  -1.31706374    -2.80216172        -0.60806071
## 133    -1.41400510  -1.20442230    -1.56855670        -0.56275157
## 134    -1.71527720  -1.66232963    -1.61367018         0.27046566
## 135    -1.38024023  -1.17854682    -1.44946373        -0.54790615
## 136    -0.01272434  -0.19203379    -1.25874673        -0.15328619
## 137     0.17908874   0.23107198    -1.15343724        -1.23113036
## 138     0.33710120   0.20501110    -1.17854682        -0.27046566
## 139     0.29695946  -0.78667510    -1.23113036         0.20501110
## 140    -0.21802303   0.32366339    -1.10528634         0.01272434
## 141     0.44707302   0.73567430    -1.01596791        -1.66232963
## 142    -0.68651916  -0.93409710    -1.20442230         0.43305527
## 143    -1.44946373  -1.25874673    -1.83849262        -0.57772207
## 144    -0.32366339  -0.68651916    -1.31706374        -0.03818128
## 145    -0.46117919  -0.20501110    -1.77352271        -0.37779383
## 146    -0.28368767  -0.28368767    -1.48684468         0.47537773
## 147     0.14042416   0.16617364    -1.52642702         0.35060018
## 148     0.91459156   0.99487522     1.23113036         0.97421613
## 149     1.48684468   2.80216172     1.17854682         1.31706374
## 150     1.15343724   1.83849262     1.34797950         0.82184079
## 151     1.71527720   2.23555842     1.28735798         1.03752256
## 152     1.05957037   1.12903457     1.12903457         0.95396468
## 153     0.71909690   0.54790615     0.99487522         0.76945312
## 154     0.68651916   0.75245638     1.41400510         0.80413364
## 155     0.76945312   0.14042416     1.10528634         1.52642702
## 156     0.93409710   0.93409710     1.20442230         2.10223158
## 157     0.89542793   1.15343724     1.83849262         0.91459156
## 158     0.83980946   0.91459156     2.10223158         0.67050162
## 159     1.28735798   1.77352271     2.23555842         0.53318051
## 160     1.01596791   1.05957037     1.08214564         0.71909690
## 161     1.99828954   1.41400510     1.66232963         0.93409710
## 162     1.12903457   0.39149488     1.61367018         0.89542793
## 163     1.77352271   1.28735798     2.42690063         1.20442230
## 164     0.65465430   0.43305527     1.05957037         0.73567430
## 165     0.54790615   0.78667510     1.15343724         1.48684468
## 166     1.17854682   1.91230127     1.01596791         1.12903457
## 167     1.08214564   1.25874673     0.97421613         1.17854682
## 168     2.23555842   1.71527720     1.91230127         1.08214564
## 169     0.97421613   0.89542793     1.25874673         2.23555842
## 170     2.42690063   1.31706374     1.56855670         1.28735798
## 171     0.99487522   1.52642702     1.71527720         1.23113036
## 172     0.82184079   0.95396468     1.38024023         1.01596791
## 173     1.38024023   1.03752256     2.80216172         1.41400510
## 174     2.80216172   1.38024023     1.77352271         1.77352271
## 175     0.80413364   0.60806071     1.48684468         1.99828954
## 176     0.85805346   0.82184079     1.99828954         0.65465430
## 177     1.44946373   1.20442230     1.52642702         1.66232963
## 178     2.10223158   1.61367018     0.85805346         1.05957037
## 179     1.25874673   1.23113036     0.17908874         1.91230127
## 180     0.75245638   0.97421613     0.27046566         1.44946373
## 181     1.91230127   2.42690063     0.89542793         0.87658763
## 182     1.52642702   1.08214564     0.28368767         1.56855670
## 183     0.87658763   0.85805346     0.63896971         0.59282318
## 184     1.20442230   1.48684468     0.15328619         1.10528634
## 185     1.23113036   0.76945312     1.44946373         2.80216172
## 186     1.10528634   0.80413364     1.31706374         2.42690063
```

```
## 187     1.41400510   1.17854682     1.03752256         1.38024023
## 188     0.95396468   1.44946373     0.16617364         1.83849262
## 189     1.34797950   1.01596791    -0.62344075         1.34797950
## 190     1.83849262   1.56855670    -0.99487522         1.15343724
## 191     0.78667510   0.87658763    -1.12903457         0.99487522
## 192     1.31706374   1.10528634    -0.78667510         1.61367018
## 193     0.73567430   0.63896971    -1.05957037         1.71527720
## 194     1.56855670   1.34797950    -1.08214564         1.25874673
## 195     1.61367018   1.99828954    -0.53318051         0.83980946
## 196     1.03752256   1.66232963    -0.97421613         0.78667510
## 197     1.66232963   2.10223158    -0.40526982         0.85805346
##     Variance_cooc.L.ADC Entropy_cooc.L.ADC DAVE_cooc.L.ADC DVAR_cooc.L.ADC
## 1            0.78667510        -0.87658763      0.36416334      1.31706374
## 2           -0.59282318        -0.57772207     -0.51856960     -0.62344075
## 3            1.01596791        -0.08918610      0.07641832      1.12903457
## 4           -0.76945312        -0.60806071     -1.08214564     -1.15343724
## 5           -0.41912210        -0.25729077     -0.31028376     -0.48967276
## 6            1.20442230         0.60806071      0.29695946      0.85805346
## 7            0.37779383         0.31028376      0.65465430      0.70271480
## 8           -0.23107198        -0.48967276     -0.36416334      0.05091800
## 9            0.20501110        -0.23107198      0.44707302      0.82184079
## 10           0.70271480        -0.16617364      0.05091800      0.99487522
## 11          -0.43305527        -0.29695946     -0.44707302     -0.56275157
## 12           0.19203379         0.32366339      0.03818128      0.19203379
## 13          -1.71527720        -2.80216172     -2.80216172     -1.61367018
## 14          -0.83980946        -0.78667510     -0.89542793     -1.01596791
## 15          -0.63896971        -1.38024023     -1.52642702     -1.41400510
## 16          -0.47537773        -0.32366339     -0.39149488     -0.19203379
## 17          -1.10528634        -0.63896971     -0.33710120     -0.44707302
## 18          -0.31028376         0.06366298     -0.21802303     -0.06366298
## 19           0.53318051         0.00000000      0.11476746      0.91459156
## 20          -0.17908874        -0.01272434     -0.54790615     -0.50406856
## 21          -0.40526982        -0.44707302     -0.73567430     -0.73567430
## 22           1.23113036        -0.54790615      0.59282318      0.76945312
## 23          -0.36416334        -0.67050162     -0.50406856      0.01272434
## 24          -0.29695946        -0.14042416     -0.59282318     -0.78667510
## 25           0.65465430         0.56275157      0.17908874      0.03818128
## 26          -0.19203379         0.37779383      0.06366298      0.15328619
## 27           1.28735798         0.62344075      0.32366339      0.63896971
## 28           0.83980946         0.41912210      0.21802303      0.54790615
## 29           0.89542793         0.57772207      0.35060018      0.50406856
## 30          -1.28735798        -1.25874673     -0.87658763     -0.60806071
## 31           0.93409710        -1.01596791      0.63896971      0.80413364
## 32          -1.17854682        -1.10528634     -0.83980946     -0.75245638
## 33          -0.33710120        -0.21802303     -0.78667510     -0.80413364
## 34           1.08214564         0.46117919      0.20501110      0.20501110
## 35           0.85805346         0.65465430      0.71909690      0.68651916
## 36           0.28368767         0.35060018     -0.23107198      0.02545075
## 37           0.29695946         0.44707302     -0.17908874      0.21802303
## 38           1.52642702         0.27046566      0.89542793      1.61367018
## 39          -0.37779383        -0.35060018     -0.53318051     -0.39149488
## 40          -1.77352271        -1.99828954     -1.34797950     -1.38024023
## 41          -0.32366339        -0.40526982     -1.20442230     -1.34797950
## 42           0.63896971         0.40526982      0.56275157      0.87658763
## 43          -0.35060018        -0.33710120     -0.80413364     -0.91459156
```

```
## 44          0.91459156        -1.03752256      0.62344075      0.78667510
## 45          0.76945312        -1.05957037      0.33710120      0.48967276
## 46         -0.25729077        -0.46117919     -0.40526982     -0.07641832
## 47          0.80413364         0.50406856      0.70271480      1.25874673
## 48          0.24416040         0.39149488      0.02545075     -0.10196844
## 49          1.31706374        -0.24416040      0.95396468      1.38024023
## 50         -0.39149488        -0.36416334     -0.82184079     -0.97421613
## 51         -1.20442230        -1.08214564     -1.38024023     -1.66232963
## 52         -0.82184079        -0.62344075     -1.25874673     -1.23113036
## 53         -0.08918610         0.05091800     -0.62344075     -0.70271480
## 54          0.62344075         0.53318051      0.23107198      0.43305527
## 55          0.87658763        -0.59282318      0.91459156      1.28735798
## 56          0.82184079        -0.17908874      0.93409710      1.17854682
## 57         -0.06366298         0.11476746     -0.37779383     -0.40526982
## 58          0.39149488        -0.07641832     -0.15328619      0.60806071
## 59          0.97421613        -1.23113036      0.76945312      1.20442230
## 60         -1.66232963        -2.10223158     -1.48684468     -1.17854682
## 61         -0.16617364         0.28368767      0.01272434     -0.03818128
## 62         -0.73567430        -0.73567430     -0.71909690     -0.65465430
## 63         -0.21802303        -0.37779383     -1.23113036     -0.83980946
## 64         -2.80216172        -2.42690063     -2.42690063     -2.80216172
## 65          0.71909690         0.43305527      0.08918610      0.16617364
## 66          0.17908874         0.01272434     -0.32366339     -0.37779383
## 67         -0.07641832         0.36416334     -0.08918610     -0.20501110
## 68          0.73567430         0.63896971      0.15328619      0.53318051
## 69         -1.01596791        -1.17854682     -0.56275157     -0.15328619
## 70          0.01272434        -0.76945312      0.27046566      0.51856960
## 71         -0.60806071        -0.27046566     -0.11476746     -0.14042416
## 72         -0.20501110        -0.10196844     -0.75245638     -0.53318051
## 73          0.15328619         0.29695946      0.53318051      0.40526982
## 74         -2.42690063        -2.23555842     -2.23555842     -2.42690063
## 75         -1.31706374        -0.65465430     -0.46117919     -0.71909690
## 76          0.27046566        -0.02545075      0.68651916      0.57772207
## 77          0.36416334        -0.20501110      0.28368767      0.67050162
## 78         -0.95396468        -0.47537773     -0.27046566     -0.31028376
## 79         -1.03752256        -1.20442230     -0.57772207     -0.16617364
## 80         -0.24416040        -0.05091800     -0.60806071     -0.51856960
## 81         -0.62344075        -0.28368767     -0.63896971     -0.54790615
## 82         -1.44946373        -1.28735798     -1.12903457     -0.82184079
## 83         -0.51856960        -0.41912210     -0.65465430     -0.85805346
## 84          0.68651916        -0.12758531     -0.03818128      0.46117919
## 85         -0.10196844         0.10196844     -0.10196844     -0.21802303
## 86         -1.41400510        -1.61367018     -1.17854682     -0.17908874
## 87         -0.78667510        -1.31706374     -0.85805346     -0.05091800
## 88         -1.83849262        -1.66232963     -1.77352271     -1.83849262
## 89          0.95396468         0.59282318      0.54790615      0.47537773
## 90         -1.99828954        -1.77352271     -1.91230127     -1.99828954
## 91         -1.52642702        -0.91459156     -0.97421613     -1.25874673
## 92          0.10196844         0.21802303      0.47537773      0.35060018
## 93         -0.97421613        -0.51856960     -0.28368767     -0.32366339
## 94         -0.87658763        -0.82184079     -0.95396468     -1.05957037
## 95          0.44707302         0.51856960     -0.02545075      0.10196844
## 96         -0.67050162        -1.44946373     -1.61367018     -1.48684468
## 97         -1.23113036        -1.12903457     -1.41400510     -1.71527720
## 98         -0.65465430        -1.41400510     -1.56855670     -1.44946373
```

```
## 99          -0.71909690        -0.70271480     -0.70271480     -0.63896971
## 100         -0.53318051        -0.43305527     -0.67050162     -0.87658763
## 101         -0.12758531         0.07641832     -0.14042416     -0.24416040
## 102          0.08918610         0.20501110      0.46117919      0.33710120
## 103          0.12758531         0.24416040      0.50406856      0.37779383
## 104         -0.85805346        -0.80413364     -0.93409710     -1.03752256
## 105          0.14042416         0.25729077      0.51856960      0.39149488
## 106          0.46117919         0.54790615     -0.01272434      0.11476746
## 107         -0.03818128        -0.03818128     -0.24416040      0.12758531
## 108         -1.48684468        -0.83980946     -0.91459156     -1.20442230
## 109         -0.56275157        -0.15328619     -0.06366298     -0.28368767
## 110         -1.05957037        -0.75245638     -1.10528634     -0.99487522
## 111         -1.34797950        -1.34797950     -1.28735798     -0.93409710
## 112          0.48967276         0.33710120      0.12758531      0.24416040
## 113          0.11476746         0.23107198      0.48967276      0.36416334
## 114         -1.91230127        -1.71527720     -1.83849262     -1.91230127
## 115          0.25729077        -0.06366298      0.67050162      0.56275157
## 116         -0.11476746         0.08918610     -0.12758531     -0.23107198
## 117         -1.12903457        -0.68651916     -0.35060018     -0.46117919
## 118         -0.44707302        -0.31028376     -0.47537773     -0.57772207
## 119         -0.27046566        -0.50406856     -0.43305527     -0.08918610
## 120         -2.23555842        -1.91230127     -2.10223158     -2.23555842
## 121         -1.61367018        -0.99487522     -1.05957037     -1.31706374
## 122          0.03818128         0.14042416      0.39149488      0.28368767
## 123         -0.99487522        -0.56275157     -0.29695946     -0.33710120
## 124         -0.91459156        -0.95396468     -1.03752256     -1.12903457
## 125          0.41912210         0.47537773     -0.07641832      0.06366298
## 126         -0.70271480        -1.56855670     -1.71527720     -1.56855670
## 127         -1.25874673        -1.15343724     -1.44946373     -1.77352271
## 128         -0.68651916        -1.52642702     -1.66232963     -1.52642702
## 129         -0.75245638        -0.85805346     -0.76945312     -0.67050162
## 130         -0.54790615        -0.53318051     -0.68651916     -0.89542793
## 131         -0.15328619         0.02545075     -0.20501110     -0.27046566
## 132          0.02545075         0.12758531      0.37779383      0.27046566
## 133          0.06366298         0.16617364      0.41912210      0.31028376
## 134         -0.89542793        -0.93409710     -1.01596791     -1.10528634
## 135          0.07641832         0.17908874      0.43305527      0.32366339
## 136          0.43305527         0.48967276     -0.05091800      0.07641832
## 137         -0.05091800        -0.11476746     -0.25729077      0.08918610
## 138         -1.56855670        -0.97421613     -0.99487522     -1.28735798
## 139         -0.57772207        -0.19203379     -0.16617364     -0.29695946
## 140         -1.08214564        -0.89542793     -1.15343724     -1.08214564
## 141         -1.38024023        -1.48684468     -1.31706374     -0.95396468
## 142          0.47537773         0.19203379      0.10196844      0.23107198
## 143          0.05091800         0.15328619      0.40526982      0.29695946
## 144         -2.10223158        -1.83849262     -1.99828954     -2.10223158
## 145         -0.14042416         0.03818128     -0.19203379     -0.25729077
## 146         -1.15343724        -0.71909690     -0.41912210     -0.47537773
## 147         -0.46117919        -0.39149488     -0.48967276     -0.59282318
## 148          2.80216172         1.25874673      2.80216172      2.80216172
## 149          0.75245638         1.17854682      0.87658763      0.17908874
## 150          0.23107198         0.91459156      0.60806071     -0.35060018
## 151          0.50406856         1.03752256      0.73567430     -0.01272434
## 152          1.15343724         1.56855670      1.05957037      0.62344075
## 153          1.71527720         2.23555842      1.61367018      1.52642702
```

```
## 154          2.10223158         1.05957037      2.23555842      2.42690063
## 155          1.99828954         1.31706374      2.42690063      2.10223158
## 156          1.25874673         1.66232963      1.17854682      0.83980946
## 157          1.61367018         1.41400510      1.28735798      1.91230127
## 158          2.42690063         0.83980946      2.10223158      2.23555842
## 159         -0.28368767         0.70271480      0.31028376      0.00000000
## 160          1.10528634         1.77352271      1.48684468      1.23113036
## 161          0.54790615         0.99487522      0.99487522      0.65465430
## 162          1.03752256         1.15343724      0.75245638      0.41912210
## 163         -0.93409710         0.67050162      0.00000000     -0.76945312
## 164          1.83849262         1.99828954      1.52642702      1.41400510
## 165          1.44946373         1.52642702      1.20442230      0.89542793
## 166          1.17854682         1.91230127      1.38024023      1.01596791
## 167          1.91230127         2.80216172      1.56855670      1.77352271
## 168          0.32366339         0.87658763      1.12903457      1.08214564
## 169          1.34797950         0.97421613      1.66232963      1.71527720
## 170          0.60806071         1.23113036      1.31706374      1.10528634
## 171          1.05957037         1.38024023      0.97421613      0.73567430
## 172          1.41400510         1.83849262      1.83849262      1.48684468
## 173         -0.80413364         0.68651916      0.14042416     -0.68651916
## 174          0.16617364         1.01596791      1.15343724      0.59282318
## 175          1.48684468         1.48684468      1.99828954      1.83849262
## 176          1.56855670         1.28735798      1.71527720      1.99828954
## 177          0.35060018         1.10528634      1.25874673      0.95396468
## 178          0.31028376         0.85805346      1.10528634      1.05957037
## 179          0.99487522         1.44946373      1.08214564      0.75245638
## 180          0.59282318         1.20442230      1.03752256      0.71909690
## 181         -0.01272434         0.82184079      0.80413364      0.44707302
## 182          0.67050162         1.12903457      1.01596791      0.25729077
## 183          1.77352271         1.34797950      1.41400510      1.56855670
## 184          1.12903457         1.61367018      1.34797950      0.97421613
## 185          0.00000000         0.75245638      0.78667510      1.03752256
## 186          0.51856960         0.80413364      0.85805346      1.15343724
## 187         -0.48967276         0.73567430      0.19203379     -0.41912210
## 188          2.23555842         2.42690063      1.91230127      1.66232963
## 189         -0.50406856         0.71909690      0.16617364     -0.43305527
## 190         -0.02545075         0.93409710      0.82184079     -0.02545075
## 191          1.38024023         1.71527720      1.77352271      1.44946373
## 192          0.33710120         1.08214564      1.23113036      0.93409710
## 193          0.40526982         0.95396468      0.83980946      0.14042416
## 194          1.66232963         2.10223158      1.44946373      1.34797950
## 195          0.56275157         0.76945312      0.24416040     -0.12758531
## 196          0.21802303         0.89542793      0.57772207     -0.36416334
## 197          0.57772207         0.78667510      0.25729077     -0.11476746
##     DENT_cooc.L.ADC SAVE_cooc.L.ADC SVAR_cooc.L.ADC SENT_cooc.L.ADC
## 1        0.43305527     -0.71909690      0.67050162     -0.21802303
## 2       -0.51856960      0.40526982     -0.75245638     -1.38024023
## 3        0.07641832     -2.42690063      1.17854682      0.63896971
## 4       -0.97421613     -0.40526982     -0.63896971     -0.14042416
## 5       -0.33710120     -0.31028376     -0.60806071     -0.23107198
## 6        0.37779383      0.33710120      1.38024023     -0.97421613
## 7        0.51856960      0.60806071      0.28368767     -1.77352271
## 8       -0.32366339      0.54790615     -0.23107198     -1.61367018
## 9        0.36416334      0.68651916     -0.05091800     -2.23555842
## 10       0.06366298     -1.71527720      0.68651916      0.59282318
```

```
## 11      -0.44707302      0.37779383     -0.56275157     -1.23113036
## 12       0.03818128     -0.83980946      0.23107198      0.36416334
## 13      -2.80216172     -2.80216172     -1.71527720      0.31028376
## 14      -0.89542793      0.31028376     -0.67050162     -1.01596791
## 15      -1.52642702     -0.97421613     -0.39149488     -0.05091800
## 16      -0.37779383      0.32366339     -0.65465430     -1.15343724
## 17      -0.40526982      0.50406856     -1.28735798     -1.48684468
## 18      -0.15328619     -0.67050162     -0.46117919      0.28368767
## 19       0.11476746     -2.23555842      0.41912210      0.78667510
## 20      -0.50406856     -0.65465430      0.17908874      0.25729077
## 21      -0.70271480     -0.10196844     -0.37779383     -0.47537773
## 22       0.48967276     -1.31706374      1.34797950      0.19203379
## 23      -0.43305527     -1.91230127     -0.47537773      0.67050162
## 24      -0.60806071     -0.06366298     -0.28368767     -0.53318051
## 25       0.12758531      0.41912210      0.71909690     -1.17854682
## 26       0.05091800     -0.70271480     -0.33710120      0.40526982
## 27       0.39149488      0.15328619      1.48684468     -0.78667510
## 28       0.24416040     -0.78667510      0.87658763     -0.02545075
## 29       0.40526982     -0.12758531      0.95396468     -0.50406856
## 30      -0.87658763     -2.10223158     -1.38024023      0.65465430
## 31       0.46117919     -1.44946373      0.93409710      0.43305527
## 32      -0.83980946     -0.82184079     -1.03752256      0.05091800
## 33      -0.76945312     -0.87658763     -0.24416040      0.54790615
## 34       0.14042416     -0.29695946      1.25874673     -0.40526982
## 35       0.56275157      0.20501110      0.82184079     -0.85805346
## 36      -0.08918610      0.24416040      0.37779383     -0.93409710
## 37      -0.03818128     -0.63896971      0.35060018      0.23107198
## 38       0.62344075      0.06366298      1.56855670     -0.51856960
## 39      -0.53318051     -0.95396468     -0.36416334      0.27046566
## 40      -1.38024023     -0.93409710     -2.23555842      0.16617364
## 41      -1.23113036     -0.80413364      0.03818128      0.57772207
## 42       0.53318051     -1.77352271      0.44707302      0.71909690
## 43      -0.80413364     -1.25874673     -0.25729077      0.70271480
## 44       0.44707302     -1.48684468      0.91459156      0.41912210
## 45       0.27046566     -1.41400510      0.80413364      0.35060018
## 46      -0.29695946     -0.23107198     -0.29695946     -0.29695946
## 47       0.57772207      0.05091800      0.63896971     -0.63896971
## 48      -0.05091800     -1.28735798      0.33710120      0.62344075
## 49       0.65465430     -0.62344075      1.12903457     -0.19203379
## 50      -0.85805346     -0.07641832     -0.35060018     -0.54790615
## 51      -1.34797950     -1.08214564     -0.89542793      0.60806071
## 52      -1.17854682     -0.44707302     -0.62344075     -0.03818128
## 53      -0.62344075     -0.68651916      0.25729077      0.29695946
## 54       0.23107198     -1.17854682      0.60806071      0.51856960
## 55       0.60806071     -1.10528634      0.65465430      0.33710120
## 56       0.63896971      0.10196844      0.47537773     -0.73567430
## 57      -0.35060018      0.62344075      0.29695946     -1.83849262
## 58      -0.01272434     -0.85805346      0.48967276      0.12758531
## 59       0.59282318     -1.52642702      0.85805346      0.47537773
## 60      -1.44946373     -1.99828954     -1.66232963      0.46117919
## 61       0.00000000     -1.38024023     -0.06366298      0.76945312
## 62      -0.67050162     -0.75245638     -0.80413364      0.21802303
## 63      -1.08214564     -0.91459156      0.24416040      0.53318051
## 64      -2.42690063     -0.19203379     -2.80216172     -0.39149488
## 65       0.08918610     -1.34797950      0.83980946      0.48967276
```

```
## 66      -0.31028376      0.08918610      0.32366339     -0.70271480
## 67      -0.10196844     -0.32366339      0.11476746     -0.27046566
## 68       0.15328619     -0.20501110      0.76945312     -0.32366339
## 69      -0.48967276     -0.41912210     -1.12903457     -0.08918610
## 70       0.25729077      0.63896971     -0.21802303     -1.99828954
## 71      -0.11476746     -0.08918610     -1.05957037     -0.48967276
## 72      -0.68651916     -0.17908874      0.14042416     -0.37779383
## 73       0.41912210     -0.46117919     -0.07641832      0.17908874
## 74      -1.99828954      0.03818128     -2.42690063     -0.68651916
## 75      -0.41912210      0.39149488     -1.61367018     -1.34797950
## 76       0.54790615      0.57772207      0.10196844     -1.56855670
## 77       0.32366339     -1.56855670      0.31028376      0.75245638
## 78      -0.24416040      0.19203379     -1.44946373     -0.87658763
## 79      -0.54790615     -0.43305527     -1.15343724     -0.12758531
## 80      -0.59282318      0.51856960      0.05091800     -1.41400510
## 81      -0.63896971      0.07641832     -0.76945312     -0.75245638
## 82      -0.95396468     -0.89542793     -1.41400510      0.20501110
## 83      -0.71909690      0.14042416     -0.48967276     -0.76945312
## 84       0.01272434     -1.83849262      0.78667510      0.73567430
## 85      -0.16617364     -0.33710120      0.02545075     -0.15328619
## 86      -1.05957037      0.75245638     -1.56855670     -2.80216172
## 87      -0.82184079      0.70271480     -1.01596791     -2.42690063
## 88      -1.66232963      0.00000000     -1.77352271     -0.56275157
## 89       0.47537773      0.46117919      0.97421613     -1.25874673
## 90      -1.91230127     -0.02545075     -1.91230127     -0.59282318
## 91      -1.03752256     -0.24416040     -1.20442230     -0.31028376
## 92       0.29695946     -0.51856960     -0.12758531      0.08918610
## 93      -0.28368767      0.17908874     -1.48684468     -0.89542793
## 94      -1.01596791      0.28368767     -0.70271480     -1.05957037
## 95      -0.06366298     -0.14042416      0.57772207     -0.43305527
## 96      -1.61367018     -1.01596791     -0.41912210     -0.07641832
## 97      -1.41400510     -1.12903457     -0.91459156      0.56275157
## 98      -1.56855670     -0.99487522     -0.40526982     -0.06366298
## 99      -0.65465430     -0.73567430     -0.78667510      0.24416040
## 100     -0.73567430      0.12758531     -0.50406856     -0.80413364
## 101     -0.20501110     -0.36416334      0.00000000     -0.17908874
## 102      0.28368767     -0.53318051     -0.14042416      0.07641832
## 103      0.33710120     -0.48967276     -0.10196844      0.11476746
## 104     -0.99487522      0.29695946     -0.68651916     -1.03752256
## 105      0.35060018     -0.47537773     -0.08918610      0.14042416
## 106     -0.02545075     -0.11476746      0.59282318     -0.41912210
## 107     -0.07641832     -1.20442230      0.16617364      0.44707302
## 108     -0.91459156     -0.21802303     -1.17854682     -0.28368767
## 109     -0.12758531      0.23107198     -0.97421613     -0.95396468
## 110     -0.93409710      0.02545075     -0.85805346     -0.67050162
## 111     -1.28735798     -1.61367018     -1.08214564      0.37779383
## 112      0.10196844      0.44707302      0.51856960     -1.12903457
## 113      0.31028376     -0.50406856     -0.11476746      0.10196844
## 114     -1.83849262     -0.01272434     -1.83849262     -0.57772207
## 115      0.50406856      0.56275157      0.07641832     -1.71527720
## 116     -0.19203379     -0.35060018      0.01272434     -0.16617364
## 117     -0.46117919      0.48967276     -1.31706374     -1.52642702
## 118     -0.47537773      0.36416334     -0.57772207     -1.28735798
## 119     -0.39149488     -0.25729077     -0.31028376     -0.33710120
## 120     -2.23555842     -0.05091800     -2.10223158     -0.62344075
```

```
## 121     -1.25874673     -0.28368767     -1.25874673     -0.36416334
## 122      0.17908874     -0.59282318     -0.19203379      0.00000000
## 123     -0.36416334      0.16617364     -1.52642702     -0.91459156
## 124     -1.20442230      0.25729077     -0.73567430     -1.10528634
## 125     -0.17908874     -0.16617364      0.54790615     -0.46117919
## 126     -1.77352271     -1.05957037     -0.44707302     -0.11476746
## 127     -1.48684468     -1.15343724     -0.93409710      0.50406856
## 128     -1.71527720     -1.03752256     -0.43305527     -0.10196844
## 129     -0.75245638     -0.76945312     -0.82184079      0.15328619
## 130     -0.78667510      0.11476746     -0.51856960     -0.83980946
## 131     -0.27046566     -0.39149488     -0.02545075     -0.25729077
## 132      0.16617364     -0.60806071     -0.20501110     -0.01272434
## 133      0.20501110     -0.56275157     -0.16617364      0.02545075
## 134     -1.15343724      0.27046566     -0.71909690     -1.08214564
## 135      0.21802303     -0.54790615     -0.15328619      0.03818128
## 136     -0.14042416     -0.15328619      0.56275157     -0.44707302
## 137     -0.21802303     -1.23113036      0.15328619      0.39149488
## 138     -1.10528634     -0.27046566     -1.23113036     -0.35060018
## 139     -0.23107198      0.21802303     -0.99487522     -0.99487522
## 140     -1.12903457      0.01272434     -0.87658763     -0.71909690
## 141     -1.31706374     -1.66232963     -1.10528634      0.32366339
## 142      0.02545075      0.43305527      0.50406856     -1.20442230
## 143      0.19203379     -0.57772207     -0.17908874      0.01272434
## 144     -2.10223158     -0.03818128     -1.99828954     -0.60806071
## 145     -0.25729077     -0.37779383     -0.01272434     -0.24416040
## 146     -0.56275157      0.47537773     -1.34797950     -1.66232963
## 147     -0.57772207      0.35060018     -0.59282318     -1.31706374
## 148      2.80216172      0.97421613      2.80216172      1.17854682
## 149      0.93409710      1.31706374      0.89542793      0.99487522
## 150      0.80413364      0.82184079      0.40526982      2.10223158
## 151      0.82184079      1.03752256      0.62344075      1.34797950
## 152      1.05957037      0.95396468      1.31706374      1.56855670
## 153      1.61367018      0.76945312      1.77352271      1.83849262
## 154      2.23555842      0.80413364      1.83849262      1.61367018
## 155      2.42690063      1.52642702      1.61367018      0.89542793
## 156      1.17854682      2.10223158      1.41400510     -0.82184079
## 157      1.41400510      0.91459156      1.66232963      1.41400510
## 158      2.10223158      0.67050162      2.23555842      1.71527720
## 159      0.76945312      0.53318051     -0.32366339      1.66232963
## 160      1.44946373      0.71909690      1.05957037      2.80216172
## 161      1.01596791      0.93409710      0.43305527      1.52642702
## 162      0.83980946      0.87658763      1.28735798      1.91230127
## 163      0.67050162      1.20442230     -0.95396468      1.05957037
## 164      1.52642702      0.73567430      2.10223158      1.77352271
## 165      1.20442230      1.48684468      1.52642702      0.91459156
## 166      1.34797950      1.12903457      1.20442230      1.15343724
## 167      1.56855670      1.17854682      1.91230127      1.10528634
## 168      1.12903457      1.08214564      0.21802303      1.25874673
## 169      1.66232963      2.23555842      0.99487522     -1.44946373
## 170      1.31706374      1.28735798      0.27046566      1.01596791
## 171      0.99487522      1.23113036      1.23113036      1.08214564
## 172      1.83849262      1.01596791      1.03752256      1.44946373
## 173      0.68651916      1.41400510     -0.83980946      0.93409710
## 174      1.15343724      1.77352271     -0.27046566      0.06366298
## 175      1.99828954      1.99828954      1.15343724     -0.65465430
```

```
## 176      1.77352271      0.65465430      1.44946373      2.42690063
## 177      1.25874673      1.66232963      0.08918610      0.83980946
## 178      1.10528634      1.05957037      0.20501110      1.23113036
## 179      1.08214564      1.91230127      1.10528634     -0.20501110
## 180      1.03752256      1.44946373      0.46117919      0.87658763
## 181      0.91459156      0.89542793      0.12758531      1.48684468
## 182      0.97421613      1.56855670      0.70271480      0.85805346
## 183      1.48684468      0.59282318      1.99828954      2.23555842
## 184      1.28735798      1.10528634      1.08214564      1.20442230
## 185      0.85805346      2.80216172     -0.03818128     -2.10223158
## 186      0.95396468      2.42690063      0.36416334     -1.91230127
## 187      0.71909690      1.38024023     -0.53318051      0.97421613
## 188      1.91230127      1.83849262      2.42690063      0.68651916
## 189      0.70271480      1.34797950     -0.54790615      0.95396468
## 190      0.87658763      1.15343724      0.19203379      1.12903457
## 191      1.71527720      0.99487522      1.01596791      1.38024023
## 192      1.23113036      1.61367018      0.06366298      0.82184079
## 193      0.89542793      1.71527720      0.53318051      0.80413364
## 194      1.38024023      1.25874673      1.71527720      1.03752256
## 195      0.73567430      0.83980946      0.73567430      1.28735798
## 196      0.78667510      0.78667510      0.39149488      1.99828954
## 197      0.75245638      0.85805346      0.75245638      1.31706374
##     ASM_cooc.L.ADC Contrast_cooc.L.ADC Dissimilarity_cooc.L.ADC
## 1       0.00000000          1.10528634               0.36416334
## 2      -0.16617364         -0.50406856              -0.51856960
## 3      -0.10196844          0.68651916               0.07641832
## 4      -0.12758531         -1.10528634              -1.08214564
## 5      -0.24416040         -0.31028376              -0.31028376
## 6      -0.46826666          0.78667510               0.29695946
## 7      -0.40526982          0.85805346               0.65465430
## 8      -0.01272434         -0.15328619              -0.36416334
## 9      -0.28368767          0.80413364               0.44707302
## 10     -0.17908874          0.43305527               0.05091800
## 11     -0.23107198         -0.43305527              -0.44707302
## 12     -0.31028376          0.16617364               0.03818128
## 13      0.21802303         -2.23555842              -2.80216172
## 14     -0.05091800         -0.93409710              -0.89542793
## 15      0.14042416         -1.52642702              -1.52642702
## 16     -0.14042416         -0.25729077              -0.39149488
## 17     -0.11476746         -0.32366339              -0.33710120
## 18     -0.29695946         -0.02545075              -0.21802303
## 19     -0.08280052          0.40526982               0.11476746
## 20     -0.27046566         -0.51856960              -0.54790615
## 21     -0.06366298         -0.71909690              -0.73567430
## 22     -0.21802303          0.91459156               0.59282318
## 23     -0.02545075         -0.16617364              -0.50406856
## 24     -0.25729077         -0.60806071              -0.59282318
## 25     -0.44707302          0.27046566               0.17908874
## 26     -0.33710120          0.17908874               0.06366298
## 27     -0.48967276          0.71909690               0.32366339
## 28     -0.36416334          0.39149488               0.21802303
## 29     -0.46826666          0.70271480               0.35060018
## 30      0.02545075         -0.80413364              -0.87658763
## 31     -0.08280052          0.97421613               0.63896971
## 32      0.03818128         -0.83980946              -0.83980946
```

```
## 33     -0.20501110         -0.82184079              -0.78667510
## 34     -0.43305527          0.29695946               0.20501110
## 35     -0.50406856          1.03752256               0.71909690
## 36     -0.32366339          0.01272434              -0.23107198
## 37     -0.37779383          0.15328619              -0.17908874
## 38     -0.39149488          1.52642702               0.89542793
## 39     -0.03818128         -0.47537773              -0.53318051
## 40      0.11476746         -1.34797950              -1.34797950
## 41     -0.15328619         -1.25874673              -1.20442230
## 42     -0.35060018          0.99487522               0.56275157
## 43     -0.19203379         -0.87658763              -0.80413364
## 44     -0.41912210          0.95396468               0.62344075
## 45      0.63896971          0.63896971               0.33710120
## 46      0.65465430         -0.23107198              -0.40526982
## 47      0.40526982          1.12903457               0.70271480
## 48      0.39149488          0.00000000               0.02545075
## 49      0.52586102          1.44946373               0.95396468
## 50      0.57022085         -0.91459156              -0.82184079
## 51      0.68651916         -1.41400510              -1.38024023
## 52      0.62344075         -1.23113036              -1.25874673
## 53      0.54790615         -0.62344075              -0.62344075
## 54      0.37779383          0.33710120               0.23107198
## 55      0.57022085          1.34797950               0.91459156
## 56      0.50406856          1.31706374               0.93409710
## 57      0.48967276         -0.36416334              -0.37779383
## 58      0.67050162          0.28368767              -0.15328619
## 59      0.71909690          1.23113036               0.76945312
## 60      0.95396468         -1.38024023              -1.48684468
## 61      0.47537773          0.05091800               0.01272434
## 62      0.75245638         -0.67050162              -0.71909690
## 63      0.59282318         -1.03752256              -1.23113036
## 64      0.97421613         -2.80216172              -2.42690063
## 65      0.43305527          0.19203379               0.08918610
## 66      0.52586102         -0.27046566              -0.32366339
## 67      0.41912210         -0.05091800              -0.08918610
## 68      0.36416334          0.32366339               0.15328619
## 69      0.76945312         -0.37779383              -0.56275157
## 70      0.60806071          0.44707302               0.27046566
## 71      0.87658763         -0.03818128              -0.11476746
## 72      0.89542793         -0.63896971              -0.75245638
## 73      0.82184079          0.62344075               0.53318051
## 74      1.01596791         -2.42690063              -2.23555842
## 75      0.93409710         -0.48967276              -0.46117919
## 76      0.83980946          0.83980946               0.68651916
## 77      0.85805346          0.67050162               0.28368767
## 78      0.91459156         -0.17908874              -0.27046566
## 79      0.12758531         -0.39149488              -0.57772207
## 80      0.06366298         -0.54790615              -0.60806071
## 81      0.08918610         -0.56275157              -0.63896971
## 82      0.15328619         -0.89542793              -1.12903457
## 83      0.10196844         -0.75245638              -0.65465430
## 84      0.07641832          0.25729077              -0.03818128
## 85      0.05091800         -0.06366298              -0.10196844
## 86      0.19203379         -0.70271480              -1.17854682
## 87      0.16617364         -0.53318051              -0.85805346
```

```
## 88      0.17908874         -1.77352271              -1.77352271
## 89      0.01272434          0.75245638               0.54790615
## 90     -0.60806071         -1.91230127              -1.91230127
## 91     -0.75245638         -1.15343724              -0.97421613
## 92     -0.82184079          0.56275157               0.47537773
## 93     -0.53318051         -0.19203379              -0.28368767
## 94     -0.85805346         -0.97421613              -0.95396468
## 95     -0.83980946          0.10196844              -0.02545075
## 96     -0.67050162         -1.61367018              -1.61367018
## 97     -0.73567430         -1.44946373              -1.41400510
## 98     -0.57772207         -1.56855670              -1.56855670
## 99      0.99487522         -0.65465430              -0.70271480
## 100    -0.78667510         -0.76945312              -0.67050162
## 101    -0.80413364         -0.08918610              -0.14042416
## 102    -0.89542793          0.54790615               0.46117919
## 103    -0.59282318          0.59282318               0.50406856
## 104    -0.76945312         -0.95396468              -0.93409710
## 105    -0.54790615          0.60806071               0.51856960
## 106    -0.51856960          0.11476746              -0.01272434
## 107     0.33710120          0.03818128              -0.24416040
## 108     0.46117919         -1.12903457              -0.91459156
## 109     0.32366339         -0.12758531              -0.06366298
## 110     0.44707302         -1.05957037              -1.10528634
## 111     0.78667510         -1.28735798              -1.28735798
## 112     0.31028376          0.24416040               0.12758531
## 113    -0.71909690          0.57772207               0.48967276
## 114    -0.56275157         -1.83849262              -1.83849262
## 115    -0.68651916          0.82184079               0.67050162
## 116    -0.70271480         -0.07641832              -0.12758531
## 117    -0.63896971         -0.33710120              -0.35060018
## 118    -0.65465430         -0.44707302              -0.47537773
## 119    -0.62344075         -0.24416040              -0.43305527
## 120    -1.44946373         -2.10223158              -2.10223158
## 121    -1.77352271         -1.20442230              -1.05957037
## 122    -2.10223158          0.48967276               0.39149488
## 123    -1.28735798         -0.20501110              -0.29695946
## 124    -2.42690063         -1.01596791              -1.03752256
## 125    -2.23555842          0.07641832              -0.07641832
## 126    -1.56855670         -1.71527720              -1.71527720
## 127    -1.71527720         -1.48684468              -1.44946373
## 128    -1.38024023         -1.66232963              -1.66232963
## 129    -1.01596791         -0.68651916              -0.76945312
## 130    -1.91230127         -0.78667510              -0.68651916
## 131    -1.99828954         -0.11476746              -0.20501110
## 132    -2.80216172          0.47537773               0.37779383
## 133    -1.41400510          0.51856960               0.41912210
## 134    -1.83849262         -0.99487522              -1.01596791
## 135    -1.31706374          0.53318051               0.43305527
## 136    -1.25874673          0.08918610              -0.05091800
## 137    -1.17854682          0.02545075              -0.25729077
## 138    -1.12903457         -1.17854682              -0.99487522
## 139    -1.20442230         -0.14042416              -0.16617364
## 140    -1.15343724         -1.08214564              -1.15343724
## 141    -1.10528634         -1.31706374              -1.31706374
## 142    -1.23113036          0.23107198               0.10196844
```

```
## 143    -1.66232963          0.50406856               0.40526982
## 144    -1.34797950         -1.99828954              -1.99828954
## 145    -1.61367018         -0.10196844              -0.19203379
## 146    -1.48684468         -0.35060018              -0.41912210
## 147    -1.52642702         -0.46117919              -0.48967276
## 148     1.21766776          2.80216172               2.80216172
## 149     1.30206724          0.20501110               0.87658763
## 150     1.48684468         -0.28368767               0.60806071
## 151     1.41400510         -0.01272434               0.73567430
## 152     1.25874673          0.41912210               1.05957037
## 153     1.05957037          1.61367018               1.61367018
## 154     1.30206724          2.42690063               2.23555842
## 155     1.17854682          2.23555842               2.42690063
## 156     1.15343724          0.93409710               1.17854682
## 157     1.44946373          1.48684468               1.28735798
## 158     1.52642702          2.10223158               2.10223158
## 159     2.23555842         -0.21802303               0.31028376
## 160     1.12903457          1.25874673               1.48684468
## 161     1.56855670          0.36416334               0.99487522
## 162     1.34797950          0.12758531               0.75245638
## 163     2.42690063         -0.85805346               0.00000000
## 164     1.10528634          1.38024023               1.52642702
## 165     1.21766776          1.01596791               1.20442230
## 166     1.08214564          1.17854682               1.38024023
## 167     1.03752256          1.56855670               1.56855670
## 168     1.61367018          0.89542793               1.12903457
## 169     1.38024023          1.66232963               1.66232963
## 170     1.83849262          1.20442230               1.31706374
## 171     1.91230127          0.37779383               0.97421613
## 172     1.66232963          1.77352271               1.83849262
## 173     2.80216172         -0.73567430               0.14042416
## 174     2.10223158          0.76945312               1.15343724
## 175     1.71527720          1.99828954               1.99828954
## 176     1.77352271          1.83849262               1.71527720
## 177     1.99828954          1.08214564               1.25874673
## 178     0.29695946          0.87658763               1.10528634
## 179     0.24416040          0.65465430               1.08214564
## 180     0.27046566          0.46117919               1.03752256
## 181     0.35060018          0.21802303               0.80413364
## 182     0.28368767          0.31028376               1.01596791
## 183     0.25729077          1.41400510               1.41400510
## 184     0.23107198          1.15343724               1.34797950
## 185     0.80413364          0.35060018               0.78667510
## 186     0.70271480          0.73567430               0.85805346
## 187     0.73567430         -0.57772207               0.19203379
## 188     0.20501110          1.91230127               1.91230127
## 189    -0.93409710         -0.59282318               0.16617364
## 190    -0.99487522          0.06366298               0.82184079
## 191    -1.03752256          1.71527720               1.77352271
## 192    -0.87658763          1.05957037               1.23113036
## 193    -1.08214564          0.14042416               0.83980946
## 194    -1.05957037          1.28735798               1.44946373
## 195    -0.95396468         -0.41912210               0.24416040
## 196    -0.97421613         -0.29695946               0.57772207
## 197    -0.91459156         -0.40526982               0.25729077
```

```
##     Inv_diff_cooc.L.ADC Inv_diff_norm_cooc.L.ADC IDM_cooc.L.ADC
## 1           -0.28368767              -0.67050162    -0.19203379
## 2           -0.23107198              -0.05091800    -0.25729077
## 3           -0.12758531              -0.35060018     0.00000000
## 4            0.27046566               0.31028376     0.28368767
## 5           -0.33710120              -0.17908874    -0.33710120
## 6           -0.70271480              -0.68651916    -0.67050162
## 7           -1.12903457              -0.91459156    -1.17854682
## 8            0.05091800              -0.08918610     0.06366298
## 9           -1.08214564              -0.78667510    -1.12903457
## 10          -0.16617364              -0.33710120    -0.15328619
## 11          -0.25729077              -0.12758531    -0.29695946
## 12          -0.50406856              -0.41912210    -0.48967276
## 13           0.70271480               0.60806071     0.97421613
## 14           0.15328619               0.27046566     0.08918610
## 15           0.57772207               0.51856960     0.71909690
## 16          -0.20501110              -0.11476746    -0.21802303
## 17          -0.40526982              -0.15328619    -0.44707302
## 18          -0.51856960              -0.31028376    -0.51856960
## 19          -0.11476746              -0.40526982     0.01272434
## 20           0.02545075              -0.01272434     0.02545075
## 21           0.11476746               0.10196844     0.12758531
## 22          -1.01596791              -0.87658763    -0.91459156
## 23          -0.01272434              -0.02545075    -0.03818128
## 24          -0.02545075               0.02545075    -0.02545075
## 25          -0.82184079              -0.60806071    -0.83980946
## 26          -0.62344075              -0.47537773    -0.62344075
## 27          -0.83980946              -0.71909690    -0.80413364
## 28          -0.67050162              -0.63896971    -0.63896971
## 29          -0.99487522              -0.73567430    -0.93409710
## 30           0.24416040               0.28368767     0.17908874
## 31          -1.05957037              -0.89542793    -1.03752256
## 32           0.28368767               0.24416040     0.29695946
## 33           0.12758531               0.15328619     0.10196844
## 34          -0.76945312              -0.65465430    -0.75245638
## 35          -1.25874673              -1.03752256    -1.25874673
## 36          -0.27046566              -0.25729077    -0.27046566
## 37          -0.36416334              -0.29695946    -0.32366339
## 38          -0.89542793              -1.25874673    -0.71909690
## 39          -0.10196844               0.00000000    -0.11476746
## 40           0.41912210               0.43305527     0.43305527
## 41           0.29695946               0.33710120     0.27046566
## 42          -0.85805346              -0.83980946    -0.82184079
## 43           0.23107198               0.20501110     0.24416040
## 44          -1.10528634              -0.93409710    -1.08214564
## 45          -0.68651916              -0.46117919    -0.65465430
## 46           0.19203379               0.25729077     0.25729077
## 47          -0.59282318              -0.57772207    -0.53318051
## 48          -0.46117919              -0.07641832    -0.43305527
## 49          -1.31706374              -1.12903457    -1.20442230
## 50           0.32366339               0.46117919     0.33710120
## 51           0.44707302               0.59282318     0.48967276
## 52           0.43305527               0.53318051     0.44707302
## 53           0.21802303               0.39149488     0.20501110
## 54          -0.56275157              -0.32366339    -0.54790615
```

```
## 55          -1.20442230               -0.99487522    -1.15343724
## 56          -1.23113036               -1.05957037    -1.05957037
## 57          -0.03818128                0.21802303    -0.05091800
## 58           0.16617364                0.05091800     0.32366339
## 59          -0.95396468               -0.76092727    -0.78667510
## 60           0.62344075                0.62344075     0.76945312
## 61          -0.31028376               -0.06366298    -0.28368767
## 62           0.33710120                0.41912210     0.35060018
## 63           0.46117919                0.54790615     0.51856960
## 64           0.67050162                0.63896971     0.87658763
## 65          -0.43305527               -0.14042416    -0.41912210
## 66          -0.08918610                0.19203379    -0.06366298
## 67          -0.41912210               -0.03818128    -0.39149488
## 68          -0.44707302               -0.23107198    -0.37779383
## 69           0.35060018                0.37779383     0.37779383
## 70          -0.57772207               -0.37779383    -0.56275157
## 71          -0.37779383                0.06366298    -0.36416334
## 72           0.39149488                0.47537773     0.41912210
## 73          -0.80413364               -0.44707302    -0.76945312
## 74           0.63896971                0.65465430     0.85805346
## 75          -0.06366298                0.32366339    -0.10196844
## 76          -0.97421613               -0.54790615    -0.87658763
## 77          -0.60806071               -0.27046566    -0.59282318
## 78          -0.21802303                0.16617364    -0.23107198
## 79           0.17908874                0.07641832     0.21802303
## 80           0.03818128                0.08918610     0.03818128
## 81           0.07641832                0.12758531     0.07641832
## 82           0.36416334                0.36416334     0.36416334
## 83           0.01272434                0.11476746    -0.01272434
## 84          -0.14042416               -0.24416040    -0.07641832
## 85          -0.54790615               -0.28368767    -0.60806071
## 86           0.56275157                0.40526982     0.73567430
## 87           0.51856960                0.35060018     0.63896971
## 88           0.59282318                0.56275157     0.75245638
## 89          -1.03752256               -0.82184079    -0.97421613
## 90           0.50406856                0.23107198     0.59282318
## 91          -0.07641832               -0.19203379    -0.14042416
## 92          -1.52642702               -1.28735798    -1.48684468
## 93          -0.65465430               -0.53318051    -0.70271480
## 94          -0.05091800               -0.21802303    -0.12758531
## 95          -0.71909690               -0.76092727    -0.73567430
## 96           0.47537773                0.14042416     0.54790615
## 97           0.25729077                0.03818128     0.23107198
## 98           0.48967276                0.17908874     0.56275157
## 99           0.37779383                0.44707302     0.39149488
## 100         -0.29695946               -0.36416334    -0.35060018
## 101         -0.93409710               -0.80413364    -1.10528634
## 102         -1.61367018               -1.34797950    -1.56855670
## 103         -1.44946373               -1.17854682    -1.38024023
## 104          0.00000000               -0.20501110    -0.08918610
## 105         -1.38024023               -1.10528634    -1.31706374
## 106         -0.48967276               -0.43305527    -0.50406856
## 107         -0.15328619                0.01272434    -0.16617364
## 108          0.31028376                0.48967276     0.31028376
## 109         -0.47537773               -0.10196844    -0.47537773
```

```
## 110          0.40526982                0.50406856     0.40526982
## 111          0.54790615                0.57772207     0.60806071
## 112         -0.35060018               -0.16617364    -0.31028376
## 113         -1.48684468               -1.20442230    -1.44946373
## 114          0.53318051                0.29695946     0.62344075
## 115         -1.71527720               -1.44946373    -1.61367018
## 116         -0.87658763               -0.70271480    -1.01596791
## 117         -0.63896971               -0.51856960    -0.68651916
## 118         -0.53318051               -0.50406856    -0.57772207
## 119         -0.19203379               -0.48967276    -0.17908874
## 120          0.10196844               -0.95396468     0.15328619
## 121         -0.78667510               -1.38024023    -0.95396468
## 122         -2.42690063               -2.42690063    -2.42690063
## 123         -1.66232963               -1.71527720    -1.71527720
## 124         -0.75245638               -1.48684468    -0.89542793
## 125         -1.77352271               -1.83849262    -1.77352271
## 126          0.06366298               -1.01596791     0.11476746
## 127         -0.39149488               -1.08214564    -0.46117919
## 128          0.08918610               -0.97421613     0.14042416
## 129         -0.24416040               -0.62344075    -0.24416040
## 130         -1.15343724               -1.52642702    -1.28735798
## 131         -1.91230127               -1.91230127    -1.91230127
## 132         -2.80216172               -2.80216172    -2.80216172
## 133         -2.10223158               -2.10223158    -2.10223158
## 134         -0.73567430               -1.41400510    -0.85805346
## 135         -1.99828954               -1.99828954    -1.99828954
## 136         -1.34797950               -1.56855670    -1.41400510
## 137         -0.91459156               -1.15343724    -0.99487522
## 138         -0.32366339               -0.59282318    -0.40526982
## 139         -1.28735798               -1.23113036    -1.34797950
## 140         -0.17908874               -0.56275157    -0.20501110
## 141          0.20501110               -0.39149488     0.16617364
## 142         -1.17854682               -1.31706374    -1.23113036
## 143         -2.23555842               -2.23555842    -2.23555842
## 144          0.14042416               -0.85805346     0.19203379
## 145         -1.83849262               -1.77352271    -1.83849262
## 146         -1.56855670               -1.66232963    -1.66232963
## 147         -1.41400510               -1.61367018    -1.52642702
## 148          0.65465430                0.68651916     0.46117919
## 149          1.38024023                1.71527720     1.38024023
## 150          1.61367018                2.10223158     1.61367018
## 151          1.56855670                1.83849262     1.56855670
## 152          1.31706374                1.56855670     1.25874673
## 153          0.87658763                0.85805346     0.83980946
## 154          0.71909690                0.71909690     0.47537773
## 155          0.68651916                0.70271480     0.50406856
## 156          1.15343724                1.34797950     1.15343724
## 157          1.25874673                1.08214564     1.34797950
## 158          0.76945312                0.76092727     0.65465430
## 159          2.23555842                2.23555842     2.23555842
## 160          0.99487522                1.01596791     0.99487522
## 161          1.41400510                1.66232963     1.41400510
## 162          1.66232963                1.91230127     1.66232963
## 163          2.80216172                2.42690063     2.80216172
## 164          0.93409710                0.99487522     0.89542793
```

```
## 165          1.05957037               1.31706374     1.12903457
## 166          0.95396468               1.03752256     0.91459156
## 167          0.91459156               0.93409710     0.93409710
## 168          1.44946373               1.52642702     1.48684468
## 169          0.85805346               0.83980946     0.82184079
## 170          0.97421613               1.10528634     0.95396468
## 171          1.52642702               1.77352271     1.52642702
## 172          0.78667510               0.82184079     0.67050162
## 173          2.42690063               2.80216172     2.42690063
## 174          1.10528634               1.41400510     1.08214564
## 175          0.75245638               0.78667510     0.57772207
## 176          0.83980946               0.89542793     0.80413364
## 177          1.01596791               1.25874673     1.01596791
## 178          1.28735798               1.12903457     1.28735798
## 179          1.20442230               1.15343724     1.20442230
## 180          1.23113036               1.20442230     1.23113036
## 181          1.48684468               1.48684468     1.44946373
## 182          1.17854682               1.17854682     1.17854682
## 183          1.03752256               0.91459156     1.10528634
## 184          0.89542793               0.87658763     0.78667510
## 185          1.99828954               1.61367018     1.99828954
## 186          1.91230127               1.44946373     1.91230127
## 187          2.10223158               1.99828954     2.10223158
## 188          0.73567430               0.73567430     0.53318051
## 189          1.83849262               1.38024023     1.83849262
## 190          1.08214564               0.97421613     1.03752256
## 191          0.60806071               0.67050162     0.05091800
## 192          0.82184079               0.80413364     0.70271480
## 193          1.12903457               0.95396468     1.05957037
## 194          0.80413364               0.76092727     0.68651916
## 195          1.71527720               1.23113036     1.71527720
## 196          1.34797950               1.05957037     1.31706374
## 197          1.77352271               1.28735798     1.77352271
##     IDM_norm_cooc.L.ADC Inv_var_cooc.L.ADC Correlation_cooc.L.ADC
## 1           -0.87658763        -0.24416040            -0.85805346
## 2           -0.07641832        -0.20501110            -0.57772207
## 3           -0.48967276         0.00000000             0.48967276
## 4            0.19203379         0.24416040             0.44707302
## 5           -0.16617364        -0.33710120            -0.60806071
## 6           -0.62344075        -0.70271480             0.59282318
## 7           -0.71909690        -1.10528634            -1.01596791
## 8           -0.21802303         0.10196844            -0.31028376
## 9           -0.63896971        -1.12903457            -1.61367018
## 10          -0.43305527        -0.21802303            -0.02545075
## 11          -0.11476746        -0.27046566            -0.39149488
## 12          -0.29695946        -0.47537773            -0.40526982
## 13           0.33710120         0.89542793             0.32366339
## 14           0.16617364         0.06366298             0.36416334
## 15           0.31028376         0.68651916             0.83980946
## 16          -0.17908874        -0.17908874            -0.83980946
## 17          -0.15328619        -0.32366339            -1.23113036
## 18          -0.23107198        -0.53318051            -0.93409710
## 19          -0.46117919         0.01272434            -0.47537773
## 20          -0.06366298        -0.06366298             0.53318051
## 21          -0.01272434         0.14042416             0.19203379
```

```
## 22          -0.73567430        -1.03752256             0.51856960
## 23          -0.19203379        -0.08918610            -0.76945312
## 24          -0.03818128        -0.03818128             0.40526982
## 25          -0.37779383        -0.82184079             0.43305527
## 26          -0.31028376        -0.65465430            -0.95396468
## 27          -0.59282318        -0.73567430             0.75245638
## 28          -0.50406856        -0.68651916             0.29695946
## 29          -0.57772207        -0.95396468             0.35060018
## 30           0.07641832         0.20501110            -0.89542793
## 31          -0.76945312        -1.23113036            -0.01272434
## 32           0.06366298         0.31028376            -0.41912210
## 33           0.02545075         0.08918610             0.54790615
## 34          -0.41912210        -0.97421613             0.78667510
## 35          -0.83980946        -1.20442230            -0.44707302
## 36          -0.24416040        -0.31028376             0.25729077
## 37          -0.28368767        -0.37779383             0.05091800
## 38          -1.10528634        -0.89542793            -0.35060018
## 39          -0.10196844        -0.02545075            -0.10196844
## 40           0.25729077         0.43305527            -0.97421613
## 41           0.21802303         0.28368767             0.85805346
## 42          -0.78667510        -0.85805346            -0.87658763
## 43           0.12758531         0.15328619             0.65465430
## 44          -0.80413364        -1.25874673            -0.03818128
## 45          -0.12758531        -0.71909690             0.08918610
## 46           0.35060018         0.25729077            -0.15328619
## 47          -0.33710120        -0.62344075            -0.91459156
## 48           0.29695946        -0.40526982             0.28368767
## 49          -0.82184079        -1.05957037            -0.71909690
## 50           0.51856960         0.33710120             0.68651916
## 51           0.62344075         0.48967276             0.71909690
## 52           0.59282318         0.44707302             0.63896971
## 53           0.44707302         0.16617364             0.76945312
## 54          -0.02545075        -0.50406856             0.00000000
## 55          -0.67050162        -1.08214564            -1.17854682
## 56          -0.70271480        -1.15343724            -1.44946373
## 57           0.40526982        -0.01272434             0.57772207
## 58           0.17908874         0.29695946             0.10196844
## 59          -0.44707302        -0.59282318            -0.70271480
## 60           0.60806071         0.73567430            -0.16617364
## 61           0.27046566        -0.35060018            -0.51856960
## 62           0.46117919         0.35060018            -0.29695946
## 63           0.53318051         0.50406856             0.87658763
## 64           0.63896971         0.87658763            -0.05091800
## 65           0.20501110        -0.44707302             0.62344075
## 66           0.37779383        -0.07641832             0.60806071
## 67           0.32366339        -0.39149488            -0.06366298
## 68           0.00000000        -0.41912210             0.24416040
## 69           0.41912210         0.40526982            -1.05957037
## 70          -0.08918610        -0.60806071            -1.10528634
## 71           0.39149488        -0.28368767            -1.66232963
## 72           0.56275157         0.41912210             0.67050162
## 73           0.01272434        -0.76945312            -1.08214564
## 74           0.65465430         0.80413364            -0.14042416
## 75           0.47537773        -0.11476746            -1.48684468
## 76          -0.14042416        -0.78667510            -1.20442230
```

```
## 77          0.03818128        -0.56275157            -0.80413364
## 78          0.43305527        -0.19203379            -1.71527720
## 79         -0.05091800         0.27046566            -1.12903457
## 80          0.05091800         0.02545075             0.50406856
## 81          0.10196844         0.07641832            -0.48967276
## 82          0.23107198         0.36416334            -0.63896971
## 83          0.15328619         0.03818128             0.14042416
## 84         -0.25729077        -0.10196844             0.47537773
## 85         -0.20501110        -0.63896971            -0.24416040
## 86          0.14042416         0.65465430            -1.03752256
## 87          0.08918610         0.57772207            -0.78667510
## 88          0.36416334         0.71909690            -0.07641832
## 89         -0.53318051        -0.99487522             0.27046566
## 90         -0.32366339         0.59282318            -0.23107198
## 91         -0.47537773        -0.05091800            -0.43305527
## 92         -1.08214564        -1.61367018            -1.38024023
## 93         -0.56275157        -0.67050162            -2.42690063
## 94         -0.54790615        -0.15328619             0.20501110
## 95         -0.91459156        -0.75245638             0.33710120
## 96         -0.40526982         0.54790615             0.80413364
## 97         -0.39149488         0.23107198             0.56275157
## 98         -0.36416334         0.56275157             0.82184079
## 99          0.57772207         0.37779383            -0.27046566
## 100        -0.60806071        -0.29695946             0.06366298
## 101        -0.89542793        -1.01596791            -0.36416334
## 102        -1.15343724        -1.66232963            -1.41400510
## 103        -0.95396468        -1.44946373            -1.28735798
## 104        -0.51856960        -0.12758531             0.23107198
## 105        -0.93409710        -1.31706374            -1.25874673
## 106        -0.35060018        -0.54790615             0.41912210
## 107         0.24416040        -0.16617364            -0.19203379
## 108         0.50406856         0.32366339            -0.20501110
## 109         0.28368767        -0.48967276            -1.15343724
## 110         0.48967276         0.39149488             0.31028376
## 111         0.54790615         0.62344075             0.12758531
## 112         0.11476746        -0.43305527             0.15328619
## 113        -1.01596791        -1.48684468            -1.31706374
## 114        -0.27046566         0.60806071            -0.21802303
## 115        -1.12903457        -1.56855670            -1.52642702
## 116        -0.85805346        -0.93409710            -0.33710120
## 117        -0.68651916        -0.57772207            -1.34797950
## 118        -0.65465430        -0.51856960            -0.50406856
## 119        -0.75245638        -0.14042416            -0.32366339
## 120        -1.28735798         0.17908874            -0.59282318
## 121        -1.44946373        -0.80413364            -0.73567430
## 122        -2.42690063        -2.42690063            -2.10223158
## 123        -1.56855670        -1.71527720            -2.80216172
## 124        -1.52642702        -0.87658763            -0.11476746
## 125        -1.91230127        -1.77352271             0.02545075
## 126        -1.41400510         0.11476746             0.70271480
## 127        -1.38024023        -0.46117919             0.39149488
## 128        -1.34797950         0.12758531             0.73567430
## 129        -0.97421613        -0.25729077            -0.62344075
## 130        -1.61367018        -1.17854682            -0.28368767
## 131        -1.83849262        -1.91230127            -0.68651916
```

```
## 132         -2.80216172        -2.80216172            -2.23555842
## 133         -2.10223158        -2.10223158            -1.83849262
## 134         -1.48684468        -0.83980946            -0.08918610
## 135         -1.99828954        -1.99828954            -1.77352271
## 136         -1.31706374        -1.41400510             0.07641832
## 137         -1.20442230        -0.91459156            -0.53318051
## 138         -1.03752256        -0.36416334            -0.54790615
## 139         -1.17854682        -1.34797950            -1.56855670
## 140         -1.05957037        -0.23107198             0.01272434
## 141         -0.99487522         0.21802303            -0.17908874
## 142         -1.23113036        -1.28735798            -0.12758531
## 143         -2.23555842        -2.23555842            -1.91230127
## 144         -1.25874673         0.19203379            -0.56275157
## 145         -1.77352271        -1.83849262            -0.67050162
## 146         -1.71527720        -1.52642702            -1.99828954
## 147         -1.66232963        -1.38024023            -0.82184079
## 148          0.70271480         0.51856960             0.93409710
## 149          1.77352271         1.38024023             1.91230127
## 150          2.23555842         1.61367018             1.99828954
## 151          1.99828954         1.56855670             1.77352271
## 152          1.61367018         1.25874673             2.10223158
## 153          1.01596791         0.85805346             1.25874673
## 154          0.73567430         0.47537773             0.11476746
## 155          0.71909690         0.46117919            -0.37779383
## 156          1.48684468         1.15343724             1.61367018
## 157          1.23113036         1.34797950             1.28735798
## 158          0.82184079         0.82184079             0.95396468
## 159          2.10223158         2.23555842             1.12903457
## 160          1.31706374         0.97421613             0.99487522
## 161          1.66232963         1.41400510             1.05957037
## 162          1.83849262         1.66232963             2.80216172
## 163          2.42690063         2.80216172             1.23113036
## 164          1.25874673         0.91459156             1.71527720
## 165          1.41400510         1.10528634             1.66232963
## 166          1.34797950         0.95396468             1.20442230
## 167          1.03752256         0.93409710             1.38024023
## 168          1.52642702         1.48684468             0.37779383
## 169          0.97421613         0.78667510             0.17908874
## 170          1.44946373         0.99487522            -0.65465430
## 171          1.91230127         1.52642702             1.83849262
## 172          1.05957037         0.67050162             0.21802303
## 173          2.80216172         2.42690063             1.15343724
## 174          1.71527720         1.05957037            -0.46117919
## 175          0.95396468         0.63896971             0.03818128
## 176          1.08214564         0.83980946             0.89542793
## 177          1.56855670         1.01596791            -0.75245638
## 178          0.99487522         1.31706374             0.16617364
## 179          1.10528634         1.17854682             1.52642702
## 180          1.15343724         1.23113036             1.01596791
## 181          1.28735798         1.44946373             0.97421613
## 182          1.20442230         1.20442230             1.31706374
## 183          0.91459156         1.08214564             1.48684468
## 184          0.93409710         0.76945312             1.08214564
## 185          1.17854682         1.99828954             0.46117919
## 186          1.12903457         1.83849262             0.91459156
```

```
## 187          1.38024023         2.10223158             1.17854682
## 188          0.78667510         0.53318051             1.41400510
## 189          0.89542793         1.91230127             1.10528634
## 190          0.80413364         1.12903457             1.03752256
## 191          0.67050162         0.05091800            -0.25729077
## 192          0.75245638         0.75245638            -0.99487522
## 193          0.76945312         1.03752256             1.34797950
## 194          0.68651916         0.70271480             1.44946373
## 195          0.83980946         1.71527720             2.23555842
## 196          0.85805346         1.28735798             1.56855670
## 197          0.87658763         1.77352271             2.42690063
##     Autocorrelation_.L.ADC Tendency_cooc.L.ADC Shade_.L.ADC
## 1              -0.71909690          0.67050162   1.41400510
## 2               0.57772207         -0.75245638  -1.17854682
## 3              -1.91230127          1.17854682   2.23555842
## 4              -0.39149488         -0.63896971  -0.37779383
## 5              -0.29695946         -0.60806071  -0.44707302
## 6               0.62344075          1.38024023  -1.56855670
## 7               1.01596791          0.28368767  -1.20442230
## 8               0.83980946         -0.23107198  -1.83849262
## 9               1.31706374         -0.05091800  -1.66232963
## 10             -1.71527720          0.68651916   1.71527720
## 11              0.54790615         -0.56275157  -0.99487522
## 12             -0.85805346          0.23107198   0.57772207
## 13             -2.80216172         -1.71527720   0.53318051
## 14              0.36416334         -0.67050162   0.00000000
## 15             -0.95396468         -0.39149488   0.71909690
## 16              0.44707302         -0.65465430  -1.08214564
## 17              0.73567430         -1.28735798  -0.83980946
## 18             -0.70271480         -0.46117919  -0.14042416
## 19             -1.99828954          0.41912210   1.10528634
## 20             -0.65465430          0.17908874  -1.05957037
## 21             -0.14042416         -0.37779383   0.28368767
## 22             -0.91459156          1.34797950   1.77352271
## 23             -2.10223158         -0.47537773   0.93409710
## 24              0.03818128         -0.28368767  -0.15328619
## 25              0.65465430          0.71909690  -1.28735798
## 26             -0.73567430         -0.33710120  -0.32366339
## 27              0.41912210          1.48684468  -0.53318051
## 28             -0.68651916          0.87658763   1.23113036
## 29              0.01272434          0.95396468   0.12758531
## 30             -2.42690063         -1.38024023   0.29695946
## 31             -1.44946373          0.93409710   1.52642702
## 32             -0.87658763         -1.03752256   0.56275157
## 33             -0.89542793         -0.24416040  -0.67050162
## 34             -0.16617364          1.25874673  -1.61367018
## 35              0.28368767          0.82184079  -1.25874673
## 36              0.40526982          0.37779383  -0.17908874
## 37             -0.46117919          0.35060018  -0.82184079
## 38              0.27046566          1.56855670   0.95396468
## 39             -1.08214564         -0.36416334   0.85805346
## 40             -1.20442230         -2.23555842  -0.31028376
## 41             -0.75245638          0.03818128  -1.23113036
## 42             -1.83849262          0.44707302   1.05957037
## 43             -1.34797950         -0.25729077  -0.91459156
```

```
## 44             -1.48684468          0.91459156   1.48684468
## 45             -1.38024023          0.80413364   1.31706374
## 46             -0.21802303         -0.29695946   0.78667510
## 47              0.10196844          0.63896971  -0.73567430
## 48             -1.31706374          0.33710120   0.47537773
## 49             -0.40526982          1.12903457   1.56855670
## 50              0.00000000         -0.35060018  -0.12758531
## 51             -1.12903457         -0.89542793  -0.39149488
## 52             -0.41912210         -0.62344075  -0.46117919
## 53             -0.67050162          0.25729077  -0.65465430
## 54             -0.93409710          0.60806071   1.08214564
## 55             -1.10528634          0.65465430   1.28735798
## 56              0.17908874          0.47537773  -0.16617364
## 57              1.03752256          0.29695946  -1.38024023
## 58             -0.82184079          0.48967276   1.15343724
## 59             -1.52642702          0.85805346   1.61367018
## 60             -2.23555842         -1.66232963   0.33710120
## 61             -1.41400510         -0.06366298  -0.80413364
## 62             -0.78667510         -0.80413364   0.36416334
## 63             -0.83980946          0.24416040   0.02545075
## 64             -0.20501110         -2.80216172  -0.43305527
## 65             -1.28735798          0.83980946   1.25874673
## 66              0.23107198          0.32366339   0.83980946
## 67             -0.31028376          0.11476746  -0.19203379
## 68             -0.19203379          0.76945312  -0.36416334
## 69             -0.43305527         -1.12903457   0.11476746
## 70              1.10528634         -0.21802303  -0.76945312
## 71             -0.12758531         -1.05957037  -0.63896971
## 72             -0.15328619          0.14042416   0.62344075
## 73             -0.48967276         -0.07641832   0.27046566
## 74              0.07641832         -2.42690063  -0.47537773
## 75              0.56275157         -1.61367018  -0.75245638
## 76              0.95396468          0.10196844  -1.12903457
## 77             -1.56855670          0.31028376   0.87658763
## 78              0.16617364         -1.44946373  -0.68651916
## 79             -0.44707302         -1.15343724   0.10196844
## 80              0.76945312          0.05091800  -1.10528634
## 81              0.11476746         -0.76945312  -0.89542793
## 82             -1.05957037         -1.41400510   0.48967276
## 83              0.21802303         -0.48967276   0.06366298
## 84             -1.77352271          0.78667510   1.44946373
## 85             -0.32366339          0.02545075   0.46117919
## 86              1.41400510         -1.56855670  -1.31706374
## 87              1.38024023         -1.01596791  -1.77352271
## 88             -0.01272434         -1.77352271  -0.54790615
## 89              0.75245638          0.97421613  -2.23555842
## 90             -0.03818128         -1.91230127  -0.57772207
## 91             -0.25729077         -1.20442230  -0.21802303
## 92             -0.54790615         -0.12758531   0.21802303
## 93              0.15328619         -1.48684468  -0.70271480
## 94              0.33710120         -0.70271480  -0.02545075
## 95             -0.08918610          0.57772207  -1.44946373
## 96             -0.99487522         -0.41912210   0.68651916
## 97             -1.15343724         -0.91459156  -0.40526982
## 98             -0.97421613         -0.40526982   0.70271480
```

```
## 99              -0.76945312          -0.78667510   0.37779383
## 100              0.20501110          -0.50406856   0.05091800
## 101             -0.35060018           0.00000000   0.43305527
## 102             -0.56275157          -0.14042416   0.20501110
## 103             -0.51856960          -0.10196844   0.24416040
## 104              0.35060018          -0.68651916  -0.01272434
## 105             -0.50406856          -0.08918610   0.25729077
## 106             -0.07641832           0.59282318  -1.41400510
## 107             -1.23113036           0.16617364   1.03752256
## 108             -0.24416040          -1.17854682  -0.20501110
## 109              0.25729077          -0.97421613  -0.95396468
## 110              0.06366298          -0.85805346  -0.48967276
## 111             -1.61367018          -1.08214564   0.51856960
## 112              0.68651916           0.51856960   0.08918610
## 113             -0.53318051          -0.11476746   0.23107198
## 114             -0.02545075          -1.83849262  -0.56275157
## 115              0.93409710           0.07641832  -1.15343724
## 116             -0.33710120           0.01272434   0.44707302
## 117              0.71909690          -1.31706374  -0.85805346
## 118              0.53318051          -0.57772207  -1.01596791
## 119             -0.23107198          -0.31028376   0.76945312
## 120             -0.06366298          -2.10223158  -0.60806071
## 121             -0.28368767          -1.25874673  -0.24416040
## 122             -0.62344075          -0.19203379   0.15328619
## 123              0.14042416          -1.52642702  -0.71909690
## 124              0.31028376          -0.73567430  -0.05091800
## 125             -0.11476746           0.54790615  -1.52642702
## 126             -1.03752256          -0.44707302   0.65465430
## 127             -1.17854682          -0.93409710  -0.41912210
## 128             -1.01596791          -0.43305527   0.67050162
## 129             -0.80413364          -0.82184079   0.35060018
## 130              0.19203379          -0.51856960   0.03818128
## 131             -0.37779383          -0.02545075   0.40526982
## 132             -0.63896971          -0.20501110   0.14042416
## 133             -0.59282318          -0.16617364   0.17908874
## 134              0.32366339          -0.71909690  -0.03818128
## 135             -0.57772207          -0.15328619   0.19203379
## 136             -0.10196844           0.56275157  -1.48684468
## 137             -1.25874673           0.15328619   1.01596791
## 138             -0.27046566          -1.23113036  -0.23107198
## 139              0.24416040          -0.99487522  -0.97421613
## 140              0.05091800          -0.87658763  -0.50406856
## 141             -1.66232963          -1.10528634   0.50406856
## 142              0.67050162           0.50406856   0.07641832
## 143             -0.60806071          -0.17908874   0.16617364
## 144             -0.05091800          -1.99828954  -0.59282318
## 145             -0.36416334          -0.01272434   0.41912210
## 146              0.70271480          -1.34797950  -0.87658763
## 147              0.51856960          -0.59282318  -1.03752256
## 148              0.91459156           2.80216172   2.42690063
## 149              1.28735798           0.89542793   0.54790615
## 150              0.39149488           0.40526982  -0.06366298
## 151              0.89542793           0.62344075  -0.10196844
## 152              0.78667510           1.31706374  -0.29695946
## 153              0.50406856           1.77352271   1.66232963
```

```
## 154             0.43305527          1.83849262   1.99828954
## 155             1.56855670          1.61367018   0.39149488
## 156             2.10223158          1.41400510  -1.99828954
## 157             0.60806071          1.66232963   1.83849262
## 158             0.08918610          2.23555842   2.80216172
## 159            -0.47537773         -0.32366339   0.89542793
## 160             0.12758531          1.05957037  -0.78667510
## 161             0.63896971          0.43305527   0.91459156
## 162             0.59282318          1.28735798   0.60806071
## 163             1.08214564         -0.95396468  -0.08918610
## 164             0.29695946          2.10223158   1.91230127
## 165             1.66232963          1.52642702   1.34797950
## 166             0.99487522          1.20442230   0.32366339
## 167             1.12903457          1.91230127   0.01272434
## 168             0.87658763          0.21802303   0.75245638
## 169             2.23555842          0.99487522  -0.62344075
## 170             1.17854682          0.27046566  -0.28368767
## 171             1.15343724          1.23113036   1.12903457
## 172             0.82184079          1.03752256   0.82184079
## 173             1.34797950         -0.83980946  -0.11476746
## 174             1.77352271         -0.27046566  -0.51856960
## 175             1.99828954          1.15343724  -1.71527720
## 176             0.02545075          1.44946373   1.38024023
## 177             1.52642702          0.08918610  -0.33710120
## 178             0.85805346          0.20501110   0.73567430
## 179             1.91230127          1.10528634  -1.34797950
## 180             1.44946373          0.46117919  -0.93409710
## 181             0.46117919          0.12758531   0.99487522
## 182             1.61367018          0.70271480   0.63896971
## 183            -0.17908874          1.99828954   2.10223158
## 184             0.97421613          1.08214564   0.97421613
## 185             2.80216172         -0.03818128  -1.91230127
## 186             2.42690063          0.36416334  -2.42690063
## 187             1.25874673         -0.53318051  -0.25729077
## 188             1.83849262          2.42690063  -2.80216172
## 189             1.23113036         -0.54790615  -0.27046566
## 190             1.05957037          0.19203379   0.31028376
## 191             0.80413364          1.01596791   0.80413364
## 192             1.48684468          0.06366298  -0.35060018
## 193             1.71527720          0.53318051   0.59282318
## 194             1.20442230          1.71527720  -2.10223158
## 195             0.47537773          0.73567430   1.17854682
## 196             0.37779383          0.39149488  -0.07641832
## 197             0.48967276          0.75245638   1.20442230
##     Prominence_cooc.L.ADC  IC1_.L.ADC  IC2_.L.ADC Coarseness_vdif_.L.ADC
## 1              1.12903457 -0.93409710  0.50406856             0.47537773
## 2             -0.62344075  0.60806071 -0.28368767             0.06366298
## 3              2.23555842 -0.07641832  0.20501110            -0.17908874
## 4             -0.91459156  0.16617364 -0.06366298            -0.31028376
## 5             -0.60806071  0.70271480 -0.33710120            -0.05091800
## 6              1.17854682 -0.37779383  0.44707302            -0.07003923
## 7              0.37779383  0.24416040  0.00000000             0.14042416
## 8              0.15328619  0.31028376 -0.14042416            -0.07003923
## 9              0.41912210 -0.16617364  0.29695946             0.60806071
## 10             1.41400510 -0.10196844  0.23107198            -0.03818128
```

```
## 11            -0.39149488  0.80413364 -0.48967276            -0.12758531
## 12             0.21802303  1.01596791 -0.80413364            -0.29695946
## 13            -0.65465430  0.39149488 -0.53318051            -0.39149488
## 14            -0.71909690  0.14042416 -0.02545075            -0.15328619
## 15            -0.44707302 -0.29695946  0.32366339            -0.50406856
## 16            -0.37779383  0.99487522 -0.89542793            -0.23107198
## 17            -1.20442230  1.05957037 -1.01596791             0.05091800
## 18            -0.35060018  1.56855670 -1.66232963            -0.41912210
## 19             0.62344075  0.82184079 -0.39149488            -0.35060018
## 20             0.24416040  0.28368767 -0.10196844            -0.47537773
## 21            -0.43305527  0.67050162 -0.29695946            -0.40526982
## 22             1.71527720 -1.56855670  0.68651916             1.41400510
## 23             0.31028376  0.89542793 -0.82184079            -0.21802303
## 24            -0.33710120  0.48967276 -0.20501110            -0.33710120
## 25             0.63896971  0.06366298  0.16617364            -0.01272434
## 26            -0.16617364  1.66232963 -1.71527720            -0.46117919
## 27             1.38024023 -0.35060018  0.41912210             0.03818128
## 28             1.01596791 -0.05091800  0.28368767             0.02545075
## 29             0.91459156 -0.08918610  0.33710120             0.07641832
## 30            -0.82184079  1.10528634 -1.15343724            -0.24416040
## 31             1.28735798 -1.44946373  0.63896971             1.61367018
## 32            -0.36416334  1.15343724 -1.34797950            -0.37779383
## 33            -0.23107198  0.12758531  0.03818128            -0.48967276
## 34             1.20442230 -0.99487522  0.54790615             0.50406856
## 35             0.87658763  0.29695946  0.05091800             0.01272434
## 36             0.28368767  0.23107198  0.01272434            -0.28368767
## 37             0.51856960  0.57772207 -0.21802303            -0.36416334
## 38             1.61367018 -1.20442230  0.56275157             0.56275157
## 39             0.23107198  0.97421613 -0.87658763            -0.44707302
## 40            -2.23555842  1.25874673 -1.52642702            -0.16617364
## 41             0.14042416 -0.31028376  0.35060018            -0.51856960
## 42             0.60806071  0.85805346 -0.50406856            -0.11476746
## 43            -0.25729077  0.02545075  0.06366298            -0.43305527
## 44             1.25874673 -1.48684468  0.62344075             1.56855670
## 45             1.03752256 -1.08214564  0.59282318             1.71527720
## 46             0.19203379  0.54790615  0.07641832             0.68651916
## 47             0.89542793  0.00000000  0.40526982             0.73567430
## 48             0.33710120  1.03752256 -0.17908874             0.46117919
## 49             1.56855670 -1.25874673  0.70271480             1.66232963
## 50            -0.63896971  0.51856960  0.14042416             0.32366339
## 51            -1.44946373  0.43305527  0.10196844             0.31028376
## 52            -0.97421613  0.46117919  0.15328619             0.28368767
## 53             0.27046566  0.40526982  0.21802303             0.25072018
## 54             0.85805346  0.73567430  0.08918610             0.67050162
## 55             1.05957037 -1.17854682  0.65465430             1.52642702
## 56             0.59282318 -0.97421613  0.60806071             1.31706374
## 57             0.32366339  0.37779383  0.24416040             0.51856960
## 58             0.76945312  0.95396468 -0.19203379             0.35060018
## 59             1.44946373 -1.66232963  0.71909690             1.77352271
## 60            -0.83980946  1.61367018 -1.10528634             0.18555738
## 61            -0.14042416  1.77352271 -1.41400510             0.25072018
## 62            -0.68651916  1.34797950 -0.70271480             0.37779383
## 63            -0.08918610 -0.43305527  0.51856960             0.43305527
## 64            -2.42690063  0.91459156 -0.32366339             0.33710120
## 65             1.08214564  0.08918610  0.36416334             0.70271480
```

```
## 66            0.43305527  0.35060018  0.25729077            0.57772207
## 67           -0.21802303  1.44946373 -0.67050162            0.36416334
## 68            0.95396468  1.12903457 -0.16617364            0.27046566
## 69           -1.01596791  1.08214564 -0.31028376            0.71909690
## 70           -0.12758531 -0.36416334  0.48967276            1.34797950
## 71           -1.12903457  2.10223158 -1.91230127            0.65465430
## 72            0.35060018  0.78667510  0.12758531            0.44707302
## 73            0.12758531  1.48684468 -0.44707302            0.75245638
## 74           -2.80216172  1.28735798 -0.60806071            0.48967276
## 75           -1.71527720  2.23555842 -1.99828954            0.63896971
## 76           -0.10196844  0.10196844  0.37779383            1.12903457
## 77            0.53318051 -0.14042416  0.47537773            1.08214564
## 78           -1.56855670  2.80216172 -2.10223158            0.62344075
## 79           -1.03752256  0.71909690 -0.46117919            0.18555738
## 80           -0.27046566  0.11476746  0.11476746           -0.14042416
## 81           -0.80413364  1.17854682 -0.97421613           -0.32366339
## 82           -0.53318051  1.38024023 -1.48684468           -0.25729077
## 83           -0.28368767  0.65465430 -0.24416040           -0.10196844
## 84            1.23113036 -0.46117919  0.46117919            0.29695946
## 85           -0.02545075  0.83980946 -0.36416334           -0.02545075
## 86           -0.99487522  0.93409710 -0.91459156           -0.20501110
## 87           -0.24416040  0.76945312 -0.51856960           -0.19203379
## 88           -1.77352271  0.62344075 -0.40526982           -0.27046566
## 89            1.15343724 -0.20501110  0.39149488            0.20501110
## 90           -1.91230127 -0.01272434 -0.65465430           -0.85805346
## 91           -1.34797950  0.63896971 -1.44946373           -0.89542793
## 92            0.07641832  0.27046566 -0.76945312           -0.63896971
## 93           -1.61367018  1.31706374 -2.42690063           -0.62344075
## 94           -0.75245638 -0.27046566 -0.15328619           -0.76945312
## 95            0.73567430 -0.11476746 -0.11476746           -0.80413364
## 96           -0.47537773 -0.63896971  0.17908874           -0.91459156
## 97           -1.48684468 -0.28368767 -0.05091800           -0.83980946
## 98           -0.46117919 -0.62344075  0.19203379           -0.87658763
## 99           -0.67050162  1.52642702 -0.68651916            0.54790615
## 100          -0.29695946  0.01272434 -0.35060018           -0.75245638
## 101          -0.05091800  0.15328619 -0.56275157           -0.70271480
## 102           0.06366298  0.20501110 -0.78667510           -0.68651916
## 103           0.10196844  0.44707302 -0.73567430           -0.56275157
## 104          -0.73567430 -0.25729077 -0.12758531           -0.73567430
## 105           0.11476746  0.53318051 -0.71909690           -0.54790615
## 106           0.75245638  0.21802303 -0.01272434           -0.53318051
## 107           0.48967276  1.23113036 -0.41912210            0.39149488
## 108          -1.31706374  1.71527720 -1.20442230            0.15328619
## 109          -1.05957037  1.83849262 -1.83849262            0.41912210
## 110          -1.15343724  0.87658763 -0.23107198            0.23107198
## 111          -0.85805346  1.20442230 -0.63896971            0.16617364
## 112           0.40526982  0.32366339  0.27046566            0.59282318
## 113           0.08918610  0.36416334 -0.75245638           -0.60806071
## 114          -1.83849262  0.03818128 -0.59282318           -0.78667510
## 115          -0.11476746 -0.48967276  0.31028376            0.00000000
## 116          -0.03818128  0.19203379 -0.54790615           -0.67050162
## 117          -1.23113036  0.56275157 -1.28735798           -0.57772207
## 118          -0.40526982  0.17908874 -0.62344075           -0.65465430
## 119           0.17908874 -0.24416040 -0.07641832           -0.59282318
## 120          -2.10223158 -0.89542793 -1.08214564           -2.10223158
```

```
## 121          -1.41400510 -0.47537773 -1.77352271            -2.42690063
## 122           0.01272434 -0.65465430 -1.31706374            -1.44946373
## 123          -1.66232963 -0.12758531 -2.80216172            -1.41400510
## 124          -0.78667510 -1.03752256 -0.47537773            -1.77352271
## 125           0.70271480 -0.95396468 -0.37779383            -1.91230127
## 126          -0.50406856 -1.34797950 -0.08918610            -2.80216172
## 127          -1.52642702 -1.15343724 -0.27046566            -1.99828954
## 128          -0.48967276 -1.31706374 -0.03818128            -2.23555842
## 129          -0.70271480 -0.03818128 -1.12903457            -0.99487522
## 130          -0.31028376 -0.87658763 -0.83980946            -1.71527720
## 131          -0.07641832 -0.75245638 -0.95396468            -1.61367018
## 132           0.00000000 -0.70271480 -1.38024023            -1.56855670
## 133           0.03818128 -0.57772207 -1.23113036            -1.31706374
## 134          -0.76945312 -1.01596791 -0.43305527            -1.66232963
## 135           0.05091800 -0.51856960 -1.17854682            -1.28735798
## 136           0.71909690 -0.68651916 -0.25729077            -1.25874673
## 137           0.47537773 -0.17908874 -0.85805346            -1.12903457
## 138          -1.38024023  0.05091800 -1.56855670            -1.23113036
## 139          -1.08214564  0.41912210 -2.23555842            -1.08214564
## 140          -1.17854682 -0.33710120 -0.57772207            -1.17854682
## 141          -0.87658763 -0.21802303 -1.05957037            -1.20442230
## 142           0.39149488 -0.60806071  0.02545075            -0.97421613
## 143           0.02545075 -0.59282318 -1.25874673            -1.38024023
## 144          -1.99828954 -0.85805346 -0.99487522            -1.83849262
## 145          -0.06366298 -0.71909690 -0.93409710            -1.52642702
## 146          -1.25874673 -0.50406856 -1.61367018            -1.34797950
## 147          -0.41912210 -0.73567430 -1.03752256            -1.48684468
## 148           2.80216172 -2.42690063  2.42690063             2.42690063
## 149           0.29695946 -0.67050162  1.34797950             0.93409710
## 150          -0.54790615 -0.78667510  1.25874673             0.91459156
## 151          -0.15328619 -0.76945312  1.38024023             0.87658763
## 152           0.93409710 -0.80413364  1.48684468             0.83079160
## 153           1.66232963 -0.41912210  1.23113036             1.28735798
## 154           1.83849262 -2.23555842  2.23555842             2.23555842
## 155           1.34797950 -2.10223158  2.10223158             1.99828954
## 156           0.97421613 -0.82184079  1.52642702             1.15343724
## 157           1.52642702 -0.15328619  1.10528634             0.97421613
## 158           2.42690063 -2.80216172  2.80216172             2.80216172
## 159          -0.01272434  0.75245638  0.78667510             0.77803527
## 160           0.65465430  1.41400510  0.76945312             0.83079160
## 161           0.25729077  0.47537773  0.85805346             1.01596791
## 162           0.78667510 -1.77352271  1.99828954             1.03752256
## 163          -1.10528634 -0.23107198  1.03752256             0.95396468
## 164           1.91230127 -1.12903457  1.61367018             1.38024023
## 165           1.10528634 -0.83980946  1.56855670             1.17854682
## 166           0.57772207  0.59282318  0.87658763             0.99487522
## 167           1.77352271 -0.02545075  1.12903457             0.85805346
## 168          -0.19203379 -0.06366298  1.05957037             1.44946373
## 169           0.67050162 -1.71527720  1.91230127             2.10223158
## 170          -0.32366339  1.91230127  0.67050162             1.25874673
## 171           0.99487522 -0.39149488  1.31706374             1.05957037
## 172           0.83980946  0.68651916  0.97421613             1.48684468
## 173          -1.28735798  0.25729077  0.91459156             1.10528634
## 174          -0.89542793  1.99828954  0.57772207             1.23113036
## 175           0.68651916 -1.10528634  1.66232963             1.91230127
```

```
## 176            1.31706374 -1.38024023  1.83849262             1.83849262
## 177           -0.57772207  2.42690063  0.53318051             1.20442230
## 178           -0.20501110 -0.44707302  0.95396468             0.77803527
## 179            0.54790615 -1.05957037  1.28735798             0.21802303
## 180            0.16617364  0.07641832  0.80413364            -0.08918610
## 181            0.36416334  0.50406856  0.73567430             0.10196844
## 182            0.50406856 -0.53318051  1.08214564             0.40526982
## 183            2.10223158 -1.83849262  1.77352271             0.89542793
## 184            0.80413364 -0.32366339  1.01596791             0.53318051
## 185           -0.17908874 -0.19203379  0.82184079             0.11476746
## 186            0.56275157 -0.40526982  0.93409710             0.12758531
## 187           -0.93409710 -0.56275157  0.99487522             0.08918610
## 188            1.99828954 -1.41400510  1.71527720             0.80413364
## 189           -0.95396468 -1.23113036  0.89542793            -1.03752256
## 190           -0.51856960 -0.54790615  0.75245638            -1.10528634
## 191            0.82184079 -0.91459156  0.83980946            -0.82184079
## 192           -0.59282318  0.33710120  0.43305527            -0.71909690
## 193            0.20501110 -1.52642702  1.15343724            -0.93409710
## 194            1.48684468 -1.28735798  1.17854682            -0.95396468
## 195            0.44707302 -1.99828954  1.41400510            -1.15343724
## 196           -0.56275157 -1.61367018  1.20442230            -1.01596791
## 197            0.46117919 -1.91230127  1.44946373            -1.05957037
##     Contrast_vdif_.L.ADC Busyness_vdif_.L.ADC Complexity_vdif_.L.ADC
## 1             1.10528634          -1.05957037             0.56275157
## 2            -0.31028376          -0.99487522            -0.85805346
## 3             0.33710120           0.24416040             0.85805346
## 4            -0.95396468           0.16617364            -1.05957037
## 5            -0.15328619          -0.50406856            -0.65465430
## 6             0.83980946          -0.76945312             0.68651916
## 7             0.68651916          -1.25874673             0.12758531
## 8             0.15328619          -0.91459156            -0.80413364
## 9             0.91459156          -1.71527720            -0.36416334
## 10            0.57772207          -0.17908874             0.76945312
## 11           -0.39149488          -0.65465430            -0.53318051
## 12            0.05091800           0.35060018             0.31028376
## 13           -1.38024023           1.34797950            -1.66232963
## 14           -0.63896971          -0.32366339            -1.31706374
## 15           -1.12903457           1.28735798            -0.91459156
## 16           -0.50406856          -0.48967276            -0.02545075
## 17           -0.21802303          -0.95396468            -1.15343724
## 18           -0.24416040           0.65465430             0.33710120
## 19            0.48967276           0.70271480             0.93409710
## 20           -0.35060018           0.99487522            -0.33710120
## 21           -0.87658763           0.40526982            -0.03818128
## 22            1.48684468          -1.61367018            -0.32366339
## 23           -0.40526982           0.02545075             0.25729077
## 24           -0.60806071           0.15328619            -0.21802303
## 25            0.50406856          -0.82184079             0.11476746
## 26           -0.10196844           0.95396468             0.63896971
## 27            0.93409710          -0.59282318             0.65465430
## 28            0.70271480          -0.36416334             0.44707302
## 29            0.85805346          -0.68651916             0.14042416
## 30           -0.91459156           0.11476746            -0.78667510
## 31            1.56855670          -1.52642702            -0.87658763
## 32           -1.17854682           0.47537773            -0.14042416
```

```
## 33          -0.80413364          0.91459156          -0.17908874
## 34           0.76945312         -1.34797950           0.02545075
## 35           0.67050162         -0.78667510           0.83980946
## 36          -0.03818128         -0.02545075           0.28368767
## 37           0.16617364          0.60806071           0.10196844
## 38           1.44946373         -1.31706374           0.73567430
## 39          -0.48967276          0.93409710           0.08918610
## 40          -1.10528634         -0.12758531          -1.56855670
## 41          -0.89542793          1.17854682          -0.71909690
## 42           0.99487522          0.05091800           0.70271480
## 43          -0.75245638          0.87658763          -0.70271480
## 44           1.52642702         -1.56855670          -0.89542793
## 45           1.41400510         -1.12903457          -1.28735798
## 46           0.10196844         -0.53318051          -0.11476746
## 47           0.82184079         -0.89542793           0.87658763
## 48           0.21802303          0.21802303          -0.16617364
## 49           1.91230127         -1.28735798           0.35060018
## 50          -0.59282318          0.57772207          -0.83980946
## 51          -0.70271480          0.76945312          -2.23555842
## 52          -0.93409710          0.67050162          -1.08214564
## 53          -0.43305527          1.31706374          -0.10196844
## 54           0.65465430         -0.21802303           0.27046566
## 55           1.66232963         -1.01596791          -0.07641832
## 56           1.34797950         -1.38024023           0.32366339
## 57          -0.05091800         -0.41912210          -0.57772207
## 58           0.53318051          0.62344075           0.54790615
## 59           1.83849262         -1.23113036          -0.63896971
## 60          -1.66232963          1.99828954          -0.62344075
## 61           0.08918610          1.44946373           0.29695946
## 62          -0.57772207          0.17908874          -0.29695946
## 63          -0.46117919          0.23107198          -1.25874673
## 64          -1.71527720          0.32366339          -1.61367018
## 65           0.62344075         -0.20501110          -0.05091800
## 66           0.35060018         -0.14042416          -1.10528634
## 67           0.01272434          0.31028376           0.01272434
## 68           0.36416334          0.82184079           0.80413364
## 69          -0.07641832         -0.60806071          -1.48684468
## 70           1.12903457         -1.44946373          -1.23113036
## 71          -0.19203379         -0.19203379          -0.20501110
## 72          -0.67050162          1.71527720          -0.08918610
## 73           0.54790615         -0.31028376           0.53318051
## 74          -1.34797950          0.53318051          -2.10223158
## 75          -0.27046566         -0.16617364          -1.12903457
## 76           1.08214564         -1.10528634          -0.23107198
## 77           1.05957037         -0.71909690          -0.35060018
## 78          -0.20501110         -0.07641832          -0.73567430
## 79          -0.16617364         -0.83980946          -1.52642702
## 80          -0.41912210         -0.15328619          -0.50406856
## 81          -0.99487522          1.66232963          -0.06366298
## 82          -1.25874673          0.51856960          -0.51856960
## 83          -0.83980946         -0.37779383          -0.46117919
## 84           0.56275157         -0.43305527           0.36416334
## 85           0.02545075         -0.28368767           0.24416040
## 86          -0.71909690         -0.23107198          -0.82184079
## 87          -0.65465430         -0.27046566          -0.19203379
```

```
## 88          -1.41400510          0.46117919           -1.71527720
## 89           0.87658763         -1.03752256            0.71909690
## 90          -1.91230127          0.37779383           -1.83849262
## 91          -1.44946373          0.83980946           -0.39149488
## 92           0.39149488         -0.80413364            0.47537773
## 93          -0.32366339         -0.25729077           -0.75245638
## 94          -0.78667510         -0.57772207           -1.38024023
## 95           0.06366298         -0.05091800            0.06366298
## 96          -1.31706374          1.23113036           -0.95396468
## 97          -1.05957037          0.71909690           -2.42690063
## 98          -1.28735798          1.25874673           -0.93409710
## 99          -0.54790615          0.20501110           -0.28368767
## 100         -1.03752256         -0.62344075           -0.47537773
## 101         -0.08918610         -0.47537773            0.21802303
## 102          0.37779383         -0.85805346            0.46117919
## 103          0.41912210         -0.73567430            0.50406856
## 104         -0.76945312         -0.51856960           -1.34797950
## 105          0.46117919         -0.70271480            0.51856960
## 106          0.12758531          0.01272434            0.07641832
## 107          0.11476746          0.08918610            0.17908874
## 108         -1.15343724          0.97421613           -0.37779383
## 109         -0.01272434         -0.08918610           -0.59282318
## 110         -1.08214564          0.54790615           -0.67050162
## 111         -1.01596791          1.15343724           -1.01596791
## 112          0.60806071         -0.39149488           -0.43305527
## 113          0.40526982         -0.75245638            0.48967276
## 114         -1.77352271          0.39149488           -1.77352271
## 115          1.03752256         -2.23555842           -0.24416040
## 116         -0.06366298         -0.44707302            0.23107198
## 117         -0.29695946         -1.17854682           -1.17854682
## 118         -0.47537773         -0.93409710           -0.54790615
## 119          0.00000000         -0.97421613           -0.12758531
## 120         -2.80216172          0.10196844           -1.99828954
## 121         -2.23555842          0.73567430           -0.41912210
## 122          0.25729077         -1.99828954            0.39149488
## 123         -0.62344075         -0.87658763           -0.76945312
## 124         -1.23113036         -1.48684468           -1.44946373
## 125         -0.17908874         -0.33710120            0.03818128
## 126         -2.10223158          1.03752256           -0.99487522
## 127         -1.56855670          0.63896971           -2.80216172
## 128         -1.99828954          1.05957037           -0.97421613
## 129         -0.97421613          0.00000000           -0.31028376
## 130         -1.52642702         -1.66232963           -0.48967276
## 131         -0.28368767         -1.20442230            0.19203379
## 132          0.23107198         -2.10223158            0.37779383
## 133          0.28368767         -1.83849262            0.41912210
## 134         -1.20442230         -1.41400510           -1.41400510
## 135          0.29695946         -1.77352271            0.43305527
## 136         -0.11476746         -0.24416040            0.05091800
## 137         -0.14042416         -0.06366298            0.16617364
## 138         -1.83849262          0.78667510           -0.40526982
## 139         -0.23107198         -0.46117919           -0.60806071
## 140         -1.61367018          0.29695946           -0.68651916
## 141         -1.48684468          1.01596791           -1.03752256
## 142          0.44707302         -1.08214564           -0.44707302
```

```
## 143          0.27046566          -1.91230127           0.40526982
## 144         -2.42690063           0.14042416          -1.91230127
## 145         -0.25729077          -1.15343724           0.20501110
## 146         -0.56275157          -2.80216172          -1.20442230
## 147         -0.82184079          -2.42690063          -0.56275157
## 148          2.80216172          -0.56275157           1.83849262
## 149          0.31028376           1.20442230           0.95396468
## 150          0.19203379           1.52642702          -0.25729077
## 151          0.03818128           1.41400510           0.82184079
## 152          0.47537773           1.91230127           1.34797950
## 153          1.38024023           0.36416334           1.66232963
## 154          2.23555842          -0.29695946           1.41400510
## 155          2.10223158          -0.63896971           1.77352271
## 156          0.80413364           0.07641832           1.08214564
## 157          1.23113036           1.38024023           2.23555842
## 158          2.42690063          -0.54790615           1.03752256
## 159         -0.68651916           2.80216172           1.05957037
## 160          1.01596791           2.10223158           1.71527720
## 161          0.32366339           0.68651916           1.23113036
## 162          0.43305527           0.75245638           0.62344075
## 163         -0.73567430           0.85805346           0.15328619
## 164          1.31706374           0.41912210           1.48684468
## 165          1.15343724           0.50406856           0.78667510
## 166          0.89542793           0.80413364           1.52642702
## 167          1.17854682           1.56855670           2.80216172
## 168          0.78667510          -0.01272434           0.59282318
## 169          1.99828954          -0.67050162           0.67050162
## 170          0.73567430           0.43305527           1.28735798
## 171          0.20501110           2.42690063           1.38024023
## 172          1.25874673           0.19203379           2.10223158
## 173         -0.44707302           1.12903457          -0.15328619
## 174          0.63896971           0.44707302           0.75245638
## 175          1.77352271          -0.40526982           1.25874673
## 176          1.71527720          -0.03818128           1.20442230
## 177          0.71909690           0.56275157           1.01596791
## 178          0.75245638          -0.11476746           0.57772207
## 179          0.51856960           0.48967276           1.12903457
## 180         -0.02545075           2.23555842           1.44946373
## 181         -0.33710120           1.10528634           1.10528634
## 182          0.07641832           0.12758531           1.15343724
## 183          1.28735798           0.06366298           1.91230127
## 184          0.95396468           0.25729077           1.61367018
## 185          0.17908874           0.33710120           0.97421613
## 186          0.24416040           0.27046566           1.31706374
## 187         -0.51856960           1.08214564           0.00000000
## 188          1.61367018          -0.35060018           2.42690063
## 189         -0.85805346           0.89542793          -0.01272434
## 190         -0.53318051           1.61367018           1.17854682
## 191          1.20442230          -0.10196844           1.99828954
## 192          0.59282318           0.28368767           0.99487522
## 193          0.14042416           0.03818128           0.60806071
## 194          0.97421613           0.59282318           1.56855670
## 195         -0.37779383           1.77352271           0.89542793
## 196         -0.12758531           1.48684468          -0.27046566
## 197         -0.36416334           1.83849262           0.91459156
```

```
##     Strength_vdif_.L.ADC SRE_align.L.ADC LRE_align.L.ADC GLNU_align.L.ADC
## 1             1.38024023      0.01908716     -0.51856960      -1.31706374
## 2             0.62344075     -0.02545075     -0.43305527      -0.59282318
## 3             0.83980946     -0.31028376     -0.06366298      -0.28368767
## 4            -0.70271480     -0.57772207      0.15328619       0.27046566
## 5             0.28368767      0.05091800     -0.48967276      -0.51856960
## 6             0.59282318      0.20501110     -0.87658763      -0.78667510
## 7             0.89542793      0.31028376     -1.12903457      -1.20442230
## 8             0.12758531     -0.36416334      0.01272434      -0.50406856
## 9             0.99487522      0.28368767     -1.17854682      -1.38024023
## 10            0.95396468     -0.33710120     -0.05091800      -0.65465430
## 11            0.10196844      0.00000000     -0.46117919      -0.36416334
## 12           -0.44707302     -0.10196844     -0.33710120       0.08918610
## 13           -0.31028376     -1.05957037      0.65465430       0.83980946
## 14           -0.10196844     -0.28368767     -0.14042416      -0.10196844
## 15           -1.23113036     -0.89542793      0.56275157       1.34797950
## 16           -0.08918610     -0.17908874     -0.25729077       0.00000000
## 17            0.27046566      0.07641832     -0.63896971      -0.54790615
## 18           -1.10528634     -0.06366298     -0.37779383       0.47537773
## 19           -0.29695946     -0.44707302      0.10196844       0.16617364
## 20           -1.52642702     -0.53318051      0.12758531       0.82184079
## 21           -0.75245638     -0.51856960      0.14042416       0.43305527
## 22            1.99828954      0.23761110     -0.99487522      -1.91230127
## 23            0.56275157     -0.35060018     -0.10196844      -0.05091800
## 24           -0.73567430     -0.43305527      0.00000000       0.28368767
## 25            0.57772207      0.15328619     -0.70271480      -0.73567430
## 26           -1.48684468     -0.01272434     -0.44707302       0.63896971
## 27            0.78667510      0.11476746     -0.73567430      -1.05957037
## 28            0.80413364      0.03818128     -0.57772207      -1.01596791
## 29            0.76945312      0.16617364     -0.89542793      -1.12903457
## 30            0.00000000     -0.47537773      0.08918610       0.14042416
## 31            1.83849262      0.23761110     -1.08214564      -2.10223158
## 32           -0.65465430     -0.63896971      0.20501110       0.56275157
## 33           -1.17854682     -0.67050162      0.24416040       0.93409710
## 34            1.23113036      0.12758531     -0.67050162      -1.28735798
## 35            0.60806071      0.33710120     -1.23113036      -1.03752256
## 36           -0.33710120     -0.19203379     -0.21802303       0.07641832
## 37           -0.87658763     -0.21802303     -0.16617364       0.32366339
## 38            1.31706374      0.19203379     -0.76945312      -1.56855670
## 39           -1.08214564     -0.39149488     -0.02545075       0.80413364
## 40           -0.16617364     -0.65465430      0.19203379       0.11476746
## 41           -1.56855670     -0.68651916      0.27046566       1.15343724
## 42            0.23107198      0.10196844     -0.68651916      -0.63896971
## 43           -1.12903457     -0.71909690      0.33710120       0.87658763
## 44            1.77352271      0.17908874     -1.10528634      -2.23555842
## 45            1.66232963      0.54790615     -0.91459156      -1.83849262
## 46            0.71909690      0.21802303      0.05091800      -0.60806071
## 47            0.91459156      0.50406856     -0.59282318      -1.17854682
## 48           -0.19203379      0.44707302     -0.40526982      -0.23107198
## 49            1.71527720      0.62344075     -1.38024023      -2.42690063
## 50           -0.83980946     -0.03818128      0.21802303       0.41912210
## 51           -1.20442230     -0.37779383      0.41912210       0.53318051
## 52           -1.15343724     -0.23107198      0.39149488       0.78667510
## 53           -1.91230127     -0.07641832      0.28368767       1.01596791
## 54            0.65465430      0.48967276     -0.60806071      -0.75245638
```

```
## 55          1.48684468     0.60806071    -1.15343724     -1.99828954
## 56          1.41400510     0.57772207    -1.01596791     -1.77352271
## 57         -0.06366298     0.32366339    -0.03818128     -0.32366339
## 58         -0.62344075     0.06366298     0.25729077      0.23107198
## 59          1.91230127     0.63896971    -1.44946373     -2.80216172
## 60         -2.10223158    -0.82184079     0.62344075      2.10223158
## 61         -1.99828954     0.36416334    -0.15328619      0.85805346
## 62         -0.23107198     0.01908716     0.16617364      0.20501110
## 63         -0.35060018    -0.24416040     0.40526982      0.17908874
## 64         -0.71909690    -0.85805346     0.63896971      0.68651916
## 65          0.75245638     0.46117919    -0.39149488     -0.76945312
## 66         -0.02545075     0.35060018    -0.19203379     -0.48967276
## 67         -0.67050162     0.40526982    -0.35060018      0.12758531
## 68         -1.34797950     0.39149488    -0.24416040      0.46117919
## 69          0.67050162     0.25729077     0.02545075     -0.67050162
## 70          1.25874673     0.53318051    -0.78667510     -1.71527720
## 71         -0.17908874     0.51856960    -0.54790615     -0.27046566
## 72         -2.42690063    -0.15328619     0.43305527      1.83849262
## 73          0.54790615     0.56275157    -0.75245638     -0.80413364
## 74         -0.91459156    -0.70271480     0.60806071      0.67050162
## 75         -0.37779383     0.41912210    -0.17908874     -0.16617364
## 76          1.08214564     0.65465430    -1.20442230     -1.44946373
## 77          1.20442230     0.59282318    -0.80413364     -1.41400510
## 78         -0.39149488     0.47537773    -0.36416334     -0.06366298
## 79          0.63896971    -0.16617364    -0.07641832     -0.68651916
## 80         -0.36416334    -0.29695946     0.03818128      0.15328619
## 81         -2.80216172    -0.41218607     0.11476746      1.77352271
## 82         -0.68651916    -0.60806071     0.31028376      0.65465430
## 83          0.01272434    -0.05091800    -0.27046566     -0.01272434
## 84          1.10528634    -0.12758531    -0.20501110     -1.10528634
## 85          0.20501110     0.08918610    -0.56275157     -0.40526982
## 86         -0.53318051    -0.87658763     0.53318051      0.37779383
## 87         -0.32366339    -0.80413364     0.47537773      0.36416334
## 88         -0.93409710    -0.93409710     0.59282318      0.76945312
## 89          0.93409710     0.27046566    -0.85805346     -1.23113036
## 90         -0.97421613    -1.20442230     0.54790615      0.73567430
## 91         -1.66232963    -0.91459156     0.06366298      1.10528634
## 92          0.48967276    -0.41218607    -1.52642702     -0.87658763
## 93         -0.40526982    -0.46117919    -0.71909690     -0.07641832
## 94         -0.12758531    -0.83980946    -0.32366339     -0.12758531
## 95         -0.47537773    -0.75245638    -0.47537773      0.03818128
## 96         -1.28735798    -1.17854682     0.50406856      1.28735798
## 97         -1.31706374    -1.01596791     0.29695946      0.51856960
## 98         -1.25874673    -1.08214564     0.51856960      1.31706374
## 99         -0.21802303     0.14042416     0.17908874      0.21802303
## 100        -0.01272434    -0.73567430    -0.53318051     -0.02545075
## 101         0.17908874    -0.62344075    -0.83980946     -0.43305527
## 102         0.47537773    -0.48967276    -1.56855670     -0.89542793
## 103         0.51856960    -0.25729077    -1.41400510     -0.83980946
## 104        -0.11476746    -0.78667510    -0.31028376     -0.11476746
## 105         0.53318051    -0.14042416    -1.34797950     -0.82184079
## 106        -0.46117919    -0.27046566    -0.29695946      0.05091800
## 107        -0.05091800     0.29695946    -0.11476746     -0.17908874
## 108        -1.61367018    -0.08918610     0.23107198      1.12903457
## 109        -0.43305527     0.43305527    -0.50406856     -0.20501110
```

```
## 110          -0.85805346     -0.20501110      0.35060018       0.60806071
## 111          -1.03752256     -0.54790615      0.48967276       0.99487522
## 112           0.35060018      0.37779383     -0.28368767      -0.70271480
## 113           0.50406856     -0.32366339     -1.48684468      -0.85805346
## 114          -0.95396468     -1.12903457      0.57772207       0.75245638
## 115           1.03752256     -0.11476746     -1.83849262      -1.48684468
## 116           0.19203379     -0.56275157     -0.82184079      -0.41912210
## 117           0.24416040     -0.50406856     -0.95396468      -0.56275157
## 118           0.08918610     -0.59282318     -0.62344075      -0.37779383
## 119           0.70271480     -0.76945312     -0.23107198      -0.62344075
## 120          -1.01596791     -2.80216172      0.44707302       0.70271480
## 121          -1.83849262     -1.91230127     -0.41912210       1.05957037
## 122           0.40526982     -1.34797950     -2.42690063      -0.97421613
## 123          -0.41912210     -1.38024023     -1.66232963      -0.08918610
## 124          -0.15328619     -1.83849262     -1.05957037      -0.15328619
## 125          -0.51856960     -1.71527720     -1.25874673       0.01272434
## 126          -1.41400510     -2.42690063      0.36416334       1.23113036
## 127          -1.44946373     -1.99828954     -0.01272434       0.50406856
## 128          -1.38024023     -2.10223158      0.37779383       1.25874673
## 129          -0.24416040     -1.03752256     -0.12758531       0.19203379
## 130          -0.03818128     -1.66232963     -1.31706374      -0.03818128
## 131           0.15328619     -1.61367018     -1.77352271      -0.46117919
## 132           0.39149488     -1.41400510     -2.80216172      -0.99487522
## 133           0.43305527     -1.25874673     -2.10223158      -0.93409710
## 134          -0.14042416     -1.77352271     -1.03752256      -0.14042416
## 135           0.44707302     -1.15343724     -1.99828954      -0.91459156
## 136          -0.50406856     -1.28735798     -0.97421613       0.02545075
## 137          -0.07641832     -0.99487522     -0.65465430      -0.19203379
## 138          -1.77352271     -1.10528634     -0.08918610       1.08214564
## 139          -0.48967276     -0.95396468     -1.28735798      -0.21802303
## 140          -0.89542793     -1.23113036      0.07641832       0.59282318
## 141          -1.05957037     -1.48684468      0.32366339       0.97421613
## 142           0.33710120     -0.97421613     -0.93409710      -0.71909690
## 143           0.41912210     -1.31706374     -2.23555842      -0.95396468
## 144          -0.99487522     -2.23555842      0.46117919       0.71909690
## 145           0.16617364     -1.52642702     -1.71527720      -0.44707302
## 146           0.21802303     -1.44946373     -1.91230127      -0.57772207
## 147           0.07641832     -1.56855670     -1.61367018      -0.39149488
## 148           2.42690063      2.23555842      0.70271480      -1.61367018
## 149          -0.20501110      1.17854682      1.34797950       0.95396468
## 150          -0.56275157      0.97421613      1.61367018       1.20442230
## 151          -0.54790615      1.03752256      1.52642702       1.56855670
## 152          -0.78667510      1.12903457      1.41400510       1.66232963
## 153           1.15343724      1.66232963      0.85805346      -0.29695946
## 154           2.23555842      2.10223158      0.73567430      -1.52642702
## 155           2.10223158      1.91230127      0.75245638      -1.34797950
## 156           0.82184079      1.34797950      1.17854682       0.24416040
## 157           0.06366298      1.23113036      1.38024023       0.62344075
## 158           2.80216172      2.42690063      0.68651916      -1.66232963
## 159          -0.82184079      0.82184079      2.42690063       2.80216172
## 160          -0.80413364      1.41400510      1.12903457       1.61367018
## 161           0.46117919      1.20442230      1.31706374       0.57772207
## 162           0.36416334      1.01596791      1.56855670       0.54790615
## 163           0.02545075      0.78667510      2.80216172       1.44946373
## 164           1.28735798      1.56855670      0.93409710      -0.31028376
```

```
## 165          0.85805346      1.38024023      1.08214564       0.06366298
## 166          0.05091800      1.48684468      0.97421613       0.44707302
## 167         -0.63896971      1.44946373      1.03752256       1.03752256
## 168          1.17854682      1.28735798      1.20442230      -0.24416040
## 169          1.61367018      1.77352271      0.80413364      -1.25874673
## 170          0.68651916      1.71527720      0.89542793       0.25729077
## 171         -1.71527720      1.08214564      1.66232963       2.42690063
## 172          1.05957037      1.83849262      0.82184079      -0.33710120
## 173         -0.25729077      0.87658763      2.23555842       1.41400510
## 174          0.31028376      1.52642702      1.10528634       0.29695946
## 175          1.44946373      2.80216172      0.71909690      -1.15343724
## 176          1.56855670      1.99828954      0.78667510      -1.08214564
## 177          0.29695946      1.61367018      0.95396468       0.35060018
## 178          1.12903457      1.05957037      1.15343724      -0.25729077
## 179          0.32366339      0.99487522      1.23113036       0.48967276
## 180         -2.23555842      0.94398431      1.28735798       2.23555842
## 181          0.03818128      0.89542793      1.48684468       1.38024023
## 182          0.87658763      1.15343724      1.01596791       0.39149488
## 183          1.52642702      1.10528634      1.05957037      -0.47537773
## 184          0.97421613      1.25874673      0.87658763       0.10196844
## 185          0.11476746      0.76945312      1.91230127       0.91459156
## 186          0.37779383      0.83980946      1.71527720       0.89542793
## 187         -0.27046566      0.73567430      2.10223158       1.52642702
## 188          1.34797950      1.31706374      0.76945312      -0.53318051
## 189         -0.28368767      0.67050162      1.99828954       1.48684468
## 190         -0.76945312      0.75245638      1.25874673       1.71527720
## 191          1.01596791      0.94398431      0.67050162      -0.35060018
## 192          0.25729077      0.91459156      0.83980946       0.33710120
## 193          0.73567430      0.80413364      0.99487522       0.31028376
## 194          0.14042416      0.85805346      0.91459156       0.40526982
## 195         -0.59282318      0.68651916      1.77352271       1.91230127
## 196         -0.60806071      0.71909690      1.44946373       1.17854682
## 197         -0.57772207      0.70271480      1.83849262       1.99828954
##     RLNU_align.L.ADC RP_align.L.ADC LGRE_align.L.ADC HGRE_align.L.ADC
## 1        -1.52642702     0.05091800      -0.06366298      -0.36416334
## 2        -0.75245638    -0.02545075      -0.39149488       0.41912210
## 3        -0.28368767    -0.28368767       0.10196844      -1.99828954
## 4         0.29695946    -0.59282318      -0.12758531      -0.47537773
## 5        -0.57772207     0.03818128      -0.23107198      -0.35060018
## 6        -0.51856960     0.24416040      -0.40526982       0.65465430
## 7        -1.23113036     0.36416334      -0.37779383       0.89542793
## 8        -0.56275157    -0.36416334      -0.51856960       0.67050162
## 9        -1.38024023     0.37779383      -0.24416040       1.34797950
## 10       -0.71909690    -0.33710120      -0.05091800      -1.56855670
## 11       -0.43305527     0.02545075      -0.25729077       0.39149488
## 12        0.17908874    -0.06366298      -0.10196844      -0.76945312
## 13        0.37779383    -1.38024023       0.05091800      -2.80216172
## 14       -0.12758531    -0.25729077      -0.47537773       0.35060018
## 15        1.25874673    -0.97421613      -0.50406856      -1.03752256
## 16       -0.03818128    -0.15328619      -0.17908874       0.40526982
## 17       -0.97421613     0.10196844      -0.48967276       0.54790615
## 18        0.68651916    -0.05091800       0.07641832      -0.83980946
## 19        0.24416040    -0.48967276      -0.01272434      -1.77352271
## 20        0.95396468    -0.56275157       0.62344075      -0.68651916
## 21        0.53318051    -0.57772207      -0.44707302      -0.05091800
```

```
## 22       -1.83849262     0.28368767       0.28368767      -0.73567430
## 23       -0.11476746    -0.29695946      -0.03818128      -2.10223158
## 24        0.41912210    -0.44707302      -0.33710120       0.03818128
## 25       -0.54790615     0.17908874      -0.31028376       0.50406856
## 26        0.87658763    -0.01272434       0.54790615      -0.97421613
## 27       -0.67050162     0.16617364      -0.19203379       0.24416040
## 28       -0.73567430     0.06366298      -0.08918610      -0.46117919
## 29       -1.03752256     0.23107198      -0.29695946       0.05091800
## 30       -0.05091800    -0.50406856      -0.11476746      -2.23555842
## 31       -2.23555842     0.31028376       0.47537773      -1.17854682
## 32        0.51856960    -0.65465430      -0.46117919      -0.87658763
## 33        1.28735798    -0.63896971       0.23107198      -1.01596791
## 34       -1.25874673     0.14042416       0.17908874      -0.19203379
## 35       -0.63896971     0.39149488      -0.14042416       0.23107198
## 36        0.20501110    -0.16617364      -0.36416334       0.43305527
## 37        0.54790615    -0.23107198       0.85805346      -0.70271480
## 38       -1.34797950     0.21802303      -0.07641832       0.25729077
## 39        0.78667510    -0.40526982      -0.02545075      -1.41400510
## 40       -0.31028376    -0.62344075      -0.43305527      -1.31706374
## 41        1.44946373    -0.71909690       0.11476746      -0.99487522
## 42       -0.53318051     0.12758531       0.14042416      -1.38024023
## 43        0.93409710    -0.76945312       0.67050162      -1.34797950
## 44       -2.42690063     0.27046566       0.36416334      -1.20442230
## 45       -2.10223158     0.54790615       0.89542793      -1.25874673
## 46       -0.68651916     0.11476746       0.43305527      -0.02545075
## 47       -1.17854682     0.50406856       0.80413364       0.21802303
## 48        0.01272434     0.46117919       0.59282318      -1.28735798
## 49       -1.91230127     0.62344075       0.83980946      -0.21802303
## 50        0.60806071    -0.14042416       0.32366339       0.02545075
## 51        0.59282318    -0.51856960       0.37779383      -1.44946373
## 52        0.80413364    -0.43305527       0.51856960      -0.67050162
## 53        1.48684468    -0.19203379       0.91459156      -0.71909690
## 54       -0.59282318     0.48967276       0.68651916      -0.85805346
## 55       -1.99828954     0.60806071       0.87658763      -0.75245638
## 56       -1.77352271     0.57772207       0.82184079       0.11476746
## 57       -0.10196844     0.20501110       0.33710120       0.91459156
## 58        0.28368767    -0.11476746       0.40526982      -0.44707302
## 59       -2.80216172     0.63896971       0.95396468      -0.95396468
## 60        1.61367018    -0.91459156       0.70271480      -2.42690063
## 61        1.31706374     0.25729077       1.71527720      -1.66232963
## 62        0.05091800    -0.08918610       0.39149488      -0.80413364
## 63        0.25729077    -0.41912210       0.50406856      -0.89542793
## 64        0.36416334    -0.95396468       0.29695946      -0.24416040
## 65       -0.65465430     0.44707302       0.76945312      -1.15343724
## 66       -0.50406856     0.29695946       0.35060018       0.27046566
## 67        0.21802303     0.40526982       0.41912210      -0.31028376
## 68        0.89542793     0.35060018       1.10528634      -0.20501110
## 69       -1.12903457     0.15328619       0.46117919      -0.32366339
## 70       -1.71527720     0.53318051       0.65465430       0.97421613
## 71       -0.32366339     0.51856960       0.63896971      -0.17908874
## 72        1.99828954    -0.35060018       0.71909690      -0.23107198
## 73       -0.76945312     0.56275157       0.73567430      -0.48967276
## 74        0.40526982    -0.80413364       0.53318051      -0.01272434
## 75       -0.29695946     0.41912210       0.56275157       0.44707302
## 76       -1.44946373     0.65465430       0.75245638       0.78667510
```

```
## 77       -1.41400510     0.59282318       0.97421613      -1.61367018
## 78       -0.19203379     0.47537773       0.57772207       0.15328619
## 79       -1.15343724    -0.21802303      -0.16617364      -0.33710120
## 80        0.19203379    -0.31028376      -0.32366339       0.62344075
## 81        1.91230127    -0.46117919      -0.21802303       0.06366298
## 82        0.43305527    -0.67050162      -0.20501110      -1.23113036
## 83       -0.06366298    -0.03818128      -0.28368767       0.10196844
## 84       -1.08214564    -0.10196844       0.24416040      -1.71527720
## 85       -0.36416334     0.08918610      -0.15328619      -0.37779383
## 86        0.08918610    -0.89542793      -0.41912210       1.28735798
## 87        0.11476746    -0.83980946      -0.27046566       1.17854682
## 88        0.50406856    -0.99487522      -0.35060018      -0.11476746
## 89       -1.05957037     0.32366339       0.01272434       0.57772207
## 90        0.47537773    -1.56855670      -0.85805346      -0.14042416
## 91        1.05957037    -0.85805346      -0.83980946      -0.27046566
## 92       -0.83980946    -0.17908874      -0.68651916      -0.54790615
## 93       -0.20501110    -0.32366339      -0.59282318       0.14042416
## 94       -0.15328619    -0.78667510      -0.87658763       0.32366339
## 95        0.15328619    -0.68651916      -0.54790615      -0.07641832
## 96        1.20442230    -1.41400510      -0.89542793      -1.08214564
## 97        0.57772207    -1.01596791      -0.76945312      -1.48684468
## 98        1.23113036    -1.34797950      -0.80413364      -1.05957037
## 99        0.06366298     0.00000000       0.60806071      -0.78667510
## 100      -0.07641832    -0.60806071      -0.82184079       0.08918610
## 101      -0.39149488    -0.54790615      -0.73567430      -0.40526982
## 102      -0.85805346    -0.27046566      -0.75245638      -0.56275157
## 103      -0.80413364    -0.07641832      -0.57772207      -0.51856960
## 104      -0.14042416    -0.75245638      -0.78667510       0.33710120
## 105      -0.78667510     0.01272434      -0.56275157      -0.50406856
## 106       0.16617364    -0.24416040       0.16617364      -0.06366298
## 107      -0.01272434     0.19203379       0.48967276      -0.91459156
## 108       1.08214564    -0.20501110       0.21802303      -0.25729077
## 109      -0.25729077     0.43305527       0.31028376       0.20501110
## 110       0.65465430    -0.37779383       0.27046566       0.01272434
## 111       0.83980946    -0.70271480       0.44707302      -1.83849262
## 112      -0.60806071     0.33710120       0.25729077       0.71909690
## 113      -0.82184079    -0.12758531      -0.62344075      -0.53318051
## 114       0.48967276    -1.44946373      -0.71909690      -0.12758531
## 115      -1.48684468     0.07641832      -0.60806071       0.76945312
## 116      -0.37779383    -0.47537773      -0.67050162      -0.39149488
## 117      -0.99487522    -0.39149488      -0.70271480       0.53318051
## 118      -0.44707302    -0.53318051      -0.63896971       0.37779383
## 119      -0.70271480    -0.73567430      -0.65465430      -0.03818128
## 120       0.44707302    -2.80216172      -2.23555842      -0.16617364
## 121       1.01596791    -1.91230127      -2.10223158      -0.29695946
## 122      -0.93409710    -1.12903457      -1.52642702      -0.62344075
## 123      -0.21802303    -1.23113036      -1.38024023       0.12758531
## 124      -0.17908874    -1.83849262      -2.42690063       0.29695946
## 125       0.12758531    -1.66232963      -1.28735798      -0.10196844
## 126       1.15343724    -2.23555842      -2.80216172      -1.12903457
## 127       0.56275157    -1.99828954      -1.77352271      -1.52642702
## 128       1.17854682    -2.10223158      -1.91230127      -1.10528634
## 129       0.03818128    -1.05957037      -0.97421613      -0.82184079
## 130      -0.08918610    -1.61367018      -1.99828954       0.07641832
## 131      -0.41912210    -1.52642702      -1.66232963      -0.43305527
```

```
## 132      -0.95396468    -1.20442230      -1.71527720      -0.63896971
## 133      -0.89542793    -1.08214564      -1.34797950      -0.59282318
## 134      -0.16617364    -1.77352271      -1.83849262       0.31028376
## 135      -0.87658763    -1.03752256      -1.31706374      -0.57772207
## 136       0.14042416    -1.17854682      -1.25874673      -0.08918610
## 137      -0.02545075    -0.93409710      -1.10528634      -0.93409710
## 138       1.03752256    -1.15343724      -1.23113036      -0.28368767
## 139      -0.27046566    -0.82184079      -1.15343724       0.19203379
## 140       0.63896971    -1.25874673      -1.17854682       0.00000000
## 141       0.82184079    -1.71527720      -1.12903457      -1.91230127
## 142      -0.62344075    -0.87658763      -1.20442230       0.70271480
## 143      -0.91459156    -1.10528634      -1.41400510      -0.60806071
## 144       0.46117919    -2.42690063      -1.61367018      -0.15328619
## 145      -0.40526982    -1.31706374      -1.48684468      -0.41912210
## 146      -1.01596791    -1.28735798      -1.56855670       0.51856960
## 147      -0.46117919    -1.48684468      -1.44946373       0.36416334
## 148      -1.56855670     2.23555842       1.83849262       1.12903457
## 149       1.41400510     1.12903457       1.01596791       1.41400510
## 150       1.38024023     0.91459156       1.08214564       0.47537773
## 151       1.52642702     0.95396468       1.25874673       0.83980946
## 152       2.10223158     1.08214564       1.99828954       0.82184079
## 153       0.02545075     1.66232963       1.44946373       0.73567430
## 154      -1.61367018     2.10223158       1.91230127       0.80413364
## 155      -1.31706374     1.91230127       1.77352271       1.52642702
## 156       0.35060018     1.31706374       1.03752256       2.10223158
## 157       0.85805346     1.15343724       1.15343724       0.93409710
## 158      -1.66232963     2.42690063       2.10223158       0.63896971
## 159       2.23555842     0.76945312       1.48684468      -0.65465430
## 160       1.83849262     1.34797950       2.80216172       0.17908874
## 161       0.62344075     1.20442230       1.12903457       0.75245638
## 162       0.76945312     0.97421613       1.23113036       0.68651916
## 163       0.91459156     0.75245638       0.99487522       1.08214564
## 164       0.00000000     1.56855670       1.66232963       0.56275157
## 165       0.07641832     1.38024023       1.05957037       1.66232963
## 166       0.75245638     1.48684468       1.17854682       1.03752256
## 167       1.56855670     1.44946373       2.42690063       1.15343724
## 168      -0.47537773     1.28735798       1.20442230       1.01596791
## 169      -1.28735798     1.77352271       1.41400510       2.23555842
## 170       0.23107198     1.71527720       1.38024023       1.20442230
## 171       2.80216172     0.99487522       1.52642702       1.10528634
## 172      -0.23107198     1.83849262       1.56855670       0.87658763
## 173       0.97421613     0.83980946       1.28735798       1.38024023
## 174       0.27046566     1.52642702       1.31706374       1.77352271
## 175      -1.20442230     2.80216172       1.61367018       1.99828954
## 176      -1.10528634     1.99828954       2.23555842       0.28368767
## 177       0.32366339     1.61367018       1.34797950       1.61367018
## 178      -0.48967276     1.05957037       0.19203379       0.99487522
## 179       0.73567430     1.03752256       0.03818128       1.91230127
## 180       2.42690063     0.93409710       0.12758531       1.44946373
## 181       0.99487522     0.89542793       0.15328619       0.48967276
## 182       0.39149488     1.23113036       0.06366298       1.48684468
## 183      -0.35060018     1.17854682       0.93409710       0.16617364
## 184       0.10196844     1.25874673       0.20501110       0.95396468
## 185       0.67050162     0.78667510       0.00000000       2.80216172
## 186       0.70271480     0.82184079       0.08918610       2.42690063
```

```
## 187       1.12903457     0.73567430       0.02545075       1.25874673
## 188      -0.33710120     1.41400510       0.78667510       1.83849262
## 189       1.10528634     0.67050162      -1.03752256       1.23113036
## 190       1.66232963     0.80413364      -1.01596791       1.05957037
## 191      -0.24416040     1.10528634      -0.93409710       0.85805346
## 192       0.31028376     1.01596791      -0.91459156       1.56855670
## 193       0.33710120     0.85805346      -1.05957037       1.71527720
## 194       0.71909690     0.87658763      -0.53318051       1.31706374
## 195       1.71527720     0.68651916      -1.08214564       0.59282318
## 196       1.34797950     0.71909690      -0.95396468       0.46117919
## 197       1.77352271     0.70271480      -0.99487522       0.60806071
##     LGSRE_align.L.ADC HGSRE_align.L.ADC LGHRE_align.L.ADC HGLRE_align.L.ADC
## 1         -0.06366298       -0.25729077       -0.10196844       -0.48967276
## 2         -0.39149488        0.41912210       -0.40526982        0.41912210
## 3          0.07641832       -1.99828954        0.08918610       -1.99828954
## 4         -0.14042416       -0.47537773       -0.08918610       -0.37779383
## 5         -0.23107198       -0.31028376       -0.24416040       -0.35060018
## 6         -0.40526982        0.67050162       -0.41912210        0.62344075
## 7         -0.37096997        0.85805346       -0.39149488        0.85805346
## 8         -0.50406856        0.63896971       -0.54790615        0.78667510
## 9         -0.21802303        1.38024023       -0.27046566        1.15343724
## 10        -0.05091800       -1.56855670       -0.05091800       -1.56855670
## 11        -0.25729077        0.39149488       -0.25729077        0.32366339
## 12        -0.10196844       -0.76945312       -0.14042416       -0.97421613
## 13         0.01272434       -2.80216172        0.19203379       -2.80216172
## 14        -0.46826666        0.35060018       -0.51856960        0.39149488
## 15        -0.51856960       -1.05957037       -0.48967276       -0.82184079
## 16        -0.17908874        0.40526982       -0.23107198        0.40526982
## 17        -0.46826666        0.54790615       -0.53318051        0.51856960
## 18         0.08918610       -0.80413364        0.07641832       -0.93409710
## 19        -0.01272434       -1.77352271        0.00000000       -1.91230127
## 20         0.53318051       -0.65465430        0.87658763       -0.50406856
## 21        -0.44707302       -0.03818128       -0.47537773       -0.08918610
## 22         0.28368767       -0.73567430        0.29695946       -0.99487522
## 23        -0.03818128       -2.10223158       -0.06366298       -2.10223158
## 24        -0.33710120        0.03818128       -0.36416334       -0.05091800
## 25        -0.31028376        0.50406856       -0.33710120        0.46117919
## 26         0.54790615       -0.97421613        0.63896971       -1.01596791
## 27        -0.19203379        0.23107198       -0.21802303        0.12758531
## 28        -0.08918610       -0.44707302       -0.07641832       -0.53318051
## 29        -0.29695946        0.06366298       -0.31028376       -0.10196844
## 30        -0.12758531       -2.23555842       -0.12758531       -2.42690063
## 31         0.47537773       -1.17854682        0.43305527       -1.41400510
## 32        -0.48967276       -0.93409710       -0.50406856       -0.91459156
## 33         0.21802303       -1.03752256        0.60806071       -0.95396468
## 34         0.17908874       -0.12758531        0.11476746       -0.21802303
## 35        -0.11476746        0.24416040       -0.15328619        0.01272434
## 36        -0.37096997        0.46117919       -0.37779383        0.43305527
## 37         0.82184079       -0.70271480        1.10528634       -0.54790615
## 38        -0.07641832        0.27046566       -0.11476746        0.25729077
## 39        -0.02545075       -1.41400510       -0.02545075       -1.34797950
## 40        -0.43305527       -1.31706374       -0.44707302       -1.15343724
## 41         0.06366298       -0.99487522        0.21802303       -0.80413364
## 42         0.15328619       -1.34797950        0.15328619       -1.52642702
## 43         0.57772207       -1.38024023        1.01596791       -1.17854682
```

```
## 44         0.36416334       -1.20442230        0.33710120       -1.44946373
## 45         0.89542793       -1.23113036        0.83980946       -1.48684468
## 46         0.44707302        0.01272434        0.39149488       -0.16617364
## 47         0.80413364        0.21802303        0.73567430        0.06366298
## 48         0.62344075       -1.25874673        0.56275157       -1.38024023
## 49         0.85805346       -0.20501110        0.80413364       -0.33710120
## 50         0.32366339        0.02545075        0.27046566       -0.03818128
## 51         0.37779383       -1.44946373        0.36416334       -1.20442230
## 52         0.51856960       -0.67050162        0.50406856       -0.46117919
## 53         0.91459156       -0.71909690        1.12903457       -0.51856960
## 54         0.70271480       -0.78667510        0.65465430       -1.03752256
## 55         0.87658763       -0.75245638        0.82184079       -1.10528634
## 56         0.83980946        0.15328619        0.78667510       -0.06366298
## 57         0.33710120        0.91459156        0.32366339        0.91459156
## 58         0.39149488       -0.46117919        0.40526982       -0.47537773
## 59         0.95396468       -0.87658763        0.85805346       -1.31706374
## 60         0.67050162       -2.42690063        0.75245638       -2.23555842
## 61         1.71527720       -1.71527720        1.91230127       -1.61367018
## 62         0.40526982       -0.83980946        0.37779383       -0.76945312
## 63         0.50406856       -0.95396468        0.47537773       -0.73567430
## 64         0.29695946       -0.29695946        0.25729077       -0.07641832
## 65         0.78667510       -1.01596791        0.70271480       -1.28735798
## 66         0.35060018        0.25729077        0.31028376        0.24416040
## 67         0.41912210       -0.24416040        0.35060018       -0.36416334
## 68         1.08214564       -0.21802303        1.34797950       -0.23107198
## 69         0.46117919       -0.27046566        0.41912210       -0.31028376
## 70         0.68651916        0.97421613        0.62344075        0.95396468
## 71         0.65465430       -0.11476746        0.59282318       -0.20501110
## 72         0.71909690       -0.23107198        0.71909690       -0.19203379
## 73         0.73567430       -0.48967276        0.67050162       -0.56275157
## 74         0.56275157       -0.10196844        0.51856960        0.28368767
## 75         0.59282318        0.47537773        0.53318051        0.44707302
## 76         0.76945312        0.78667510        0.68651916        0.67050162
## 77         0.97421613       -1.61367018        0.89542793       -1.77352271
## 78         0.60806071        0.14042416        0.54790615        0.05091800
## 79        -0.16617364       -0.28368767       -0.17908874       -0.32366339
## 80        -0.32366339        0.59282318       -0.35060018        0.71909690
## 81        -0.24416040        0.05091800       -0.19203379        0.27046566
## 82        -0.20501110       -1.28735798       -0.20501110       -1.12903457
## 83        -0.28368767        0.10196844       -0.29695946        0.11476746
## 84         0.24416040       -1.66232963        0.28368767       -1.83849262
## 85        -0.15328619       -0.37779383       -0.16617364       -0.39149488
## 86        -0.41912210        1.20442230       -0.46117919        1.61367018
## 87        -0.27046566        1.12903457       -0.28368767        1.38024023
## 88        -0.35060018       -0.14042416       -0.32366339        0.21802303
## 89         0.02545075        0.60806071        0.05091800        0.54790615
## 90        -0.85805346       -0.16617364       -0.87658763        0.19203379
## 91        -0.83980946       -0.33710120       -0.85805346       -0.25729077
## 92        -0.68651916       -0.54790615       -0.68651916       -0.62344075
## 93        -0.59282318        0.12758531       -0.59282318        0.03818128
## 94        -0.87658763        0.32366339       -0.89542793        0.36416334
## 95        -0.53318051       -0.06366298       -0.43305527       -0.12758531
## 96        -0.89542793       -1.10528634       -0.83980946       -0.85805346
## 97        -0.76945312       -1.48684468       -0.73567430       -1.23113036
## 98        -0.80413364       -1.08214564       -0.76945312       -0.83980946
```

```
## 99         0.63896971       -0.82184079        0.57772207       -0.75245638
## 100       -0.82184079        0.08918610       -0.82184079        0.10196844
## 101       -0.73567430       -0.40526982       -0.75245638       -0.41912210
## 102       -0.75245638       -0.56275157       -0.78667510       -0.63896971
## 103       -0.57772207       -0.51856960       -0.57772207       -0.59282318
## 104       -0.78667510        0.33710120       -0.80413364        0.37779383
## 105       -0.56275157       -0.50406856       -0.56275157       -0.57772207
## 106        0.12758531       -0.05091800        0.48967276       -0.11476746
## 107        0.48967276       -0.89542793        0.46117919       -1.05957037
## 108        0.23107198       -0.32366339        0.17908874       -0.24416040
## 109        0.31028376        0.20501110        0.24416040        0.15328619
## 110        0.27046566       -0.01272434        0.23107198        0.00000000
## 111        0.43305527       -1.83849262        0.44707302       -1.66232963
## 112        0.25729077        0.70271480        0.20501110        0.70271480
## 113       -0.62344075       -0.53318051       -0.62344075       -0.60806071
## 114       -0.71909690       -0.15328619       -0.71909690        0.20501110
## 115       -0.60806071        0.76945312       -0.60806071        0.65465430
## 116       -0.67050162       -0.39149488       -0.67050162       -0.40526982
## 117       -0.70271480        0.53318051       -0.70271480        0.50406856
## 118       -0.63896971        0.37779383       -0.63896971        0.31028376
## 119       -0.65465430        0.00000000       -0.65465430       -0.17908874
## 120       -2.23555842       -0.19203379       -2.42690063        0.16617364
## 121       -2.10223158       -0.36416334       -2.23555842       -0.28368767
## 122       -1.52642702       -0.62344075       -1.52642702       -0.70271480
## 123       -1.38024023        0.11476746       -1.38024023        0.02545075
## 124       -2.42690063        0.29695946       -2.80216172        0.33710120
## 125       -1.28735798       -0.08918610       -1.28735798       -0.15328619
## 126       -2.80216172       -1.15343724       -2.10223158       -0.89542793
## 127       -1.77352271       -1.52642702       -1.66232963       -1.25874673
## 128       -1.91230127       -1.12903457       -1.77352271       -0.87658763
## 129       -0.97421613       -0.85805346       -0.99487522       -0.78667510
## 130       -1.99828954        0.07641832       -1.99828954        0.08918610
## 131       -1.66232963       -0.43305527       -1.71527720       -0.44707302
## 132       -1.71527720       -0.63896971       -1.83849262       -0.71909690
## 133       -1.34797950       -0.59282318       -1.34797950       -0.67050162
## 134       -1.83849262        0.31028376       -1.91230127        0.35060018
## 135       -1.31706374       -0.57772207       -1.31706374       -0.65465430
## 136       -1.25874673       -0.07641832       -1.08214564       -0.14042416
## 137       -1.08214564       -0.91459156       -1.10528634       -1.08214564
## 138       -1.23113036       -0.35060018       -1.25874673       -0.27046566
## 139       -1.15343724        0.19203379       -1.17854682        0.14042416
## 140       -1.17854682       -0.02545075       -1.20442230       -0.01272434
## 141       -1.12903457       -1.91230127       -1.12903457       -1.71527720
## 142       -1.20442230        0.68651916       -1.23113036        0.68651916
## 143       -1.41400510       -0.60806071       -1.41400510       -0.68651916
## 144       -1.61367018       -0.17908874       -1.61367018        0.17908874
## 145       -1.48684468       -0.41912210       -1.48684468       -0.43305527
## 146       -1.56855670        0.51856960       -1.56855670        0.48967276
## 147       -1.44946373        0.36416334       -1.44946373        0.29695946
## 148        1.83849262        1.17854682        1.77352271        1.01596791
## 149        1.01596791        1.41400510        0.93409710        1.28735798
## 150        1.10528634        0.44707302        1.05957037        0.57772207
## 151        1.25874673        0.83980946        1.23113036        0.93409710
## 152        1.99828954        0.82184079        2.23555842        0.87658763
## 153        1.48684468        0.75245638        1.44946373        0.63896971
```

```
## 154        1.91230127        0.80413364        1.83849262        0.60806071
## 155        1.77352271        1.61367018        1.71527720        1.25874673
## 156        1.03752256        2.10223158        0.99487522        2.10223158
## 157        1.12903457        0.93409710        1.15343724        0.89542793
## 158        2.10223158        0.71909690        1.99828954        0.47537773
## 159        1.41400510       -0.68651916        1.66232963       -0.29695946
## 160        2.80216172        0.16617364        2.80216172        0.23107198
## 161        1.15343724        0.73567430        1.08214564        0.76945312
## 162        1.23113036        0.65465430        1.20442230        0.80413364
## 163        0.99487522        1.01596791        0.91459156        1.23113036
## 164        1.66232963        0.62344075        1.56855670        0.53318051
## 165        1.05957037        1.66232963        0.97421613        1.52642702
## 166        1.17854682        1.08214564        1.03752256        0.99487522
## 167        2.42690063        1.15343724        2.42690063        1.10528634
## 168        1.20442230        1.05957037        1.17854682        1.05957037
## 169        1.44946373        2.23555842        1.41400510        2.23555842
## 170        1.38024023        1.28735798        1.38024023        1.12903457
## 171        1.52642702        1.10528634        1.61367018        1.17854682
## 172        1.56855670        0.89542793        1.48684468        0.83980946
## 173        1.28735798        1.31706374        1.25874673        1.66232963
## 174        1.31706374        1.77352271        1.28735798        1.77352271
## 175        1.61367018        1.99828954        1.52642702        1.91230127
## 176        2.23555842        0.28368767        2.10223158        0.07641832
## 177        1.34797950        1.56855670        1.31706374        1.34797950
## 178        0.19203379        1.03752256        0.14042416        1.03752256
## 179        0.05091800        1.83849262        0.01272434        1.99828954
## 180        0.14042416        1.44946373        0.12758531        1.56855670
## 181        0.16617364        0.48967276        0.10196844        0.59282318
## 182        0.10196844        1.48684468        0.03818128        1.41400510
## 183        0.93409710        0.17908874        0.95396468       -0.02545075
## 184        0.20501110        0.95396468        0.16617364        0.97421613
## 185        0.00000000        2.80216172       -0.03818128        2.80216172
## 186        0.11476746        2.42690063        0.06366298        2.42690063
## 187        0.03818128        1.25874673        0.02545075        1.48684468
## 188        0.75245638        1.91230127        0.76945312        1.83849262
## 189       -1.03752256        1.23113036       -1.05957037        1.44946373
## 190       -1.01596791        0.99487522       -1.03752256        1.08214564
## 191       -0.93409710        0.87658763       -0.93409710        0.82184079
## 192       -0.91459156        1.52642702       -0.91459156        1.31706374
## 193       -1.05957037        1.71527720       -1.15343724        1.71527720
## 194       -0.54790615        1.34797950       -0.01272434        1.20442230
## 195       -1.10528634        0.56275157       -1.01596791        0.73567430
## 196       -0.95396468        0.43305527       -0.95396468        0.56275157
## 197       -0.99487522        0.57772207       -0.97421613        0.75245638
##     GLNU_norm_align.L.ADC RLNU_norm_align.L.ADC GLVAR_align.L.ADC
## 1             -0.11476746            0.05091800        0.85805346
## 2             -0.08918610           -0.05091800       -0.54790615
## 3             -0.21802303           -0.29695946        0.89542793
## 4             -0.12758531           -0.67050162       -0.80413364
## 5             -0.24416040            0.03818128       -0.36416334
## 6             -0.75245638            0.29695946        1.05957037
## 7             -0.46117919            0.46117919        0.25729077
## 8             -0.14042416           -0.33710120       -0.16617364
## 9             -0.33710120            0.44707302        0.12758531
## 10            -0.40526982           -0.32366339        0.75245638
```

```
## 11          -0.16617364          -0.01272434       -0.43305527
## 12          -0.43305527          -0.08918610        0.11476746
## 13           0.75245638          -1.91230127       -1.66232963
## 14          -0.06366298          -0.27046566       -0.85805346
## 15           0.11476746          -1.28735798       -0.57772207
## 16          -0.10196844          -0.16617364       -0.40526982
## 17           0.00000000           0.15328619       -1.08214564
## 18          -0.28368767          -0.07641832       -0.35060018
## 19          -0.41912210          -0.46117919        0.54790615
## 20          -0.37779383          -0.62344075       -0.24416040
## 21          -0.19203379          -0.60806071       -0.47537773
## 22          -0.44707302           0.40526982        1.31706374
## 23           0.05091800          -0.35060018       -0.25729077
## 24          -0.35060018          -0.43305527       -0.29695946
## 25          -0.62344075           0.24416040        0.53318051
## 26          -0.39149488          -0.02545075       -0.20501110
## 27          -0.76945312           0.21802303        1.15343724
## 28          -0.54790615           0.01272434        0.83980946
## 29          -0.70271480           0.28368767        0.87658763
## 30           0.31028376          -0.50406856       -1.28735798
## 31          -0.23107198           0.41912210        0.99487522
## 32           0.24416040          -0.75245638       -0.97421613
## 33          -0.29695946          -0.76945312       -0.37779383
## 34          -0.71909690           0.20501110        1.03752256
## 35          -0.68651916           0.47537773        0.71909690
## 36          -0.51856960          -0.17908874        0.27046566
## 37          -0.48967276          -0.19203379        0.24416040
## 38          -0.59282318           0.31028376        1.34797950
## 39          -0.03818128          -0.39149488       -0.41912210
## 40           0.53318051          -0.73567430       -1.71527720
## 41          -0.17908874          -0.83980946       -0.39149488
## 42          -0.53318051           0.16617364        0.73567430
## 43          -0.20501110          -0.89542793       -0.48967276
## 44          -0.32366339           0.32366339        0.97421613
## 45           0.44707302           0.54790615        0.76945312
## 46           0.29695946          -0.06366298       -0.05091800
## 47           0.03818128           0.50406856        0.70271480
## 48           0.07641832           0.35737354        0.14042416
## 49           0.02545075           0.62344075        1.48684468
## 50           0.32366339          -0.37779383       -0.50406856
## 51           0.51856960          -0.68651916       -1.34797950
## 52           0.40526982          -0.59282318       -0.99487522
## 53           0.15328619          -0.41912210       -0.19203379
## 54          -0.01272434           0.48967276        0.63896971
## 55           0.25729077           0.60806071        0.93409710
## 56           0.08918610           0.59282318        0.82184079
## 57           0.12758531           0.07641832       -0.07641832
## 58           0.16617364          -0.28368767        0.56275157
## 59           0.35060018           0.65465430        1.12903457
## 60           0.87658763          -1.34797950       -1.77352271
## 61           0.19203379           0.14042416       -0.17908874
## 62           0.56275157          -0.31028376       -0.71909690
## 63           0.23107198          -0.54790615       -0.23107198
## 64           0.83980946          -1.38024023       -2.80216172
## 65           0.01272434           0.35737354        0.65465430
```

```
## 66            0.17908874            0.11476746       -0.03818128
## 67            0.14042416            0.27046566       -0.21802303
## 68           -0.07641832            0.23107198        0.67050162
## 69            0.65465430           -0.03818128       -0.82184079
## 70            0.41912210            0.53318051       -0.08918610
## 71            0.62344075            0.51856960       -0.78667510
## 72            0.47537773           -0.56275157       -0.31028376
## 73            0.33710120            0.56275157        0.10196844
## 74            0.85805346           -1.15343724       -2.42690063
## 75            0.71909690            0.25729077       -1.31706374
## 76            0.28368767            0.63896971        0.35060018
## 77            0.36416334            0.57772207        0.40526982
## 78            0.67050162            0.43305527       -1.01596791
## 79            0.21802303           -0.21802303       -0.83980946
## 80           -0.25729077           -0.36416334       -0.28368767
## 81           -0.05091800           -0.44707302       -0.95396468
## 82            0.50406856           -0.80413364       -1.44946373
## 83            0.06366298           -0.10196844       -0.65465430
## 84           -0.36416334           -0.14042416        0.80413364
## 85           -0.31028376            0.08918610       -0.10196844
## 86            0.60806071           -1.17854682       -1.15343724
## 87            0.39149488           -1.01596791       -0.56275157
## 88            0.54790615           -1.44946373       -1.83849262
## 89           -0.56275157            0.37779383        0.91459156
## 90           -0.27046566           -1.71527720       -1.99828954
## 91           -0.65465430           -0.95396468       -1.52642702
## 92           -1.03752256            0.02545075        0.05091800
## 93           -0.50406856           -0.12758531       -1.03752256
## 94           -0.85805346           -0.65465430       -0.89542793
## 95           -1.08214564           -0.48967276        0.31028376
## 96           -0.67050162           -1.61367018       -0.60806071
## 97           -0.78667510           -1.20442230       -1.38024023
## 98           -0.57772207           -1.56855670       -0.59282318
## 99            0.68651916           -0.23107198       -0.70271480
## 100          -0.80413364           -0.47537773       -0.67050162
## 101          -1.01596791           -0.25729077       -0.12758531
## 102          -1.05957037            0.00000000        0.03818128
## 103          -0.91459156            0.12758531        0.07641832
## 104          -0.82184079           -0.63896971       -0.87658763
## 105          -0.87658763            0.17908874        0.08918610
## 106          -0.60806071           -0.15328619        0.32366339
## 107           0.20501110            0.06366298        0.16617364
## 108           0.59282318           -0.40526982       -1.48684468
## 109           0.37779383            0.39149488       -0.75245638
## 110           0.43305527           -0.51856960       -1.23113036
## 111           0.73567430           -0.93409710       -1.17854682
## 112          -0.02545075            0.19203379        0.37779383
## 113          -0.95396468            0.10196844        0.06366298
## 114          -0.15328619           -1.66232963       -1.91230127
## 115          -0.99487522            0.33710120        0.33710120
## 116          -0.93409710           -0.20501110       -0.11476746
## 117          -0.63896971           -0.11476746       -1.10528634
## 118          -0.83980946           -0.24416040       -0.44707302
## 119          -0.89542793           -0.57772207       -0.06366298
## 120          -1.28735798           -2.80216172       -2.23555842
```

```
## 121          -1.44946373          -1.83849262       -1.61367018
## 122          -2.23555842          -0.87658763       -0.01272434
## 123          -1.31706374          -0.99487522       -1.05957037
## 124          -1.71527720          -1.52642702       -0.93409710
## 125          -2.80216172          -1.31706374        0.28368767
## 126          -1.48684468          -2.23555842       -0.63896971
## 127          -1.52642702          -1.99828954       -1.41400510
## 128          -1.34797950          -2.10223158       -0.62344075
## 129          -1.10528634          -1.08214564       -0.73567430
## 130          -1.56855670          -1.25874673       -0.68651916
## 131          -2.10223158          -1.12903457       -0.15328619
## 132          -2.42690063          -0.91459156       -0.02545075
## 133          -1.83849262          -0.78667510        0.01272434
## 134          -1.61367018          -1.48684468       -0.91459156
## 135          -1.77352271          -0.71909690        0.02545075
## 136          -1.38024023          -1.03752256        0.29695946
## 137          -1.20442230          -0.85805346        0.15328619
## 138          -1.12903457          -1.23113036       -1.56855670
## 139          -1.17854682          -0.53318051       -0.76945312
## 140          -1.15343724          -1.41400510       -1.25874673
## 141          -0.97421613          -1.77352271       -1.20442230
## 142          -1.23113036          -0.70271480        0.36416334
## 143          -1.99828954          -0.82184079        0.00000000
## 144          -1.25874673          -2.42690063       -2.10223158
## 145          -1.91230127          -1.05957037       -0.14042416
## 146          -1.41400510          -0.97421613       -1.12903457
## 147          -1.66232963          -1.10528634       -0.46117919
## 148           0.97421613           2.23555842        2.80216172
## 149           1.28735798           1.03752256        0.78667510
## 150           1.61367018           0.87658763        0.21802303
## 151           1.44946373           0.91459156        0.44707302
## 152           1.08214564           1.01596791        1.17854682
## 153           0.93409710           1.66232963        1.71527720
## 154           1.23113036           2.10223158        2.23555842
## 155           1.01596791           1.99828954        1.99828954
## 156           1.03752256           1.28735798        1.28735798
## 157           1.10528634           1.10528634        1.66232963
## 158           1.34797950           2.80216172        2.42690063
## 159           2.80216172           0.75245638       -0.27046566
## 160           1.15343724           1.38024023        1.20442230
## 161           1.71527720           1.08214564        0.57772207
## 162           1.20442230           0.95396468        1.08214564
## 163           2.23555842           0.73567430       -0.53318051
## 164           0.95396468           1.52642702        1.77352271
## 165           1.12903457           1.34797950        1.38024023
## 166           1.05957037           1.48684468        1.10528634
## 167           0.89542793           1.41400510        1.83849262
## 168           1.91230127           1.23113036        0.50406856
## 169           1.48684468           1.77352271        1.25874673
## 170           1.83849262           1.71527720        0.51856960
## 171           1.52642702           0.93409710        0.95396468
## 172           1.31706374           1.83849262        1.44946373
## 173           2.42690063           0.80413364       -0.51856960
## 174           2.10223158           1.44946373        0.23107198
## 175           1.25874673           2.42690063        1.56855670
```

```
## 176            1.38024023            1.91230127        1.61367018
## 177            1.99828954            1.61367018        0.43305527
## 178            1.17854682            1.12903457        0.48967276
## 179            0.82184079            1.05957037        1.01596791
## 180            0.91459156            0.99487522        0.46117919
## 181            1.56855670            0.85805346        0.19203379
## 182            0.99487522            1.20442230        0.59282318
## 183            0.76945312            1.15343724        1.91230127
## 184            0.78667510            1.31706374        1.23113036
## 185            1.77352271            0.78667510        0.39149488
## 186            1.41400510            0.82184079        0.68651916
## 187            1.66232963            0.71909690       -0.32366339
## 188            0.63896971            1.56855670        2.10223158
## 189            0.80413364            0.67050162       -0.33710120
## 190            0.48967276            0.83980946        0.17908874
## 191           -0.47537773            1.25874673        1.41400510
## 192            0.70271480            1.17854682        0.41912210
## 193            0.10196844            0.89542793        0.47537773
## 194           -0.73567430            0.97421613        1.52642702
## 195            0.46117919            0.68651916        0.60806071
## 196            0.27046566            0.76945312        0.20501110
## 197            0.57772207            0.70271480        0.62344075
##     RLVAR_align.L.ADC Entropy_align.L.ADC  SZSE.L.ADC  LZSE.L.ADC LGLZE.L.ADC
## 1         -0.43305527         -0.41912210  0.24416040 -0.87658763 -0.07641832
## 2         -0.41912210         -0.85805346 -0.03818128 -0.59282318 -0.39149488
## 3         -0.07641832          0.19203379 -0.89542793  0.23107198  0.11476746
## 4          0.21802303         -0.36416334 -0.51856960 -0.02545075 -0.19203379
## 5         -0.36416334         -0.37779383 -0.29695946 -0.10196844 -0.20501110
## 6         -0.78667510          0.62344075  0.20501110 -1.20442230 -0.40526982
## 7         -0.89542793         -0.01272434  0.33710120 -0.80413364 -0.36416334
## 8          0.08918610         -0.23107198 -0.53318051  0.17908874 -0.50406856
## 9         -0.99487522         -0.47537773  0.40526982 -1.77352271 -0.23107198
## 10        -0.02545075          0.27046566 -0.23107198 -0.24416040 -0.05091800
## 11        -0.37779383         -0.43305527  0.19203379 -0.62344075 -0.24416040
## 12        -0.29695946          0.23107198  0.21802303 -0.97421613 -0.10196844
## 13         1.23113036         -2.80216172 -1.71527720  1.66232963  0.06366298
## 14        -0.11476746         -0.68651916 -0.14042416 -0.31028376 -0.47537773
## 15         0.91459156         -0.51856960 -1.12903457  0.83980946 -0.51856960
## 16        -0.23107198         -0.39149488 -0.41912210 -0.03818128 -0.14042416
## 17        -0.59282318         -1.34797950 -0.20501110 -0.21802303 -0.46117919
## 18        -0.35060018         -0.08918610  0.17908874 -0.76945312  0.10196844
## 19         0.16617364          0.36416334 -0.39149488  0.31028376 -0.01272434
## 20         0.27046566          0.21802303 -0.43305527  0.05091800  0.54790615
## 21         0.28368767         -0.19203379 -0.60806071  0.29695946 -0.44707302
## 22        -0.87658763         -0.12758531 -0.07641832 -0.12758531  0.32366339
## 23        -0.08918610         -0.54790615 -0.25729077 -0.29695946 -0.03818128
## 24         0.02545075          0.05091800 -0.37779383 -0.16617364 -0.32366339
## 25        -0.62344075          0.54790615  0.12758531 -0.41912210 -0.31028376
## 26        -0.40526982          0.14042416  0.10836573 -0.57772207  0.56275157
## 27        -0.68651916          0.63896971  0.06366298 -0.60806071 -0.17908874
## 28        -0.51856960          0.53318051 -0.17908874 -0.27046566 -0.08918610
## 29        -0.80413364          0.56275157  0.23107198 -1.12903457 -0.29695946
## 30         0.10196844         -1.71527720 -0.97421613  0.37779383 -0.11476746
## 31        -0.92430037         -0.76945312  0.62344075 -2.42690063  0.46117919
## 32         0.35060018         -0.93409710 -0.70271480  0.39149488 -0.48967276
```

```
## 33         0.36416334          0.12758531 -1.48684468  0.62344075  0.14042416
## 34        -0.60806071          0.60806071  0.32366339 -0.95396468  0.19203379
## 35        -1.01596791          0.57772207  0.51856960 -1.83849262 -0.12758531
## 36        -0.20501110          0.39149488 -0.06366298 -0.28368767 -0.35060018
## 37        -0.14042416          0.46117919 -0.05091800 -0.43305527  0.80413364
## 38        -0.63896971          0.47537773 -0.35060018 -0.01272434 -0.06366298
## 39         0.00000000         -0.40526982 -0.12758531 -0.47537773 -0.02545075
## 40         0.32366339         -2.42690063 -0.83980946  0.27046566 -0.43305527
## 41         0.37779383          0.07641832 -0.67050162  0.15328619  0.03818128
## 42        -0.65465430          0.41912210  0.10836573 -0.32366339  0.08918610
## 43         0.44707302          0.02545075 -0.85805346  0.40526982  0.48967276
## 44        -0.97421613         -0.78667510  0.60806071 -2.80216172  0.36416334
## 45        -0.48967276         -1.17854682  0.59282318 -1.91230127  0.89542793
## 46         0.33710120          0.03818128  0.14042416  0.06366298  0.43305527
## 47        -0.27046566          0.44707302  0.54790615 -1.44946373  0.82184079
## 48        -0.12758531          0.25729077  0.35060018 -0.70271480  0.62344075
## 49        -0.76945312          0.11476746  0.56275157 -1.38024023  0.85805346
## 50         0.47537773         -0.06366298  0.02545075 -0.19203379  0.31028376
## 51         0.70271480         -0.63896971 -0.32366339  0.07641832  0.37779383
## 52         0.62344075         -0.29695946 -0.33710120  0.08918610  0.53318051
## 53         0.51856960          0.37779383 -0.28368767  0.11476746  0.91459156
## 54        -0.31028376          0.51856960  0.53318051 -1.61367018  0.71909690
## 55        -0.57772207         -0.44707302  0.39149488 -0.91459156  0.87658763
## 56        -0.50406856          0.06366298  0.47537773 -0.93409710  0.83980946
## 57         0.19203379          0.28368767  0.08918610 -0.17908874  0.35060018
## 58         0.53318051          0.40526982 -0.01272434  0.14042416  0.39149488
## 59        -0.71909690         -0.70271480  0.65465430 -2.23555842  0.93409710
## 60         1.17854682         -2.23555842 -1.05957037  0.65465430  0.73567430
## 61         0.12758531          0.17908874  0.27046566 -0.40526982  1.44946373
## 62         0.43305527         -0.53318051 -0.19203379 -0.07641832  0.40526982
## 63         0.63896971          0.29695946 -1.10528634  0.43305527  0.51856960
## 64         1.31706374         -2.10223158 -1.25874673  0.97421613  0.28368767
## 65        -0.10196844          0.50406856  0.48967276 -0.82184079  0.78667510
## 66         0.05091800          0.08918610  0.07641832 -0.20501110  0.33710120
## 67        -0.05091800          0.16617364  0.28368767 -0.39149488  0.41912210
## 68         0.06366298          0.65465430  0.36416334 -0.63896971  1.01596791
## 69         0.25729077         -1.38024023 -0.50406856  0.35060018  0.47537773
## 70        -0.39149488         -1.15343724  0.50406856 -1.25874673  0.68651916
## 71        -0.15328619         -0.73567430  0.57772207 -1.66232963  0.65465430
## 72         0.73567430          0.24416040 -0.27046566  0.10196844  0.70271480
## 73        -0.32366339         -0.02545075  0.44707302 -0.78667510  0.75245638
## 74         1.20442230         -1.99828954 -1.15343724  0.89542793  0.57772207
## 75         0.11476746         -1.23113036  0.37779383 -0.71909690  0.59282318
## 76        -0.54790615         -0.10196844  0.63896971 -1.99828954  0.76945312
## 77        -0.33710120         -0.25729077  0.41912210 -0.48967276  0.99487522
## 78         0.01272434         -0.99487522  0.46117919 -1.01596791  0.60806071
## 79        -0.01272434         -1.44946373 -0.65465430  0.32366339 -0.16617364
## 80         0.07641832          0.10196844 -0.62344075  0.12758531 -0.33710120
## 81         0.29695946         -0.35060018 -0.54790615  0.02545075 -0.25729077
## 82         0.40526982         -1.56855670 -0.63896971  0.36416334 -0.21802303
## 83        -0.16617364         -0.57772207 -0.71909690  0.24416040 -0.28368767
## 84        -0.17908874          0.32366339  0.01272434 -0.46117919  0.25729077
## 85        -0.44707302          0.01272434  0.25729077 -0.85805346 -0.15328619
## 86         0.89542793         -1.25874673 -1.34797950  0.41912210 -0.41912210
## 87         0.78667510         -0.75245638 -0.75245638  0.33710120 -0.27046566
```

```
## 88         0.99487522         -1.52642702 -1.31706374  0.53318051 -0.37779383
## 89        -0.70271480          0.59282318  0.16617364 -0.68651916  0.00000000
## 90         0.71909690         -1.66232963 -1.77352271  0.50406856 -0.85805346
## 91        -0.24416040         -1.08214564 -0.73567430 -0.05091800 -0.83980946
## 92        -1.25874673         -0.16617364 -0.11476746 -1.15343724 -0.68651916
## 93        -0.95396468         -1.10528634  0.03818128 -1.23113036 -0.59282318
## 94        -0.73567430         -0.82184079 -0.48967276 -0.35060018 -0.87658763
## 95        -0.82184079          0.43305527 -0.40526982 -0.65465430 -0.53318051
## 96         0.59282318         -0.60806071 -1.61367018  0.80413364 -0.89542793
## 97         0.14042416         -0.83980946 -0.80413364  0.00000000 -0.76945312
## 98         0.60806071         -0.59282318 -1.56855670  0.82184079 -0.80413364
## 99         0.50406856         -0.50406856 -0.10196844 -0.06366298  0.63896971
## 100       -0.83980946         -0.67050162 -1.23113036  0.21802303 -0.82184079
## 101       -1.08214564         -0.05091800 -0.24416040 -1.03752256 -0.73567430
## 102       -1.28735798         -0.17908874 -0.15328619 -1.17854682 -0.75245638
## 103       -1.15343724         -0.14042416  0.00000000 -1.08214564 -0.57772207
## 104       -0.67050162         -0.80413364 -0.46117919 -0.33710120 -0.78667510
## 105       -1.12903457         -0.11476746  0.05091800 -1.05957037 -0.54790615
## 106       -0.25729077          0.48967276 -0.08918610 -0.54790615  0.02545075
## 107        0.15328619          0.15328619  0.15328619 -0.23107198  0.50406856
## 108        0.46117919         -0.95396468 -0.31028376  0.03818128  0.23107198
## 109       -0.19203379         -0.56275157  0.29695946 -0.36416334  0.29695946
## 110        0.56275157         -0.48967276 -0.36416334  0.28368767  0.27046566
## 111        0.83980946         -1.20442230 -0.56275157  0.25729077  0.44707302
## 112        0.03818128          0.31028376  0.31028376 -0.50406856  0.24416040
## 113       -1.23113036         -0.15328619 -0.02545075 -1.10528634 -0.62344075
## 114        0.76945312         -1.61367018 -1.66232963  0.51856960 -0.71909690
## 115       -1.34797950         -0.24416040  0.43305527 -2.10223158 -0.60806071
## 116       -1.03752256         -0.03818128 -0.16617364 -0.99487522 -0.67050162
## 117       -1.10528634         -1.41400510 -0.44707302 -0.25729077 -0.70271480
## 118       -0.92430037         -0.46117919 -0.21802303 -0.67050162 -0.63896971
## 119       -0.46117919         -0.07641832 -0.47537773  0.01272434 -0.65465430
## 120       -0.28368767         -1.91230127 -2.80216172  0.47537773 -2.23555842
## 121       -1.41400510         -1.28735798 -1.83849262 -0.14042416 -2.10223158
## 122       -2.42690063         -0.32366339 -0.95396468 -1.52642702 -1.52642702
## 123       -1.71527720         -1.31706374 -0.78667510 -1.71527720 -1.38024023
## 124       -1.52642702         -1.03752256 -1.44946373 -0.53318051 -2.42690063
## 125       -1.56855670          0.33710120 -1.28735798 -0.83980946 -1.28735798
## 126       -0.53318051         -0.91459156 -2.23555842  0.70271480 -2.80216172
## 127       -1.20442230         -1.05957037 -1.91230127 -0.11476746 -1.77352271
## 128       -0.47537773         -0.89542793 -2.10223158  0.71909690 -1.91230127
## 129       -0.75245638         -0.71909690 -0.93409710 -0.15328619 -0.97421613
## 130       -1.61367018         -0.97421613 -1.99828954  0.16617364 -1.99828954
## 131       -1.83849262         -0.21802303 -1.08214564 -1.31706374 -1.66232963
## 132       -2.80216172         -0.33710120 -0.99487522 -1.56855670 -1.71527720
## 133       -2.10223158         -0.28368767 -0.82184079 -1.41400510 -1.34797950
## 134       -1.48684468         -1.01596791 -1.41400510 -0.51856960 -1.83849262
## 135       -1.99828954         -0.27046566 -0.76945312 -1.34797950 -1.31706374
## 136       -1.44946373          0.35060018 -0.91459156 -0.75245638 -1.25874673
## 137       -1.17854682          0.00000000 -0.68651916 -0.37779383 -1.08214564
## 138       -0.85805346         -1.12903457 -1.17854682 -0.08918610 -1.23113036
## 139       -1.38024023         -0.87658763 -0.59282318 -0.56275157 -1.15343724
## 140       -0.56275157         -0.65465430 -1.20442230  0.20501110 -1.17854682
## 141       -0.03818128         -1.48684468 -1.52642702  0.19203379 -1.12903457
## 142       -1.31706374          0.20501110 -0.57772207 -0.73567430 -1.20442230
```

```
## 143       -2.23555842         -0.31028376 -0.87658763 -1.48684468 -1.41400510
## 144       -0.21802303         -1.83849262 -2.42690063  0.48967276 -1.61367018
## 145       -1.77352271         -0.20501110 -1.01596791 -1.28735798 -1.48684468
## 146       -1.91230127         -1.77352271 -1.38024023 -0.44707302 -1.56855670
## 147       -1.66232963         -0.62344075 -1.03752256 -0.89542793 -1.44946373
## 148        0.20501110          1.48684468  2.10223158  0.57772207  1.83849262
## 149        1.41400510          1.28735798  1.23113036  1.10528634  1.03752256
## 150        1.71527720          1.01596791  1.05957037  1.25874673  1.10528634
## 151        1.61367018          1.17854682  1.03752256  1.28735798  1.25874673
## 152        1.44946373          1.83849262  1.08214564  1.34797950  1.99828954
## 153        0.68651916          2.23555842  1.99828954  0.56275157  1.52642702
## 154        0.39149488          1.12903457  1.56855670  0.73567430  1.91230127
## 155        0.48967276          1.38024023  1.77352271  0.68651916  1.77352271
## 156        1.15343724          1.66232963  1.31706374  1.12903457  1.08214564
## 157        1.48684468          1.91230127  1.17854682  1.41400510  1.12903457
## 158        0.24416040          0.99487522  2.80216172  0.44707302  2.10223158
## 159        2.23555842          0.67050162  0.80413364  1.99828954  1.56855670
## 160        1.10528634          1.56855670  1.41400510  1.01596791  2.80216172
## 161        1.38024023          1.10528634  1.12903457  1.15343724  1.15343724
## 162        1.66232963          1.71527720  0.78667510  1.77352271  1.23113036
## 163        2.80216172          0.68651916  0.75245638  2.80216172  0.97421613
## 164        0.87658763          2.10223158  1.83849262  0.76945312  1.71527720
## 165        1.01596791          1.41400510  1.28735798  1.08214564  1.05957037
## 166        0.93409710          1.52642702  1.44946373  1.03752256  1.17854682
## 167        1.03752256          2.80216172  1.48684468  0.93409710  2.42690063
## 168        1.25874673          0.78667510  0.97421613  1.56855670  1.20442230
## 169        0.57772207          0.83980946  1.91230127  0.59282318  1.41400510
## 170        0.85805346          0.97421613  2.23555842  0.54790615  1.38024023
## 171        1.83849262          1.61367018  1.10528634  1.31706374  1.48684468
## 172        0.67050162          1.31706374  1.66232963  0.78667510  1.61367018
## 173        2.42690063          0.70271480  0.76945312  2.42690063  1.28735798
## 174        1.08214564          0.82184079  1.52642702  0.85805346  1.31706374
## 175        0.41912210          1.25874673  2.42690063  0.46117919  1.66232963
## 176        0.65465430          1.20442230  1.61367018  0.95396468  2.23555842
## 177        0.97421613          0.89542793  1.71527720  0.67050162  1.34797950
## 178        0.95396468          0.76945312  0.89542793  1.48684468  0.20501110
## 179        1.05957037          1.44946373  0.93409710  1.38024023  0.07641832
## 180        1.28735798          1.15343724  0.95396468  1.23113036  0.16617364
## 181        1.34797950          0.73567430  0.91459156  1.61367018  0.17908874
## 182        0.82184079          1.08214564  0.87658763  1.44946373  0.12758531
## 183        0.80413364          1.77352271  1.20442230  0.99487522  0.95396468
## 184        0.54790615          1.34797950  1.38024023  0.75245638  0.21802303
## 185        1.99828954          0.80413364  0.71909690  1.71527720  0.01272434
## 186        1.91230127          0.95396468  0.83980946  1.52642702  0.15328619
## 187        2.10223158          0.75245638  0.73567430  1.91230127  0.05091800
## 188        0.31028376          2.42690063  1.34797950  0.87658763  0.67050162
## 189        1.77352271          0.71909690  0.67050162  1.83849262 -1.03752256
## 190        0.75245638          0.87658763  0.85805346  1.17854682 -1.01596791
## 191       -1.05957037          1.23113036  1.15343724  0.63896971 -0.93409710
## 192       -0.06366298          0.85805346  1.25874673  0.60806071 -0.91459156
## 193        0.23107198          0.93409710  0.99487522  1.05957037 -1.05957037
## 194        0.17908874          1.99828954  1.01596791  0.91459156 -0.56275157
## 195        1.52642702          1.03752256  0.68651916  2.10223158 -1.10528634
## 196        1.12903457          0.91459156  0.82184079  1.20442230 -0.95396468
## 197        1.56855670          1.05957037  0.70271480  2.23555842 -0.99487522
```

```
##     HGLZE.L.ADC SZLGE.L.ADC SZHGE.L.ADC LZLGE.L.ADC LZHGE.L.ADC GLNU_area.L.ADC
## 1   -0.28368767 -0.06366298 -0.16617364 -0.14042416 -0.99487522     -1.31706374
## 2    0.41912210 -0.37779383  0.33710120 -0.47537773  0.29695946     -0.54790615
## 3   -1.99828954  0.08918610 -1.99828954  0.50406856 -1.66232963     -0.39149488
## 4   -0.48967276 -0.25729077 -0.65465430 -0.06366298 -0.43305527      0.29695946
## 5   -0.44707302 -0.19203379 -0.44707302 -0.27046566 -0.39149488     -0.53318051
## 6    0.62344075 -0.40526982  0.62344075 -0.50406856  0.37779383     -0.75245638
## 7    0.89542793 -0.35060018  0.91459156 -0.46117919  0.63896971     -1.20442230
## 8    0.59282318 -0.48967276  0.54790615 -0.51856960  1.01596791     -0.50406856
## 9    1.31706374 -0.20501110  1.38024023 -0.33037484  0.95396468     -1.34797950
## 10  -1.56855670 -0.08918610 -1.41400510 -0.07641832 -1.52642702     -0.65465430
## 11   0.31028376 -0.21802303  0.32366339 -0.31028376  0.16617364     -0.35060018
## 12  -0.82184079 -0.10196844 -0.78667510 -0.16617364 -1.23113036      0.12758531
## 13  -2.80216172  0.03818128 -2.80216172  1.23113036 -2.80216172      0.54790615
## 14   0.39149488 -0.47537773  0.40526982 -0.53318051  0.27046566     -0.06366298
## 15  -0.89542793 -0.51856960 -1.05957037 -0.15328619 -0.10196844      1.08214564
## 16   0.40526982 -0.12758531  0.28368767 -0.24416040  0.43305527     -0.05091800
## 17   0.53318051 -0.46117919  0.53318051 -0.54790615  0.53318051     -0.56275157
## 18  -0.85805346  0.11476746 -0.87658763  0.02545075 -1.01596791      0.51856960
## 19  -1.66232963 -0.01272434 -1.66232963  0.31028376 -1.61367018      0.11476746
## 20  -0.51856960  0.25729077 -0.68651916  1.48684468 -0.48967276      0.89542793
## 21  -0.01272434 -0.43305527 -0.02545075 -0.43305527  0.20501110      0.41912210
## 22  -0.50406856  0.32366339 -0.47537773  0.46117919 -1.17854682     -2.23555842
## 23  -2.10223158 -0.02545075 -2.10223158 -0.10196844 -2.42690063      0.00000000
## 24   0.03818128 -0.32366339  0.00000000 -0.39149488  0.02545075      0.31028376
## 25   0.48967276 -0.29695946  0.56275157 -0.40526982  0.39149488     -0.71909690
## 26  -1.12903457  0.45411481 -1.01596791  0.65465430 -1.03752256      0.78667510
## 27   0.24416040 -0.17908874  0.23107198 -0.21802303  0.01272434     -1.05957037
## 28  -0.46117919 -0.07641832 -0.37779383 -0.12758531 -0.68651916     -1.03752256
## 29   0.05091800 -0.31028376  0.10196844 -0.37779383 -0.32366339     -1.12903457
## 30  -2.23555842 -0.15328619 -2.23555842 -0.08918610 -1.83849262      0.08918610
## 31  -1.20442230  0.51130564 -0.93409710  0.25729077 -2.10223158     -1.91230127
## 32  -0.83980946 -0.50406856 -0.97421613 -0.36416334 -0.40526982      0.47537773
## 33  -1.08214564  0.05091800 -1.25874673  2.42690063  0.05091800      0.91459156
## 34  -0.17908874  0.19203379 -0.01272434  0.10196844 -0.44707302     -1.28735798
## 35   0.21802303 -0.11476746  0.27046566 -0.25729077 -0.25729077     -1.01596791
## 36   0.44707302 -0.36416334  0.47537773 -0.44707302  0.31028376      0.10196844
## 37  -0.71909690  0.62344075 -0.70271480  1.56855670 -0.71909690      0.36416334
## 38   0.23107198 -0.05091800  0.11476746 -0.11476746  0.40526982     -1.56855670
## 39  -1.52642702  0.00000000 -1.38024023 -0.02545075 -1.28735798      0.87658763
## 40  -1.25874673 -0.44707302 -1.34797950 -0.33037484 -0.59282318      0.01272434
## 41  -1.10528634  0.02545075 -1.17854682  0.63896971 -0.57772207      1.28735798
## 42  -1.38024023  0.06366298 -1.28735798  0.59282318 -1.48684468     -0.63896971
## 43  -1.34797950  0.23107198 -1.61367018  2.10223158 -0.53318051      0.85805346
## 44  -1.23113036  0.39149488 -0.95396468  0.20501110 -2.23555842     -1.99828954
## 45  -1.28735798  0.91459156 -1.03752256  0.73567430 -1.91230127     -1.83849262
## 46  -0.02545075  0.48967276  0.05091800  0.27046566 -0.06366298     -0.60806071
## 47   0.16617364  0.82184079  0.21802303  0.62344075 -0.16617364     -1.17854682
## 48  -1.31706374  0.65465430 -1.23113036  0.51856960 -1.38024023     -0.20501110
## 49  -0.20501110  0.87658763 -0.11476746  0.70271480 -0.70271480     -2.80216172
## 50   0.02545075  0.35060018  0.01272434  0.12758531 -0.05091800      0.43305527
## 51  -1.41400510  0.40526982 -1.44946373  0.28368767 -1.10528634      0.65465430
## 52  -0.53318051  0.56275157 -0.71909690  0.39149488 -0.46117919      0.80413364
## 53  -0.73567430  0.83980946 -0.76945312  1.34797950 -0.47537773      1.10528634
## 54  -0.87658763  0.75245638 -0.85805346  0.56275157 -1.25874673     -0.70271480
```

```
## 55  -0.75245638  0.89542793 -0.75245638  0.71909690 -1.20442230     -2.10223158
## 56   0.11476746  0.85805346  0.20501110  0.68651916 -0.17908874     -1.77352271
## 57   0.91459156  0.37779383  0.85805346  0.14042416  0.91459156     -0.28368767
## 58  -0.36416334  0.41912210 -0.29695946  0.36416334 -0.56275157      0.19203379
## 59  -1.05957037  0.97421613 -0.73567430  0.76945312 -1.77352271     -2.42690063
## 60  -2.42690063  0.70271480 -2.42690063  0.75245638 -1.41400510      2.10223158
## 61  -1.77352271  1.31706374 -1.77352271  1.91230127 -1.56855670      0.93409710
## 62  -0.78667510  0.43305527 -0.82184079  0.24416040 -0.75245638      0.21802303
## 63  -0.99487522  0.54790615 -1.20442230  0.53318051 -0.24416040      0.17908874
## 64  -0.24416040  0.31028376 -0.46117919  0.23107198  0.83980946      0.67050162
## 65  -1.15343724  0.80413364 -0.99487522  0.60806071 -1.44946373     -0.73567430
## 66   0.27046566  0.36416334  0.24416040  0.16617364  0.08918610     -0.48967276
## 67  -0.35060018  0.45411481 -0.28368767  0.21802303 -0.51856960      0.16617364
## 68  -0.21802303  0.93409710 -0.15328619  1.41400510 -0.41912210      0.48967276
## 69  -0.25729077  0.51130564 -0.25729077  0.32366339 -0.01272434     -0.76945312
## 70   0.93409710  0.73567430  0.95396468  0.47537773  0.68651916     -1.71527720
## 71  -0.19203379  0.68651916 -0.12758531  0.43305527 -0.50406856     -0.24416040
## 72  -0.23107198  0.71909690 -0.24416040  0.67050162 -0.08918610      1.99828954
## 73  -0.54790615  0.76945312 -0.48967276  0.57772207 -0.78667510     -0.80413364
## 74  -0.05091800  0.59282318 -0.14042416  0.44707302  0.99487522      0.56275157
## 75   0.43305527  0.60806071  0.46117919  0.35060018  0.10196844     -0.12758531
## 76   0.76945312  0.78667510  0.82184079  0.54790615  0.19203379     -1.44946373
## 77  -1.61367018  0.99487522 -1.56855670  0.87658763 -1.71527720     -1.41400510
## 78   0.15328619  0.63896971  0.15328619  0.37779383 -0.19203379     -0.01272434
## 79  -0.27046566 -0.16617364 -0.27046566 -0.17908874 -0.02545075     -0.78667510
## 80   0.60806071 -0.33710120  0.57772207 -0.41912210  0.73567430      0.15328619
## 81   0.06366298 -0.27046566  0.02545075 -0.20501110  0.28368767      1.91230127
## 82  -1.17854682 -0.23107198 -1.31706374 -0.19203379 -0.54790615      0.53318051
## 83   0.10196844 -0.28368767  0.08918610 -0.29695946  0.57772207     -0.14042416
## 84  -1.71527720  0.27046566 -1.71527720  0.29695946 -1.99828954     -1.08214564
## 85  -0.37779383 -0.14042416 -0.31028376 -0.23107198 -0.60806071     -0.40526982
## 86   1.23113036 -0.41912210  1.12903457 -0.48967276  1.66232963      0.27046566
## 87   1.12903457 -0.24416040  1.01596791 -0.35060018  1.56855670      0.28368767
## 88  -0.11476746 -0.39149488 -0.17908874 -0.28368767  0.82184079      0.76945312
## 89   0.56275157  0.01272434  0.60806071  0.06366298  0.41912210     -1.23113036
## 90  -0.14042416 -0.85805346 -0.20501110 -0.83980946  0.78667510      0.73567430
## 91  -0.31028376 -0.83980946 -0.40526982 -0.89542793 -0.35060018      1.20442230
## 92  -0.60806071 -0.67050162 -0.54790615 -0.71909690 -0.85805346     -0.87658763
## 93   0.14042416 -0.57772207  0.14042416 -0.59282318 -0.20501110     -0.02545075
## 94   0.36416334 -0.87658763  0.37779383 -0.91459156  0.24416040     -0.08918610
## 95  -0.07641832 -0.54790615 -0.07641832  0.41912210 -0.28368767      0.06366298
## 96  -0.93409710 -0.89542793 -1.10528634 -0.68651916 -0.12758531      1.03752256
## 97  -1.44946373 -0.78667510 -1.48684468 -0.78667510 -1.12903457      0.63896971
## 98  -0.91459156 -0.80413364 -1.08214564 -0.62344075 -0.11476746      1.05957037
## 99  -0.76945312  0.67050162 -0.80413364  0.48967276 -0.73567430      0.23107198
## 100  0.08918610 -0.82184079  0.07641832 -0.87658763  0.56275157     -0.15328619
## 101 -0.40526982 -0.73567430 -0.33710120 -0.80413364 -0.63896971     -0.43305527
## 102 -0.62344075 -0.75245638 -0.56275157 -0.82184079 -0.87658763     -0.89542793
## 103 -0.57772207 -0.56275157 -0.51856960 -0.57772207 -0.82184079     -0.83980946
## 104  0.37779383 -0.76945312  0.39149488 -0.85805346  0.25729077     -0.07641832
## 105 -0.56275157 -0.53318051 -0.50406856 -0.56275157 -0.80413364     -0.82184079
## 106 -0.06366298 -0.03818128 -0.06366298  0.83980946 -0.27046566      0.07641832
## 107 -1.01596791  0.53318051 -0.89542793  0.33710120 -1.05957037     -0.17908874
## 108 -0.29695946  0.24416040 -0.39149488  0.05091800 -0.33710120      1.23113036
## 109  0.20501110  0.33710120  0.19203379  0.11476746  0.07641832     -0.21802303
```

```
## 110  0.01272434  0.29695946 -0.03818128  0.15328619  0.35060018      0.60806071
## 111 -1.83849262  0.47537773 -1.83849262  0.40526982 -1.31706374      0.97421613
## 112  0.65465430  0.28368767  0.70271480  0.07641832  0.48967276     -0.67050162
## 113 -0.59282318 -0.60806071 -0.53318051 -0.60806071 -0.83980946     -0.85805346
## 114 -0.12758531 -0.71909690 -0.19203379 -0.75245638  0.80413364      0.75245638
## 115  0.75245638 -0.59282318  0.80413364 -0.63896971  0.17908874     -1.48684468
## 116 -0.39149488 -0.65465430 -0.32366339 -0.70271480 -0.62344075     -0.41912210
## 117  0.51856960 -0.68651916  0.51856960 -0.76945312  0.51856960     -0.57772207
## 118  0.29695946 -0.62344075  0.31028376 -0.65465430  0.15328619     -0.36416334
## 119 -0.03818128 -0.63896971  0.03818128 -0.67050162 -0.07641832     -0.62344075
## 120 -0.16617364 -2.23555842 -0.23107198 -1.99828954  0.75245638      0.70271480
## 121 -0.33710120 -2.10223158 -0.43305527 -2.42690063 -0.37779383      1.15343724
## 122 -0.68651916 -1.52642702 -0.62344075 -1.61367018 -0.95396468     -0.97421613
## 123  0.12758531 -1.38024023  0.12758531 -1.38024023 -0.21802303     -0.03818128
## 124  0.33710120 -2.42690063  0.35060018 -2.80216172  0.21802303     -0.11476746
## 125 -0.10196844 -1.31706374 -0.10196844 -1.08214564 -0.31028376      0.03818128
## 126 -0.97421613 -2.80216172 -1.15343724 -1.52642702 -0.15328619      0.99487522
## 127 -1.48684468 -1.83849262 -1.52642702 -1.77352271 -1.15343724      0.62344075
## 128 -0.95396468 -1.91230127 -1.12903457 -1.44946373 -0.14042416      1.01596791
## 129 -0.80413364 -0.97421613 -0.83980946 -1.05957037 -0.76945312      0.20501110
## 130  0.07641832 -1.99828954  0.06366298 -2.23555842  0.54790615     -0.16617364
## 131 -0.43305527 -1.66232963 -0.36416334 -1.83849262 -0.67050162     -0.46117919
## 132 -0.70271480 -1.71527720 -0.63896971 -1.91230127 -0.97421613     -0.99487522
## 133 -0.65465430 -1.34797950 -0.59282318 -1.34797950 -0.91459156     -0.93409710
## 134  0.35060018 -1.77352271  0.36416334 -2.10223158  0.23107198     -0.10196844
## 135 -0.63896971 -1.28735798 -0.57772207 -1.31706374 -0.89542793     -0.91459156
## 136 -0.08918610 -1.25874673 -0.08918610 -0.73567430 -0.29695946      0.05091800
## 137 -1.03752256 -1.08214564 -0.91459156 -1.15343724 -1.08214564     -0.19203379
## 138 -0.32366339 -1.23113036 -0.41912210 -1.28735798 -0.36416334      1.17854682
## 139  0.19203379 -1.15343724  0.17908874 -1.23113036  0.06366298     -0.23107198
## 140  0.00000000 -1.17854682 -0.05091800 -1.20442230  0.33710120      0.59282318
## 141 -1.91230127 -1.10528634 -1.91230127 -1.12903457 -1.34797950      0.95396468
## 142  0.63896971 -1.20442230  0.68651916 -1.25874673  0.47537773     -0.68651916
## 143 -0.67050162 -1.41400510 -0.60806071 -1.41400510 -0.93409710     -0.95396468
## 144 -0.15328619 -1.61367018 -0.21802303 -1.66232963  0.76945312      0.71909690
## 145 -0.41912210 -1.48684468 -0.35060018 -1.56855670 -0.65465430     -0.44707302
## 146  0.50406856 -1.56855670  0.50406856 -1.71527720  0.50406856     -0.59282318
## 147  0.28368767 -1.44946373  0.29695946 -1.48684468  0.14042416     -0.37779383
## 148  1.17854682  1.91230127  1.31706374  1.61367018  0.65465430     -1.66232963
## 149  1.41400510  1.03752256  1.41400510  0.80413364  1.25874673      1.12903457
## 150  0.47537773  1.10528634  0.44707302  0.95396468  0.46117919      1.41400510
## 151  0.87658763  1.25874673  0.83980946  1.08214564  0.93409710      1.56855670
## 152  0.82184079  1.77352271  0.75245638  1.99828954  0.89542793      1.77352271
## 153  0.73567430  1.56855670  0.71909690  1.28735798  0.32366339     -0.25729077
## 154  0.80413364  1.99828954  0.76945312  1.66232963  0.36416334     -1.52642702
## 155  1.52642702  1.83849262  1.61367018  1.52642702  1.15343724     -1.38024023
## 156  2.10223158  1.08214564  2.10223158  0.82184079  2.10223158      0.24416040
## 157  0.97421613  1.12903457  1.03752256  1.03752256  0.70271480      0.57772207
## 158  0.67050162  2.23555842  0.78667510  1.77352271 -0.03818128     -1.61367018
## 159 -0.47537773  1.44946373 -0.67050162  1.71527720  0.12758531      2.80216172
## 160  0.17908874  2.80216172  0.16617364  2.80216172  0.03818128      1.61367018
## 161  0.78667510  1.15343724  0.73567430  0.93409710  0.62344075      0.68651916
## 162  0.68651916  1.23113036  0.59282318  1.20442230  1.08214564      0.50406856
## 163  1.08214564  1.01596791  0.93409710  0.91459156  1.99828954      1.44946373
## 164  0.57772207  1.71527720  0.67050162  1.38024023  0.11476746     -0.27046566
```

```
## 165  1.66232963  1.05957037  1.66232963  0.85805346  1.34797950      0.02545075
## 166  0.99487522  1.17854682  1.05957037  0.89542793  0.85805346      0.46117919
## 167  1.15343724  2.10223158  1.23113036  2.23555842  0.97421613      1.25874673
## 168  1.05957037  1.20442230  1.10528634  0.99487522  1.31706374     -0.29695946
## 169  2.23555842  1.52642702  2.23555842  1.17854682  1.71527720     -1.25874673
## 170  1.20442230  1.41400510  1.28735798  1.12903457  0.87658763      0.25729077
## 171  1.10528634  1.48684468  1.15343724  1.44946373  1.23113036      2.42690063
## 172  0.85805346  1.61367018  0.89542793  1.31706374  0.60806071     -0.32366339
## 173  1.38024023  1.28735798  1.25874673  1.15343724  2.23555842      1.34797950
## 174  1.77352271  1.34797950  1.77352271  1.01596791  1.38024023      0.33710120
## 175  1.99828954  1.66232963  1.99828954  1.25874673  1.41400510     -1.15343724
## 176  0.32366339  2.42690063  0.41912210  1.83849262  0.00000000     -1.10528634
## 177  1.61367018  1.38024023  1.56855670  1.05957037  1.12903457      0.39149488
## 178  1.03752256  0.20501110  1.08214564  0.19203379  1.28735798     -0.31028376
## 179  1.91230127  0.12758531  1.83849262 -0.03818128  1.77352271      0.44707302
## 180  1.44946373  0.15328619  1.44946373  0.08918610  1.48684468      2.23555842
## 181  0.54790615  0.17908874  0.48967276  0.17908874  0.71909690      1.31706374
## 182  1.48684468  0.14042416  1.48684468  0.00000000  1.61367018      0.32366339
## 183  0.25729077  0.95396468  0.25729077  0.97421613 -0.23107198     -0.47537773
## 184  0.95396468  0.21802303  0.99487522  0.03818128  0.67050162      0.14042416
## 185  2.80216172  0.07641832  2.80216172 -0.05091800  2.80216172      0.82184079
## 186  2.42690063  0.16617364  2.42690063 -0.01272434  2.42690063      0.83980946
## 187  1.28735798  0.10196844  1.20442230  0.01272434  1.91230127      1.52642702
## 188  1.83849262  0.57772207  1.91230127  0.78667510  1.52642702     -0.51856960
## 189  1.25874673 -1.03752256  1.17854682 -1.03752256  1.83849262      1.48684468
## 190  1.01596791 -1.01596791  0.97421613 -1.10528634  1.03752256      1.83849262
## 191  0.83980946 -0.93409710  0.87658763 -0.99487522  0.59282318     -0.33710120
## 192  1.56855670 -0.91459156  1.52642702 -0.93409710  1.10528634      0.37779383
## 193  1.71527720 -1.05957037  1.71527720 -1.17854682  1.44946373      0.35060018
## 194  1.34797950 -0.70271480  1.34797950  1.10528634  1.05957037      0.40526982
## 195  0.70271480 -1.12903457  0.63896971 -0.97421613  1.17854682      1.66232963
## 196  0.46117919 -0.95396468  0.43305527 -1.01596791  0.44707302      1.38024023
## 197  0.71909690 -0.99487522  0.65465430 -0.95396468  1.20442230      1.71527720
##      ZSNU.L.ADC   ZSP.L.ADC GLNU_norm.L.ADC ZSNU_norm.L.ADC GLVAR_area.L.ADC
## 1   -1.48684468  0.25729077     -0.11476746      0.29695946       0.87658763
## 2   -0.95396468  0.03818128     -0.08918610     -0.07641832      -0.56275157
## 3   -0.46117919 -0.97421613     -0.32366339     -1.17854682       0.82184079
## 4    0.35060018 -0.51856960     -0.12758531     -0.68651916      -0.85805346
## 5   -0.63896971 -0.33710120     -0.25729077     -0.31028376      -0.33710120
## 6   -0.48967276  0.33710120     -0.71909690      0.23107198       1.05957037
## 7   -1.17854682  0.31028376     -0.43305527      0.40526982       0.32366339
## 8   -0.67050162 -0.75245638     -0.19203379     -0.70271480      -0.10196844
## 9   -1.34797950  0.44707302     -0.31028376      0.44707302      -0.07641832
## 10  -0.68651916 -0.20501110     -0.39149488     -0.21802303       0.75245638
## 11  -0.39149488  0.14042416     -0.14042416      0.20501110      -0.46117919
## 12   0.25729077  0.27046566     -0.41912210      0.25729077       0.12758531
## 13   0.21802303 -2.80216172      0.60806071     -1.99828954      -1.66232963
## 14  -0.14042416 -0.14042416     -0.07641832     -0.15328619      -0.87658763
## 15   1.10528634 -1.48684468     -0.02545075     -1.25874673      -0.62344075
## 16  -0.07641832 -0.43305527     -0.10196844     -0.50406856      -0.35060018
## 17  -0.99487522 -0.21802303     -0.01272434     -0.20501110      -1.01596791
## 18   0.75245638  0.21802303     -0.24416040      0.17908874      -0.37779383
## 19   0.20501110 -0.76945312     -0.46826666     -0.44707302       0.57772207
## 20   1.17854682 -0.47537773     -0.35060018     -0.57772207      -0.27046566
## 21   0.53318051 -0.87658763     -0.16617364     -0.76945312      -0.43305527
```

```
## 22  -2.23555842 -0.23107198     -0.44707302     -0.10196844       1.31706374
## 23  -0.08918610 -0.17908874      0.00000000     -0.23107198      -0.25729077
## 24   0.51856960 -0.27046566     -0.33710120     -0.47537773      -0.32366339
## 25  -0.56275157  0.05091800     -0.59282318      0.08918610       0.53318051
## 26   0.95396468  0.11476746     -0.37779383      0.05091800      -0.20501110
## 27  -0.65465430  0.10196844     -0.73567430      0.03818128       1.08214564
## 28  -0.73567430 -0.19203379     -0.56275157     -0.19203379       0.91459156
## 29  -0.97421613  0.29695946     -0.67050162      0.24416040       0.85805346
## 30  -0.25729077 -1.17854682      0.24416040     -1.20442230      -1.17854682
## 31  -1.99828954  0.63896971     -0.20501110      0.63896971       0.97421613
## 32   0.50406856 -1.12903457      0.14042416     -1.01596791      -0.78667510
## 33   0.93409710 -1.52642702     -0.29695946     -1.71527720      -0.39149488
## 34  -1.25874673  0.32366339     -0.65465430      0.39149488       1.01596791
## 35  -0.54790615  0.50406856     -0.62344075      0.56275157       0.70271480
## 36   0.23107198 -0.12758531     -0.50406856     -0.06366298       0.31028376
## 37   0.60806071 -0.10196844     -0.46826666     -0.08918610       0.24416040
## 38  -1.52642702 -0.44707302     -0.60806071     -0.33710120       1.25874673
## 39   0.87658763 -0.08918610     -0.05091800     -0.14042416      -0.41912210
## 40  -0.44707302 -1.01596791      0.44707302     -1.12903457      -1.71527720
## 41   1.41400510 -0.78667510     -0.15328619     -0.97421613      -0.40526982
## 42  -0.50406856 -0.01272434     -0.53318051      0.06366298       0.71909690
## 43   0.89542793 -1.15343724     -0.17908874     -1.15343724      -0.51856960
## 44  -2.10223158  0.60806071     -0.28368767      0.62344075       0.95396468
## 45  -1.83849262  0.59282318      0.50406856      0.59282318       0.76945312
## 46  -0.70271480 -0.15328619      0.32366339     -0.03818128      -0.03818128
## 47  -1.10528634  0.53318051      0.08918610      0.53318051       0.68651916
## 48   0.00000000  0.36416334      0.11476746      0.33710120       0.14042416
## 49  -1.91230127  0.56275157      0.06366298      0.54790615       1.48684468
## 50   0.68651916 -0.07641832      0.36416334     -0.16617364      -0.54790615
## 51   0.59282318 -0.32366339      0.57772207     -0.61573253      -1.38024023
## 52   0.83980946 -0.35060018      0.47537773     -0.61573253      -1.08214564
## 53   1.48684468 -0.40526982      0.20501110     -0.53318051      -0.17908874
## 54  -0.57772207  0.54790615      0.03818128      0.50406856       0.56275157
## 55  -2.42690063  0.40526982      0.28368767      0.36416334       0.99487522
## 56  -1.77352271  0.46117919      0.07641832      0.46117919       0.83980946
## 57  -0.10196844 -0.06366298      0.15328619     -0.11476746      -0.06366298
## 58   0.32366339 -0.31028376      0.12758531     -0.17908874       0.48967276
## 59  -2.80216172  0.65465430      0.40526982      0.65465430       1.10528634
## 60   1.56855670 -1.41400510      0.80413364     -1.31706374      -1.77352271
## 61   1.31706374  0.20501110      0.25729077      0.15328619      -0.21802303
## 62   0.06366298 -0.24416040      0.59282318     -0.32366339      -0.71909690
## 63   0.08918610 -1.25874673      0.27046566     -1.41400510      -0.23107198
## 64   0.27046566 -1.56855670      0.82184079     -1.66232963      -2.80216172
## 65  -0.59282318  0.41912210      0.05091800      0.47537773       0.63896971
## 66  -0.47537773 -0.03818128      0.23107198     -0.12758531       0.03818128
## 67   0.24416040  0.23107198      0.19203379      0.16617364      -0.24416040
## 68   1.15343724  0.35060018     -0.06366298      0.35060018       0.65465430
## 69  -1.20442230 -0.83980946      0.63896971     -0.75245638      -0.80413364
## 70  -1.71527720  0.51856960      0.54790615      0.48967276      -0.08918610
## 71  -0.24416040  0.57772207      0.65465430      0.51856960      -0.83980946
## 72   2.10223158 -0.28368767      0.56275157     -0.51856960      -0.36416334
## 73  -0.75245638  0.43305527      0.37779383      0.41912210       0.11476746
## 74   0.29695946 -1.61367018      0.83980946     -1.44946373      -2.42690063
## 75  -0.23107198  0.39149488      0.73567430      0.32366339      -1.34797950
## 76  -1.38024023  0.62344075      0.33710120      0.60806071       0.35060018
```

```
## 77  -1.44946373  0.37779383      0.39149488      0.37779383       0.39149488
## 78  -0.03818128  0.47537773      0.70271480      0.43305527      -1.10528634
## 79  -1.23113036 -0.93409710      0.16617364     -0.87658763      -0.82184079
## 80   0.12758531 -0.70271480     -0.23107198     -0.82184079      -0.31028376
## 81   1.91230127 -0.50406856     -0.03818128     -0.73567430      -0.99487522
## 82   0.46117919 -0.95396468      0.43305527     -0.89542793      -1.31706374
## 83  -0.27046566 -0.91459156      0.01272434     -1.05957037      -0.57772207
## 84  -1.12903457  0.00000000     -0.36416334     -0.01272434       0.80413364
## 85  -0.32366339  0.28368767     -0.21802303      0.31028376      -0.11476746
## 86   0.01272434 -1.38024023      0.46117919     -1.52642702      -0.97421613
## 87   0.10196844 -1.03752256      0.35060018     -1.08214564      -0.53318051
## 88   0.44707302 -1.44946373      0.53318051     -1.48684468      -1.83849262
## 89  -1.05957037  0.16617364     -0.54790615      0.10196844       0.89542793
## 90   0.41912210 -1.91230127     -0.40526982     -1.83849262      -1.99828954
## 91   1.25874673 -0.73567430     -0.68651916     -0.85805346      -1.52642702
## 92  -0.82184079  0.07641832     -1.01596791      0.11476746       0.06366298
## 93  -0.05091800  0.17908874     -0.51856960      0.19203379      -1.12903457
## 94  -0.16617364 -0.39149488     -0.85805346     -0.35060018      -0.91459156
## 95   0.17908874 -0.25729077     -1.08214564     -0.24416040       0.28368767
## 96   1.05957037 -1.83849262     -0.80413364     -1.61367018      -0.65465430
## 97   0.57772207 -0.82184079     -0.76945312     -0.93409710      -1.41400510
## 98   1.08214564 -1.77352271     -0.75245638     -1.56855670      -0.63896971
## 99   0.07641832 -0.16617364      0.68651916     -0.25729077      -0.70271480
## 100 -0.28368767 -1.20442230     -0.82184079     -1.23113036      -0.59282318
## 101 -0.35060018 -0.05091800     -0.97421613      0.00000000      -0.14042416
## 102 -0.83980946  0.01272434     -1.05957037      0.07641832       0.05091800
## 103 -0.78667510  0.12758531     -0.91459156      0.14042416       0.08918610
## 104 -0.15328619 -0.36416334     -0.78667510     -0.29695946      -0.89542793
## 105 -0.76945312  0.15328619     -0.87658763      0.21802303       0.10196844
## 106  0.19203379 -0.02545075     -0.57772207     -0.05091800       0.29695946
## 107 -0.01272434  0.06366298      0.21802303     -0.02545075       0.16617364
## 108  1.28735798 -0.29695946      0.62344075     -0.56275157      -1.48684468
## 109 -0.20501110  0.19203379      0.41912210      0.27046566      -0.75245638
## 110  0.63896971 -0.60806071      0.48967276     -0.59282318      -1.25874673
## 111  0.80413364 -0.80413364      0.75245638     -0.80413364      -1.20442230
## 112 -0.60806071  0.24416040      0.02545075      0.28368767       0.37779383
## 113 -0.80413364  0.08918610     -0.95396468      0.12758531       0.07641832
## 114  0.43305527 -1.71527720     -0.27046566     -1.77352271      -1.91230127
## 115 -1.41400510  0.48967276     -0.99487522      0.57772207       0.33710120
## 116 -0.33710120  0.02545075     -0.93409710      0.02545075      -0.12758531
## 117 -1.01596791 -0.37779383     -0.63896971     -0.39149488      -1.03752256
## 118 -0.40526982 -0.11476746     -0.83980946      0.01272434      -0.47537773
## 119 -0.71909690 -0.54790615     -0.89542793     -0.40526982      -0.05091800
## 120  0.39149488 -2.42690063     -1.28735798     -2.80216172      -2.23555842
## 121  1.20442230 -1.28735798     -1.41400510     -1.34797950      -1.61367018
## 122 -0.91459156 -0.59282318     -2.23555842     -0.46117919      -0.01272434
## 123 -0.06366298 -0.48967276     -1.31706374     -0.37779383      -1.15343724
## 124 -0.19203379 -1.10528634     -1.71527720     -0.95396468      -0.95396468
## 125  0.15328619 -0.89542793     -2.80216172     -0.78667510       0.25729077
## 126  1.01596791 -2.23555842     -1.56855670     -2.23555842      -0.68651916
## 127  0.56275157 -1.34797950     -1.48684468     -1.38024023      -1.44946373
## 128  1.03752256 -2.10223158     -1.44946373     -2.10223158      -0.67050162
## 129  0.05091800 -0.85805346     -1.10528634     -0.83980946      -0.73567430
## 130 -0.29695946 -1.66232963     -1.61367018     -1.91230127      -0.60806071
## 131 -0.37779383 -0.68651916     -2.10223158     -0.65465430      -0.16617364
```

```
## 132 -0.93409710 -0.65465430     -2.42690063     -0.48967276      -0.02545075
## 133 -0.87658763 -0.56275157     -1.83849262     -0.41912210       0.01272434
## 134 -0.17908874 -1.05957037     -1.52642702     -0.91459156      -0.93409710
## 135 -0.85805346 -0.53318051     -1.77352271     -0.36416334       0.02545075
## 136  0.16617364 -0.67050162     -1.34797950     -0.71909690       0.27046566
## 137 -0.02545075 -0.62344075     -1.20442230     -0.67050162       0.15328619
## 138  1.23113036 -0.99487522     -1.12903457     -1.03752256      -1.56855670
## 139 -0.21802303 -0.46117919     -1.17854682     -0.28368767      -0.76945312
## 140  0.62344075 -1.23113036     -1.15343724     -1.10528634      -1.28735798
## 141  0.78667510 -1.31706374     -1.03752256     -1.28735798      -1.23113036
## 142 -0.62344075 -0.41912210     -1.23113036     -0.27046566       0.36416334
## 143 -0.89542793 -0.57772207     -1.99828954     -0.43305527       0.00000000
## 144  0.40526982 -1.99828954     -1.25874673     -2.42690063      -2.10223158
## 145 -0.36416334 -0.63896971     -1.91230127     -0.54790615      -0.15328619
## 146 -1.03752256 -1.08214564     -1.38024023     -0.99487522      -1.05957037
## 147 -0.41912210 -0.71909690     -1.66232963     -0.63896971      -0.48967276
## 148 -1.56855670  2.10223158      0.99487522      2.23555842       2.80216172
## 149  1.44946373  1.17854682      1.31706374      1.17854682       0.73567430
## 150  1.38024023  1.05957037      1.71527720      1.00536565       0.20501110
## 151  1.52642702  1.03752256      1.52642702      1.00536565       0.43305527
## 152  1.99828954  0.99487522      1.12903457      1.03752256       1.20442230
## 153  0.03818128  1.99828954      0.95396468      1.99828954       1.71527720
## 154 -1.61367018  1.61367018      1.23113036      1.56855670       2.23555842
## 155 -1.31706374  1.77352271      1.01596791      1.77352271       1.99828954
## 156  0.37779383  1.20442230      1.05957037      1.23113036       1.34797950
## 157  0.91459156  1.08214564      1.03752256      1.15343724       1.66232963
## 158 -1.66232963  2.80216172      1.41400510      2.80216172       2.42690063
## 159  2.23555842  0.76945312      2.23555842      0.80413364      -0.19203379
## 160  1.83849262  1.38024023      1.17854682      1.34797950       1.17854682
## 161  0.65465430  1.15343724      1.77352271      1.10528634       0.59282318
## 162  0.67050162  0.80413364      1.20442230      0.78667510       1.15343724
## 163  0.82184079  0.73567430      2.42690063      0.68651916      -0.50406856
## 164  0.02545075  1.66232963      0.97421613      1.83849262       1.77352271
## 165  0.11476746  1.23113036      1.15343724      1.20442230       1.38024023
## 166  0.76945312  1.41400510      1.10528634      1.38024023       1.12903457
## 167  1.71527720  1.48684468      0.89542793      1.52642702       1.83849262
## 168 -0.51856960  0.89542793      1.83849262      0.95396468       0.54790615
## 169 -1.28735798  1.91230127      1.61367018      1.91230127       1.28735798
## 170  0.31028376  2.23555842      1.91230127      2.10223158       0.50406856
## 171  2.80216172  1.10528634      1.66232963      1.05957037       0.93409710
## 172 -0.11476746  1.71527720      1.34797950      1.66232963       1.44946373
## 173  0.85805346  0.71909690      2.80216172      0.76945312      -0.44707302
## 174  0.33710120  1.56855670      2.10223158      1.48684468       0.21802303
## 175 -1.08214564  2.42690063      1.25874673      2.42690063       1.56855670
## 176 -1.15343724  1.52642702      1.38024023      1.61367018       1.61367018
## 177  0.48967276  1.83849262      1.99828954      1.71527720       0.41912210
## 178 -0.53318051  0.85805346      1.08214564      0.89542793       0.51856960
## 179  0.71909690  0.95396468      0.85805346      0.93409710       1.03752256
## 180  2.42690063  0.97421613      0.91459156      0.97421613       0.44707302
## 181  1.12903457  0.83980946      1.44946373      0.87658763       0.23107198
## 182  0.28368767  0.87658763      0.93409710      0.83980946       0.67050162
## 183 -0.43305527  1.25874673      0.78667510      1.25874673       1.91230127
## 184  0.14042416  1.44946373      0.87658763      1.44946373       1.23113036
## 185  0.54790615  0.78667510      1.48684468      0.73567430       0.46117919
## 186  0.70271480  0.82184079      1.28735798      0.82184079       0.78667510
```

```
## 187  0.99487522  0.75245638      1.56855670      0.75245638      -0.28368767
## 188 -0.31028376  1.31706374      0.67050162      1.28735798       2.10223158
## 189  0.97421613  0.67050162      0.76945312      0.67050162      -0.29695946
## 190  1.77352271  0.93409710      0.51856960      0.91459156       0.17908874
## 191 -0.12758531  1.28735798     -0.48967276      1.31706374       1.41400510
## 192  0.47537773  1.34797950      0.71909690      1.41400510       0.40526982
## 193  0.36416334  1.01596791      0.10196844      1.08214564       0.47537773
## 194  0.73567430  1.12903457     -0.70271480      1.12903457       1.52642702
## 195  1.61367018  0.68651916      0.17908874      0.70271480       0.60806071
## 196  1.34797950  0.91459156      0.29695946      0.85805346       0.19203379
## 197  1.66232963  0.70271480      0.31028376      0.71909690       0.62344075
##     ZSVAR.L.ADC Entropy_area.L.ADC Max_cooc.H.ADC Average_cooc.H.ADC
## 1   -0.80413364        -0.75245638    -0.11476746        -1.20442230
## 2   -0.63896971        -1.28735798    -0.27046566         0.57772207
## 3    0.44707302         0.57772207     0.07641832        -0.80413364
## 4    0.06366298        -0.20501110    -0.12758531        -0.56275157
## 5    0.01272434        -0.12758531    -0.39837290        -0.17908874
## 6   -1.25874673         0.59282318    -0.07641832        -0.83980946
## 7   -0.68651916        -0.36416334    -0.33710120         0.40526982
## 8    0.48967276         0.03818128    -0.37779383         0.43305527
## 9   -1.44946373        -1.44946373    -0.17908874        -0.29695946
## 10  -0.19203379         0.21802303    -0.14042416        -1.31706374
## 11  -0.44707302        -0.87658763    -0.20501110         0.46117919
## 12  -0.91459156        -0.03818128    -0.32366339        -1.08214564
## 13   1.99828954        -0.67050162     0.01272434        -1.77352271
## 14  -0.35060018        -0.89542793    -0.29031717        -0.67050162
## 15   1.61367018         0.12758531    -0.10196844        -1.44946373
## 16   0.07641832        -0.10196844    -0.47537773        -0.14042416
## 17  -0.07641832        -1.48684468    -0.46117919         0.54790615
## 18  -0.75245638        -0.24416040    -0.21802303         0.02545075
## 19   0.82184079         0.56275157    -0.35060018        -1.83849262
## 20   0.20501110         0.31028376     0.20501110        -0.99487522
## 21   0.67050162         0.24416040    -0.01272434        -1.28735798
## 22   0.14042416        -0.50406856    -0.15328619        -0.24416040
## 23  -0.32366339        -0.70271480    -0.19203379        -1.41400510
## 24  -0.03818128         0.15328619    -0.44707302        -0.46117919
## 25  -0.29695946         0.48967276    -0.48967276         0.37779383
## 26  -0.50406856         0.02545075    -0.23761110         0.32366339
## 27  -0.51856960         0.62344075    -0.23761110         0.59282318
## 28  -0.23107198         0.54790615    -0.39837290        -0.87658763
## 29  -0.99487522         0.47537773    -0.29031717        -0.15328619
## 30   0.70271480        -0.65465430    -0.36416334        -1.38024023
## 31  -2.42690063        -2.42690063    -0.05091800        -0.25729077
## 32   0.89542793        -0.19203379    -0.08918610        -1.25874673
## 33   1.31706374         0.63896971    -0.02545075        -0.91459156
## 34  -0.76945312         0.37779383    -0.25729077         0.23107198
## 35  -1.41400510         0.27046566    -0.41912210         0.56275157
## 36  -0.15328619         0.35060018    -0.16617364        -0.51856960
## 37  -0.37779383         0.43305527     0.15328619         0.31028376
## 38   0.16617364         0.41912210    -0.06366298         0.39149488
## 39  -0.46117919        -0.54790615    -0.03818128         0.25729077
## 40   0.50406856        -1.56855670    -0.43305527        -1.34797950
## 41   0.36416334         0.29695946     0.00000000        -0.23107198
## 42  -0.11476746         0.39149488    -0.50406856        -1.99828954
## 43   0.93409710         0.46117919     0.19203379        -1.12903457
```

```
## 44  -2.80216172        -2.80216172    -0.31028376        -0.27046566
## 45  -1.52642702        -1.99828954     0.63896971         0.29695946
## 46   0.37779383        -0.02545075     0.78667510        -2.10223158
## 47  -1.15343724         0.07641832     0.62344075        -0.05091800
## 48  -0.53318051         0.17908874     0.46117919        -0.60806071
## 49  -1.05957037        -0.68651916     0.53318051        -0.12758531
## 50  -0.14042416        -0.15328619     0.59282318        -1.10528634
## 51   0.17908874        -0.78667510     0.47537773        -0.97421613
## 52   0.19203379        -0.21802303     0.76945312        -0.62344075
## 53   0.29695946         0.53318051     0.70271480        -0.71909690
## 54  -1.31706374         0.20501110     0.43305527        -0.78667510
## 55  -0.83980946        -1.20442230     0.65465430        -0.01272434
## 56  -0.71909690        -0.29695946     0.68651916         0.60806071
## 57  -0.06366298         0.33710120     0.67050162         0.36416334
## 58   0.47537773         0.51856960     0.57772207        -1.91230127
## 59  -2.10223158        -2.23555842     0.73567430        -0.85805346
## 60   1.34797950        -0.85805346     0.93409710        -0.33710120
## 61  -0.28368767         0.05091800     0.83980946         0.35060018
## 62   0.03818128        -0.57772207     0.56275157        -1.17854682
## 63   0.87658763         0.65465430     0.80413364        -1.03752256
## 64   1.71527720        -0.93409710     0.71909690        -0.16617364
## 65  -0.60806071         0.23107198     0.54790615        -0.82184079
## 66  -0.10196844         0.14042416     0.44707302        -0.35060018
## 67  -0.27046566         0.10196844     0.41912210        -0.73567430
## 68  -0.47537773         0.60806071     0.51856960         0.28368767
## 69   0.75245638        -0.95396468     0.50406856        -2.42690063
## 70  -1.12903457        -2.10223158     0.60806071         0.62344075
## 71  -1.34797950        -1.66232963     0.87658763         0.20501110
## 72   0.27046566         0.32366339     1.01596791         0.27046566
## 73  -0.70271480        -0.17908874     0.99487522         0.24416040
## 74   1.44946373        -0.63896971     0.97421613        -0.39149488
## 75  -0.67050162        -1.83849262     0.82184079        -0.08918610
## 76  -1.48684468        -1.12903457     0.89542793         0.65465430
## 77  -0.33710120        -0.53318051     0.91459156        -0.21802303
## 78  -0.78667510        -1.61367018     0.85805346         0.03818128
## 79   0.68651916        -1.03752256     0.02545075        -2.80216172
## 80   0.33710120         0.44707302     0.10196844         0.33710120
## 81   0.08918610        -0.07641832     0.16617364        -0.19203379
## 82   0.73567430        -0.91459156     0.12758531        -0.95396468
## 83   0.51856960         0.00000000     0.14042416         0.21802303
## 84  -0.39149488         0.11476746     0.08918610        -0.20501110
## 85  -0.82184079        -0.25729077     0.06366298        -0.54790615
## 86   0.85805346        -0.16617364     0.05091800         0.48967276
## 87   0.65465430        -0.27046566     0.11476746         0.50406856
## 88   1.17854682        -0.41912210     0.17908874        -0.28368767
## 89  -0.59282318         0.50406856     0.03818128         0.47537773
## 90   1.12903457        -0.62344075    -0.60806071        -0.32366339
## 91   0.00000000        -0.97421613    -0.73567430        -0.47537773
## 92  -1.03752256        -0.33710120    -0.75245638         0.14042416
## 93  -1.28735798        -1.77352271    -0.56275157         0.00000000
## 94  -0.43305527        -1.08214564    -0.85805346        -0.70271480
## 95  -0.73567430         0.36416334    -0.71909690        -0.07641832
## 96   1.52642702         0.06366298    -0.83980946        -1.52642702
## 97   0.02545075        -1.01596791    -0.82184079        -1.01596791
## 98   1.56855670         0.08918610    -0.76945312        -1.48684468
```

```
## 99   0.05091800        -0.51856960     0.95396468        -1.15343724
## 100  0.46117919        -0.05091800    -0.70271480         0.17908874
## 101 -1.10528634        -0.39149488    -0.80413364        -0.59282318
## 102 -1.08214564        -0.35060018    -0.87658763         0.12758531
## 103 -0.95396468        -0.31028376    -0.57772207         0.16617364
## 104 -0.41912210        -1.05957037    -0.78667510        -0.68651916
## 105 -0.93409710        -0.28368767    -0.53318051         0.19203379
## 106 -0.56275157         0.40526982    -0.51856960        -0.06366298
## 107 -0.05091800         0.16617364     0.35060018        -1.61367018
## 108  0.12758531        -0.73567430     0.48967276        -0.43305527
## 109 -0.21802303        -0.80413364     0.32366339         0.01272434
## 110  0.71909690        -0.23107198     0.40526982        -0.40526982
## 111  0.57772207        -0.83980946     0.39149488        -0.89542793
## 112 -0.40526982         0.19203379     0.36416334        -0.41912210
## 113 -0.97421613        -0.32366339    -0.62344075         0.15328619
## 114  1.15343724        -0.60806071    -0.54790615        -0.31028376
## 115 -2.23555842        -1.25874673    -0.65465430         0.63896971
## 116 -1.01596791        -0.37779383    -0.67050162        -0.57772207
## 117 -0.25729077        -1.52642702    -0.68651916         0.53318051
## 118 -0.57772207        -0.99487522    -0.63896971         0.44707302
## 119  0.24416040        -0.11476746    -0.59282318        -2.23555842
## 120  1.05957037        -0.82184079    -1.41400510        -0.37779383
## 121 -0.36416334        -1.23113036    -1.71527720        -0.53318051
## 122 -1.77352271        -0.47537773    -1.77352271         0.06366298
## 123 -1.99828954        -1.91230127    -1.34797950        -0.03818128
## 124 -0.89542793        -1.41400510    -2.42690063        -0.76945312
## 125 -1.38024023         0.25729077    -1.66232963        -0.11476746
## 126  1.38024023        -0.08918610    -2.23555842        -1.66232963
## 127 -0.31028376        -1.34797950    -2.10223158        -1.05957037
## 128  1.41400510        -0.06366298    -1.83849262        -1.56855670
## 129 -0.24416040        -0.71909690    -1.01596791        -1.23113036
## 130  0.35060018        -0.14042416    -1.61367018         0.10196844
## 131 -1.91230127        -0.59282318    -1.99828954        -0.65465430
## 132 -1.83849262        -0.48967276    -2.80216172         0.05091800
## 133 -1.61367018        -0.44707302    -1.38024023         0.08918610
## 134 -0.87658763        -1.38024023    -1.91230127        -0.75245638
## 135 -1.56855670        -0.43305527    -1.28735798         0.11476746
## 136 -1.17854682         0.28368767    -1.25874673        -0.10196844
## 137 -0.48967276        -0.01272434    -1.20442230        -1.71527720
## 138 -0.12758531        -1.10528634    -1.10528634        -0.50406856
## 139 -0.62344075        -1.15343724    -1.23113036        -0.02545075
## 140  0.59282318        -0.40526982    -1.12903457        -0.44707302
## 141  0.41912210        -1.17854682    -1.15343724        -0.93409710
## 142 -0.85805346         0.01272434    -1.17854682        -0.48967276
## 143 -1.66232963        -0.46117919    -1.44946373         0.07641832
## 144  1.08214564        -0.76945312    -1.31706374        -0.36416334
## 145 -1.71527720        -0.56275157    -1.52642702        -0.63896971
## 146 -0.65465430        -1.71527720    -1.56855670         0.51856960
## 147 -1.20442230        -1.31706374    -1.48684468         0.41912210
## 148 -0.02545075         0.97421613     1.17854682         1.25874673
## 149  0.60806071         1.28735798     1.28735798         0.76945312
## 150  0.91459156         0.95396468     1.10528634         0.82184079
## 151  0.95396468         1.20442230     1.56855670         0.97421613
## 152  0.99487522         2.23555842     1.44946373         0.93409710
## 153 -0.17908874         1.61367018     1.05957037         0.89542793
```

```
## 154  0.10196844         0.76945312     1.34797950         1.34797950
## 155  0.23107198         1.12903457     1.41400510         2.23555842
## 156  0.63896971         1.77352271     1.38024023         1.83849262
## 157  1.03752256         2.10223158     1.25874673         0.70271480
## 158 -1.23113036         0.67050162     1.52642702         0.85805346
## 159  1.91230127         0.93409710     2.10223158         1.08214564
## 160  0.54790615         1.38024023     1.71527720         1.77352271
## 161  0.80413364         1.03752256     1.23113036         0.75245638
## 162  1.66232963         2.80216172     1.61367018         0.78667510
## 163  2.80216172         0.89542793     1.48684468         1.23113036
## 164  0.31028376         1.66232963     1.20442230         0.87658763
## 165  0.62344075         1.56855670     1.08214564         1.05957037
## 166  0.56275157         1.48684468     1.03752256         0.91459156
## 167  0.39149488         2.42690063     1.15343724         1.66232963
## 168  1.28735798         0.87658763     1.12903457         0.68651916
## 169 -0.08918610         0.68651916     1.31706374         2.42690063
## 170 -0.20501110         0.73567430     1.83849262         1.48684468
## 171  0.97421613         1.71527720     2.80216172         1.61367018
## 172  0.25729077         1.23113036     2.42690063         1.56855670
## 173  2.10223158         0.99487522     2.23555842         1.03752256
## 174  0.28368767         0.70271480     1.66232963         1.28735798
## 175 -0.54790615         0.78667510     1.91230127         2.80216172
## 176  0.53318051         1.05957037     1.99828954         1.15343724
## 177  0.15328619         0.75245638     1.77352271         1.41400510
## 178  1.23113036         0.82184079     0.21802303         0.67050162
## 179  1.01596791         1.91230127     0.28368767         1.71527720
## 180  0.83980946         1.31706374     0.37779383         1.20442230
## 181  1.25874673         0.91459156     0.31028376         0.83980946
## 182  1.10528634         1.34797950     0.33710120         1.52642702
## 183  0.43305527         1.52642702     0.27046566         1.17854682
## 184  0.11476746         1.17854682     0.25729077         0.99487522
## 185  1.48684468         1.25874673     0.24416040         1.99828954
## 186  1.20442230         1.15343724     0.29695946         2.10223158
## 187  1.83849262         1.08214564     0.75245638         1.12903457
## 188  0.32366339         1.99828954     0.23107198         1.91230127
## 189  1.77352271         1.01596791    -0.91459156         1.10528634
## 190  0.76945312         0.85805346    -0.95396468         1.01596791
## 191 -0.01272434         1.10528634    -0.97421613         1.44946373
## 192 -0.16617364         0.71909690    -0.89542793         1.38024023
## 193  0.40526982         0.80413364    -1.08214564         0.95396468
## 194  0.21802303         1.83849262    -0.93409710         1.31706374
## 195  2.23555842         1.41400510    -1.05957037         0.71909690
## 196  0.78667510         0.83980946    -1.03752256         0.80413364
## 197  2.42690063         1.44946373    -0.99487522         0.73567430
##     Variance_cooc.H.ADC Entropy_cooc.H.ADC DAVE_cooc.H.ADC DVAR_cooc.H.ADC
## 1           -0.95396468         0.48967276      0.10196844      0.07641832
## 2           -0.80413364        -0.70271480      0.01272434     -0.36416334
## 3            0.63896971        -0.23107198     -0.67050162     -0.35060018
## 4           -0.99487522         0.12758531     -1.23113036     -1.28735798
## 5           -1.71527720        -0.06366298     -0.03818128     -0.23107198
## 6            0.56275157        -0.75245638     -1.20442230     -0.80413364
## 7            0.60806071        -0.47537773      0.31028376      0.31028376
## 8           -1.91230127        -0.17908874     -0.48967276     -0.11476746
## 9           -1.25874673        -1.41400510      0.37779383      0.32366339
## 10          -0.78667510        -0.51856960     -0.54790615     -0.33710120
```

```
## 11          -1.17854682         0.17908874     -0.21802303     -0.43305527
## 12           0.17908874         0.47537773     -0.31028376     -0.21802303
## 13          -2.10223158         0.25729077     -0.65465430     -0.85805346
## 14          -0.62344075        -0.14042416     -0.85805346     -1.08214564
## 15          -0.17908874        -0.35060018     -1.91230127     -1.99828954
## 16          -1.15343724         0.53318051      0.11476746      0.12758531
## 17          -1.01596791         0.19203379      0.29695946      0.20501110
## 18          -0.37779383         0.63896971      0.24416040      0.15328619
## 19          -0.89542793         0.27046566     -0.50406856     -0.16617364
## 20          -0.10196844        -0.15328619     -1.28735798     -1.05957037
## 21          -0.35060018         0.31028376     -0.78667510     -0.56275157
## 22          -0.39149488        -1.83849262     -0.83980946     -1.48684468
## 23          -0.36416334         0.32366339      0.05091800     -0.08918610
## 24          -0.40526982         0.24416040     -1.12903457     -1.03752256
## 25           0.15328619        -0.32366339     -0.75245638     -1.01596791
## 26          -0.33710120         0.65465430      0.19203379      0.21802303
## 27           0.54790615        -0.71909690     -1.61367018     -1.66232963
## 28          -0.60806071        -0.44707302     -0.73567430     -0.99487522
## 29          -0.08918610        -0.57772207     -0.71909690     -0.91459156
## 30          -0.46117919         0.40526982      0.07641832      0.06366298
## 31          -0.75245638        -2.23555842     -0.19203379     -0.76945312
## 32          -1.08214564         0.56275157      0.02545075      0.05091800
## 33          -0.59282318         0.05091800     -1.52642702     -1.31706374
## 34           0.21802303        -1.28735798     -1.38024023     -1.83849262
## 35           0.53318051        -1.03752256      0.03818128     -0.06366298
## 36          -0.28368767        -0.85805346     -1.03752256     -0.89542793
## 37          -0.29695946         0.06366298     -0.76945312     -0.20501110
## 38           0.65465430        -1.61367018     -0.16617364      0.67050162
## 39          -0.57772207        -0.50406856      0.06366298      0.11476746
## 40          -2.42690063        -1.10528634      0.16617364     -0.10196844
## 41          -0.05091800        -0.36416334     -1.77352271     -1.44946373
## 42          -1.31706374         0.10196844      0.15328619      0.00000000
## 43          -0.43305527        -0.31028376     -1.71527720     -1.41400510
## 44          -0.76945312        -2.42690063     -0.20501110     -0.78667510
## 45          -0.32366339        -1.99828954     -0.02545075     -0.87658763
## 46          -2.23555842        -0.46117919     -0.51856960     -0.28368767
## 47           0.25729077        -0.67050162      0.12758531      0.63896971
## 48           0.62344075        -1.23113036     -0.46117919     -0.75245638
## 49          -1.34797950        -1.91230127      0.25729077     -0.19203379
## 50          -0.14042416        -0.65465430     -1.44946373     -1.77352271
## 51           0.14042416        -1.71527720     -1.48684468     -1.56855670
## 52          -0.02545075         0.07641832     -1.41400510     -1.38024023
## 53          -0.06366298         0.03818128     -1.83849262     -1.52642702
## 54          -0.56275157        -0.10196844     -0.36416334     -0.48967276
## 55          -0.11476746        -2.10223158      0.56275157      0.29695946
## 56          -0.97421613        -1.77352271      0.40526982      0.28368767
## 57          -0.07641832        -0.16617364     -1.17854682     -1.20442230
## 58          -1.28735798         0.20501110     -0.80413364     -0.50406856
## 59          -1.83849262        -2.80216172      0.17908874     -0.41912210
## 60          -0.03818128        -0.93409710     -0.01272434      0.10196844
## 61          -0.82184079         0.59282318      0.00000000      0.08918610
## 62          -0.53318051         0.44707302     -0.33710120     -0.25729077
## 63          -0.44707302        -0.73567430     -2.80216172     -1.91230127
## 64          -1.38024023        -1.17854682     -0.57772207      0.03818128
## 65           0.16617364        -0.48967276     -1.10528634     -1.23113036
```

```
## 66          0.19203379        -0.33710120     -1.15343724     -1.34797950
## 67          0.57772207         0.51856960     -0.24416040     -0.47537773
## 68         -0.15328619         0.39149488     -0.97421613     -0.51856960
## 69         -0.87658763        -0.54790615      0.23107198      0.59282318
## 70          0.11476746        -1.66232963      0.32366339      0.33710120
## 71         -0.41912210        -0.87658763      0.65465430      0.36416334
## 72          0.59282318         0.23107198     -1.34797950     -0.73567430
## 73          0.40526982        -0.83980946      0.57772207      0.56275157
## 74         -1.41400510        -0.63896971     -0.44707302     -0.07641832
## 75         -0.67050162        -1.08214564      0.59282318      0.35060018
## 76         -0.71909690        -1.31706374      0.35060018      0.24416040
## 77         -0.12758531        -1.48684468      0.14042416      0.02545075
## 78         -0.83980946        -0.82184079      0.63896971      0.40526982
## 79         -0.91459156        -0.62344075      0.21802303      0.57772207
## 80          0.20501110         0.01272434     -1.25874673     -0.97421613
## 81         -0.31028376        -0.68651916     -0.28368767      0.14042416
## 82         -0.50406856         0.60806071      0.20501110      0.16617364
## 83          0.51856960        -1.44946373     -0.37779383     -0.37779383
## 84         -1.77352271        -0.91459156     -1.31706374     -1.25874673
## 85          0.03818128        -0.76945312     -0.06366298     -0.57772207
## 86         -1.99828954         0.41912210      0.08918610      0.68651916
## 87         -1.44946373        -1.34797950     -0.05091800      0.65465430
## 88         -1.48684468         0.35060018     -0.56275157      0.01272434
## 89          0.41912210        -0.05091800     -0.47537773     -0.71909690
## 90         -1.56855670         0.28368767     -0.60806071     -0.02545075
## 91         -0.21802303         0.57772207     -0.14042416     -0.14042416
## 92          0.35060018        -0.02545075      0.50406856      0.50406856
## 93         -0.85805346        -0.95396468      0.62344075      0.39149488
## 94         -0.65465430        -0.20501110     -0.91459156     -1.12903457
## 95          0.46117919        -1.12903457     -1.01596791     -0.67050162
## 96         -0.20501110        -0.43305527     -2.10223158     -2.23555842
## 97          0.12758531        -0.07641832     -1.56855670     -1.61367018
## 98         -0.19203379        -0.41912210     -1.99828954     -2.10223158
## 99         -0.51856960         0.46117919     -0.32366339     -0.24416040
## 100         0.50406856        -1.52642702     -0.39149488     -0.39149488
## 101         0.01272434        -0.80413364     -0.08918610     -0.60806071
## 102         0.33710120        -0.03818128      0.48967276      0.48967276
## 103         0.37779383         0.00000000      0.53318051      0.53318051
## 104        -0.63896971        -0.19203379     -0.89542793     -1.10528634
## 105         0.39149488         0.02545075      0.54790615      0.54790615
## 106         0.47537773         0.15328619     -0.99487522     -0.65465430
## 107        -0.47537773         0.37779383     -0.27046566     -0.31028376
## 108        -0.16617364         0.62344075     -0.12758531     -0.12758531
## 109         0.24416040        -0.89542793      0.39149488      0.27046566
## 110         0.06366298        -1.15343724     -0.82184079     -0.93409710
## 111        -1.10528634         0.50406856     -0.41912210     -0.53318051
## 112         0.08918610        -0.40526982     -0.68651916     -0.82184079
## 113         0.36416334        -0.01272434      0.51856960      0.51856960
## 114        -1.52642702         0.29695946     -0.59282318     -0.01272434
## 115        -0.73567430        -1.38024023      0.33710120      0.23107198
## 116         0.02545075        -0.78667510     -0.07641832     -0.59282318
## 117        -1.03752256         0.11476746      0.28368767      0.19203379
## 118        -1.20442230         0.08918610     -0.23107198     -0.44707302
## 119        -2.80216172        -0.56275157     -0.53318051     -0.29695946
## 120        -1.66232963         0.14042416     -0.63896971     -0.05091800
```

```
## 121         -0.27046566         0.43305527     -0.17908874     -0.17908874
## 122          0.28368767        -0.27046566      0.43305527      0.43305527
## 123         -0.93409710        -1.05957037      0.60806071      0.37779383
## 124         -0.70271480        -0.39149488     -0.95396468     -1.17854682
## 125          0.43305527        -1.20442230     -1.08214564     -0.70271480
## 126         -0.25729077        -0.60806071     -2.42690063     -2.80216172
## 127          0.10196844        -0.29695946     -1.66232963     -1.71527720
## 128         -0.24416040        -0.59282318     -2.23555842     -2.42690063
## 129         -0.54790615         0.33710120     -0.35060018     -0.27046566
## 130          0.48967276        -1.56855670     -0.40526982     -0.40526982
## 131         -0.01272434        -0.99487522     -0.11476746     -0.63896971
## 132          0.27046566        -0.28368767      0.41912210      0.41912210
## 133          0.31028376        -0.24416040      0.46117919      0.46117919
## 134         -0.68651916        -0.37779383     -0.93409710     -1.15343724
## 135          0.32366339        -0.21802303      0.47537773      0.47537773
## 136          0.44707302        -0.08918610     -1.05957037     -0.68651916
## 137         -0.48967276         0.21802303     -0.29695946     -0.32366339
## 138         -0.23107198         0.54790615     -0.15328619     -0.15328619
## 139          0.23107198        -1.01596791      0.36416334      0.25729077
## 140          0.05091800        -1.25874673     -0.87658763     -0.95396468
## 141         -1.12903457         0.36416334     -0.43305527     -0.54790615
## 142          0.07641832        -0.53318051     -0.70271480     -0.83980946
## 143          0.29695946        -0.25729077      0.44707302      0.44707302
## 144         -1.61367018         0.16617364     -0.62344075     -0.03818128
## 145          0.00000000        -0.97421613     -0.10196844     -0.62344075
## 146         -1.05957037        -0.11476746      0.27046566      0.17908874
## 147         -1.23113036        -0.12758531     -0.25729077     -0.46117919
## 148          0.80413364         0.70271480      1.61367018      1.15343724
## 149          1.25874673         1.08214564      0.76945312      0.71909690
## 150          1.61367018         0.73567430      0.75245638      0.75245638
## 151          1.44946373         1.56855670      0.78667510      0.78667510
## 152          1.38024023         1.52642702      0.71909690      0.76945312
## 153          1.01596791         1.34797950      1.12903457      1.03752256
## 154          1.31706374         0.68651916      1.91230127      1.56855670
## 155          0.83980946         0.71909690      1.77352271      1.52642702
## 156          1.34797950         1.31706374      0.85805346      0.85805346
## 157          0.82184079         1.61367018      0.97421613      1.01596791
## 158          0.68651916         0.67050162      1.44946373      1.08214564
## 159          1.41400510         0.91459156      1.31706374      1.38024023
## 160          0.93409710         2.42690063      1.34797950      1.34797950
## 161          1.03752256         1.99828954      1.15343724      1.12903457
## 162          1.08214564         1.03752256      0.67050162      0.70271480
## 163          0.78667510         0.83980946      1.01596791      1.31706374
## 164          1.66232963         1.17854682      0.89542793      0.83980946
## 165          1.71527720         1.25874673      0.87658763      0.80413364
## 166          2.42690063         2.10223158      1.20442230      1.05957037
## 167          1.23113036         1.83849262      0.93409710      0.99487522
## 168          0.87658763         1.15343724      1.56855670      2.23555842
## 169          1.52642702         0.75245638      1.66232963      1.61367018
## 170          1.10528634         0.95396468      2.80216172      1.71527720
## 171          2.80216172         1.66232963      0.80413364      0.91459156
## 172          1.91230127         0.97421613      1.99828954      1.99828954
## 173          0.76945312         1.10528634      1.08214564      1.20442230
## 174          0.97421613         0.87658763      2.10223158      1.66232963
## 175          0.95396468         0.82184079      1.71527720      1.48684468
```

```
## 176          1.28735798         0.76945312      1.41400510      1.28735798
## 177          0.91459156         0.99487522      2.42690063      1.83849262
## 178          0.85805346         1.12903457      1.52642702      2.10223158
## 179          1.77352271         1.48684468      0.83980946      0.89542793
## 180          1.12903457         1.05957037      1.17854682      1.41400510
## 181          1.05957037         2.80216172      1.48684468      1.44946373
## 182          2.23555842         0.78667510      1.10528634      1.10528634
## 183          0.70271480         0.93409710      0.82184079      0.82184079
## 184          1.48684468         1.01596791      1.25874673      0.97421613
## 185          0.67050162         1.91230127      1.38024023      2.80216172
## 186          0.75245638         0.80413364      1.28735798      2.42690063
## 187          0.73567430         1.77352271      1.03752256      1.25874673
## 188          1.99828954         1.41400510      1.05957037      0.93409710
## 189          0.71909690         1.71527720      0.99487522      1.23113036
## 190          1.15343724         2.23555842      1.23113036      1.17854682
## 191          1.83849262         1.44946373      1.83849262      1.91230127
## 192          0.89542793         0.89542793      2.23555842      1.77352271
## 193          0.99487522         1.28735798      0.95396468      0.87658763
## 194          2.10223158         0.85805346      0.91459156      0.95396468
## 195          1.17854682         1.20442230      0.68651916      0.60806071
## 196          1.56855670         1.38024023      0.73567430      0.73567430
## 197          1.20442230         1.23113036      0.70271480      0.62344075
##     DENT_cooc.H.ADC SAVE_cooc.H.ADC SVAR_cooc.H.ADC SENT_cooc.H.ADC
## 1        0.01272434     -1.20442230     -0.83980946      0.28368767
## 2       -0.03818128      0.57772207     -0.48967276     -1.71527720
## 3       -0.57772207     -0.78667510      0.35060018      0.14042416
## 4       -1.25874673     -0.59282318      0.10196844     -0.16617364
## 5       -0.02545075     -0.17908874     -0.82184079     -0.56275157
## 6       -1.12903457     -0.83980946      0.46117919     -0.68651916
## 7        0.31028376      0.40526982     -0.68651916     -1.25874673
## 8       -0.41912210      0.43305527     -0.71909690     -1.38024023
## 9        0.47537773     -0.29695946     -1.99828954     -0.35060018
## 10      -0.47537773     -1.31706374     -0.20501110      0.47537773
## 11      -0.17908874      0.46117919     -0.50406856     -1.41400510
## 12      -0.16617364     -1.08214564     -0.10196844      0.20501110
## 13      -0.59282318     -1.77352271     -0.46117919      0.63896971
## 14      -0.87658763     -0.67050162      0.02545075      0.07641832
## 15      -1.91230127     -1.44946373      0.62344075      0.51856960
## 16       0.14042416     -0.14042416     -0.91459156     -0.37779383
## 17       0.29695946      0.54790615     -1.44946373     -1.77352271
## 18       0.24416040      0.03818128     -0.85805346     -0.39149488
## 19      -0.37779383     -1.83849262     -0.36416334      0.41912210
## 20      -1.23113036     -0.97421613      0.27046566      0.21802303
## 21      -0.70271480     -1.28735798     -0.06366298      0.35060018
## 22      -1.15343724     -0.24416040      0.19203379     -0.36416334
## 23       0.06366298     -1.41400510     -0.62344075      0.46117919
## 24      -0.93409710     -0.46117919      0.16617364      0.00000000
## 25      -0.82184079      0.37779383      0.23107198     -1.34797950
## 26       0.23107198      0.32366339     -0.87658763     -0.78667510
## 27      -1.56855670      0.59282318      0.65465430     -1.66232963
## 28      -0.80413364     -0.87658763     -0.05091800      0.16617364
## 29      -0.78667510     -0.15328619      0.08918610     -0.60806071
## 30       0.10196844     -1.38024023     -0.70271480      0.39149488
## 31      -0.62344075     -0.25729077     -0.24416040     -0.02545075
## 32       0.03818128     -1.25874673     -0.76945312      0.53318051
```

```
## 33      -1.48684468     -0.93409710      0.24416040      0.17908874
## 34      -1.52642702      0.24416040      0.54790615     -1.28735798
## 35       0.02545075      0.56275157     -0.17908874     -1.83849262
## 36      -0.89542793     -0.53318051      0.14042416     -0.47537773
## 37      -0.67050162      0.31028376     -0.08918610     -0.63896971
## 38      -0.15328619      0.39149488      0.17908874     -0.97421613
## 39       0.12758531      0.25729077     -0.75245638     -0.17908874
## 40       0.17908874     -1.34797950     -1.56855670      0.44707302
## 41      -1.77352271     -0.23107198      0.47537773     -0.53318051
## 42       0.15328619     -1.99828954     -0.93409710      0.56275157
## 43      -1.61367018     -1.12903457      0.37779383      0.23107198
## 44      -0.63896971     -0.27046566     -0.25729077     -0.03818128
## 45      -0.46117919      0.29695946     -0.21802303     -0.57772207
## 46      -0.40526982     -2.10223158     -0.78667510      0.65465430
## 47       0.19203379     -0.05091800     -0.67050162     -1.03752256
## 48      -0.35060018     -0.63896971      0.36416334     -0.08918610
## 49       0.11476746     -0.12758531     -0.95396468     -0.12758531
## 50      -1.41400510     -1.10528634      0.41912210      0.15328619
## 51      -1.44946373     -0.99487522      0.51856960      0.11476746
## 52      -1.38024023     -0.65465430      0.43305527     -0.27046566
## 53      -1.71527720     -0.75245638      0.44707302      0.03818128
## 54      -0.20501110     -0.80413364     -0.23107198      0.19203379
## 55       0.43305527     -0.02545075     -1.61367018     -0.83980946
## 56       0.46117919      0.60806071     -1.91230127     -2.23555842
## 57      -1.05957037      0.36416334      0.25729077     -1.31706374
## 58      -0.68651916     -1.91230127     -0.19203379      0.43305527
## 59      -0.05091800     -0.85805346     -1.01596791      0.25729077
## 60       0.08280052     -0.33710120     -0.43305527      0.06366298
## 61       0.08280052      0.35060018     -0.73567430     -1.20442230
## 62      -0.11476746     -1.17854682     -0.33710120      0.31028376
## 63      -2.80216172     -1.05957037      0.63896971     -0.10196844
## 64      -0.33710120     -0.16617364     -0.47537773      0.10196844
## 65      -0.97421613     -0.82184079      0.33710120      0.24416040
## 66      -1.03752256     -0.37779383      0.39149488     -0.11476746
## 67      -0.07641832     -0.76945312      0.03818128     -0.19203379
## 68      -0.76945312      0.28368767     -0.03818128     -0.48967276
## 69       0.27046566     -2.42690063     -1.08214564      0.60806071
## 70       0.35060018      0.62344075     -1.03752256     -1.99828954
## 71       0.65465430      0.15328619     -2.10223158     -0.75245638
## 72      -1.10528634      0.27046566      0.53318051     -0.62344075
## 73       0.60806071      0.23107198     -1.12903457     -0.76945312
## 74      -0.25729077     -0.39149488     -0.63896971      0.12758531
## 75       0.62344075     -0.11476746     -1.83849262     -0.51856960
## 76       0.48967276      0.65465430     -1.66232963     -2.42690063
## 77       0.05091800     -0.21802303     -0.65465430     -0.50406856
## 78       0.63896971      0.02545075     -2.23555842     -0.59282318
## 79       0.21802303     -2.80216172     -1.10528634      0.59282318
## 80      -1.20442230      0.33710120      0.40526982     -1.23113036
## 81      -0.06366298     -0.19203379     -0.44707302     -0.40526982
## 82       0.25729077     -0.95396468     -0.89542793      0.33710120
## 83      -0.28368767      0.21802303      0.07641832     -0.70271480
## 84      -1.34797950     -0.20501110     -0.07641832     -0.54790615
## 85      -0.14042416     -0.54790615     -0.11476746     -0.15328619
## 86       0.16617364      0.48967276     -1.77352271     -1.44946373
## 87       0.00000000      0.50406856     -1.05957037     -1.56855670
```

```
## 88      -0.39149488     -0.28368767     -0.54790615      0.05091800
## 89      -0.50406856      0.47537773      0.15328619     -1.52642702
## 90      -0.53318051     -0.32366339     -0.57772207     -0.06366298
## 91      -0.12758531     -0.47537773     -0.39149488     -0.07641832
## 92       0.51856960      0.14042416     -1.23113036     -0.93409710
## 93       0.59282318      0.01272434     -2.42690063     -0.71909690
## 94      -0.99487522     -0.70271480      0.00000000     -0.01272434
## 95      -0.91459156     -0.07641832      0.31028376     -0.73567430
## 96      -2.10223158     -1.52642702      0.59282318      0.48967276
## 97      -1.66232963     -1.01596791      0.50406856      0.01272434
## 98      -1.99828954     -1.48684468      0.60806071      0.50406856
## 99      -0.08918610     -1.15343724     -0.32366339      0.32366339
## 100     -0.36416334      0.20501110      0.06366298     -0.80413364
## 101     -0.23107198     -0.57772207     -0.14042416     -0.28368767
## 102      0.50406856      0.12758531     -1.25874673     -0.95396468
## 103      0.54790615      0.17908874     -1.17854682     -0.85805346
## 104     -0.95396468     -0.68651916      0.01272434      0.02545075
## 105      0.57772207      0.19203379     -1.15343724     -0.82184079
## 106     -0.83980946     -0.06366298      0.32366339     -0.65465430
## 107     -0.10196844     -1.66232963     -0.29695946      0.57772207
## 108     -0.01272434     -0.44707302     -0.37779383      0.08918610
## 109      0.56275157      0.00000000     -0.97421613     -0.67050162
## 110     -0.71909690     -0.40526982      0.21802303     -0.20501110
## 111     -0.27046566     -0.89542793     -0.27046566      0.40526982
## 112     -0.60806071     -0.43305527      0.12758531     -0.32366339
## 113      0.53318051      0.16617364     -1.20442230     -0.89542793
## 114     -0.51856960     -0.31028376     -0.56275157     -0.05091800
## 115      0.33710120      0.63896971     -1.71527720     -2.80216172
## 116     -0.21802303     -0.56275157     -0.12758531     -0.24416040
## 117      0.28368767      0.53318051     -1.48684468     -1.91230127
## 118     -0.24416040      0.44707302     -0.51856960     -1.48684468
## 119     -0.56275157     -2.23555842     -0.80413364      0.62344075
## 120     -0.75245638     -0.36416334     -0.60806071     -0.31028376
## 121     -0.32366339     -0.51856960     -0.41912210     -0.33710120
## 122      0.36416334      0.06366298     -1.38024023     -1.15343724
## 123      0.44707302     -0.01272434     -2.80216172     -0.99487522
## 124     -1.31706374     -0.73567430     -0.02545075     -0.25729077
## 125     -1.17854682     -0.10196844      0.28368767     -1.01596791
## 126     -2.42690063     -1.61367018      0.56275157      0.36416334
## 127     -1.83849262     -1.03752256      0.48967276     -0.23107198
## 128     -2.23555842     -1.56855670      0.57772207      0.37779383
## 129     -0.29695946     -1.23113036     -0.35060018      0.27046566
## 130     -0.65465430      0.11476746      0.05091800     -1.05957037
## 131     -0.44707302     -0.62344075     -0.16617364     -0.44707302
## 132      0.32366339      0.05091800     -1.41400510     -1.17854682
## 133      0.39149488      0.08918610     -1.31706374     -1.10528634
## 134     -1.28735798     -0.71909690     -0.01272434     -0.21802303
## 135      0.41912210      0.10196844     -1.28735798     -1.08214564
## 136     -1.08214564     -0.08918610      0.29695946     -0.87658763
## 137     -0.31028376     -1.71527720     -0.31028376      0.54790615
## 138     -0.19203379     -0.50406856     -0.40526982     -0.14042416
## 139      0.40526982     -0.03818128     -0.99487522     -0.91459156
## 140     -1.01596791     -0.41912210      0.20501110     -0.41912210
## 141     -0.54790615     -0.91459156     -0.28368767      0.29695946
## 142     -0.85805346     -0.48967276      0.11476746     -0.46117919
```

```
## 143      0.37779383      0.07641832     -1.34797950     -1.12903457
## 144     -0.73567430     -0.35060018     -0.59282318     -0.29695946
## 145     -0.43305527     -0.60806071     -0.15328619     -0.43305527
## 146      0.20501110      0.51856960     -1.52642702     -2.10223158
## 147     -0.48967276      0.41912210     -0.53318051     -1.61367018
## 148      1.44946373      1.25874673      0.93409710      1.17854682
## 149      0.76945312      0.76945312      1.71527720      1.61367018
## 150      0.75245638      0.82184079      1.99828954      1.52642702
## 151      0.78667510      0.97421613      1.77352271      1.10528634
## 152      0.71909690      0.93409710      1.83849262      1.38024023
## 153      1.12903457      0.89542793      1.20442230      1.66232963
## 154      1.71527720      1.34797950      0.78667510      0.83980946
## 155      1.77352271      2.23555842      0.71909690      0.68651916
## 156      0.85805346      1.83849262      1.48684468      0.76945312
## 157      0.97421613      0.70271480      1.23113036      1.99828954
## 158      1.28735798      0.85805346      0.91459156      1.77352271
## 159      1.39692360      1.08214564      1.12903457      1.44946373
## 160      1.39692360      1.77352271      0.97421613      0.80413364
## 161      1.20442230      0.75245638      1.17854682      1.83849262
## 162      0.67050162      0.78667510      2.80216172      1.23113036
## 163      1.05957037      1.23113036      1.08214564      1.48684468
## 164      0.91459156      0.87658763      1.56855670      1.71527720
## 165      0.87658763      1.05957037      1.61367018      1.20442230
## 166      1.23113036      0.91459156      1.38024023      1.12903457
## 167      0.95396468      1.66232963      1.31706374      1.05957037
## 168      1.61367018      0.68651916      0.85805346      2.80216172
## 169      1.66232963      2.42690063      0.89542793      0.70271480
## 170      2.80216172      1.48684468      0.70271480      0.87658763
## 171      0.83980946      1.61367018      2.10223158      0.95396468
## 172      2.10223158      1.56855670      0.82184079      0.85805346
## 173      1.10528634      1.03752256      1.01596791      1.56855670
## 174      2.23555842      1.28735798      0.73567430      1.01596791
## 175      1.83849262      2.80216172      0.76945312      0.67050162
## 176      1.34797950      1.15343724      0.99487522      1.03752256
## 177      2.42690063      1.41400510      0.68651916      0.97421613
## 178      1.52642702      0.67050162      0.83980946      2.42690063
## 179      0.82184079      1.71527720      1.66232963      0.78667510
## 180      1.25874673      1.20442230      1.10528634      1.08214564
## 181      1.56855670      0.83980946      0.95396468      1.91230127
## 182      1.08214564      1.52642702      1.41400510      0.93409710
## 183      0.80413364      1.17854682      1.28735798      0.99487522
## 184      1.15343724      0.99487522      1.25874673      1.15343724
## 185      1.48684468      1.99828954      0.75245638      0.75245638
## 186      1.31706374      2.10223158      0.87658763      0.71909690
## 187      1.03752256      1.12903457      1.05957037      1.41400510
## 188      1.01596791      1.91230127      1.44946373      0.73567430
## 189      0.99487522      1.10528634      1.03752256      1.28735798
## 190      1.17854682      1.01596791      1.15343724      1.25874673
## 191      1.91230127      1.44946373      0.80413364      0.82184079
## 192      1.99828954      1.38024023      0.67050162      0.91459156
## 193      0.89542793      0.95396468      1.34797950      1.31706374
## 194      0.93409710      1.31706374      1.52642702      0.89542793
## 195      0.68651916      0.71909690      2.23555842      2.10223158
## 196      0.73567430      0.80413364      1.91230127      1.34797950
## 197      0.70271480      0.73567430      2.42690063      2.23555842
```

```
##     ASM_cooc.H.ADC Contrast_cooc.H.ADC Dissimilarity_cooc.H.ADC
## 1      0.025450750          0.06366298               0.10196844
## 2     -0.205011101         -0.05091800               0.01272434
## 3     -0.082800524         -0.62344075              -0.67050162
## 4     -0.296959457         -1.31706374              -1.23113036
## 5     -0.250720181         -0.06366298              -0.03818128
## 6     -0.050917999         -1.10528634              -1.20442230
## 7     -0.114767460          0.35060018               0.31028376
## 8     -0.205011101         -0.51856960              -0.48967276
## 9      0.006362044          0.44707302               0.37779383
## 10    -0.082800524         -0.60806071              -0.54790615
## 11    -0.296959457         -0.23107198              -0.21802303
## 12    -0.419122095         -0.12758531              -0.31028376
## 13    -0.357373540         -0.68651916              -0.65465430
## 14    -0.205011101         -0.97421613              -0.85805346
## 15    -0.146852138         -1.91230127              -1.91230127
## 16    -0.454114812          0.11476746               0.11476746
## 17    -0.357373540          0.33710120               0.29695946
## 18    -0.482512917          0.20501110               0.24416040
## 19    -0.296959457         -0.53318051              -0.50406856
## 20    -0.025450750         -1.28735798              -1.28735798
## 21    -0.296959457         -0.70271480              -0.78667510
## 22     0.050917999         -1.17854682              -0.83980946
## 23    -0.357373540          0.01272434               0.05091800
## 24    -0.357373540         -1.08214564              -1.12903457
## 25    -0.166173638         -0.89542793              -0.75245638
## 26    -0.482512917          0.21802303               0.19203379
## 27    -0.050917999         -1.66232963              -1.61367018
## 28    -0.114767460         -0.87658763              -0.73567430
## 29    -0.114767460         -0.85805346              -0.71909690
## 30    -0.391494881          0.05091800               0.07641832
## 31     0.063662985         -0.36416334              -0.19203379
## 32    -0.454114812         -0.02545075               0.02545075
## 33    -0.205011101         -1.41400510              -1.52642702
## 34     0.006362044         -1.44946373              -1.38024023
## 35    -0.205011101          0.02545075               0.03818128
## 36    -0.250720181         -0.95396468              -1.03752256
## 37    -0.146852138         -0.63896971              -0.76945312
## 38     0.038181279          0.15328619              -0.16617364
## 39    -0.419122095          0.08918610               0.06366298
## 40    -0.419122095          0.12758531               0.16617364
## 41    -0.050917999         -1.77352271              -1.77352271
## 42    -0.296959457          0.10196844               0.15328619
## 43    -0.012724345         -1.71527720              -1.71527720
## 44    -0.504068562         -0.37779383              -0.20501110
## 45     0.804133642         -0.32366339              -0.02545075
## 46     0.694594205         -0.54790615              -0.51856960
## 47     0.719096898          0.23107198               0.12758531
## 48     0.525861023         -0.67050162              -0.46117919
## 49     0.786675105          0.16617364               0.25729077
## 50     0.562751572         -1.61367018              -1.44946373
## 51     0.562751572         -1.48684468              -1.48684468
## 52     0.600424520         -1.38024023              -1.41400510
## 53     0.631186204         -1.83849262              -1.83849262
## 54     0.600424520         -0.35060018              -0.36416334
```

```
## 55     0.821840794          0.47537773               0.56275157
## 56     0.769453118          0.46117919               0.40526982
## 57     0.631186204         -1.25874673              -1.17854682
## 58     0.562751572         -0.71909690              -0.80413364
## 59     0.839809460          0.03818128               0.17908874
## 60     0.482512917          0.00000000              -0.01272434
## 61     0.454114812         -0.01272434               0.00000000
## 62     0.482512917         -0.28368767              -0.33710120
## 63     0.735674299         -2.80216172              -2.80216172
## 64     0.525861023         -0.46117919              -0.57772207
## 65     0.670501625         -1.12903457              -1.10528634
## 66     0.654654299         -1.23113036              -1.15343724
## 67     0.454114812         -0.31028376              -0.24416040
## 68     0.504068562         -0.76945312              -0.97421613
## 69     0.694594205          0.29695946               0.23107198
## 70     0.752456384          0.36416334               0.32366339
## 71     0.914591560          0.76945312               0.65465430
## 72     0.974216128         -1.15343724              -1.34797950
## 73     0.953964677          0.70271480               0.57772207
## 74     0.934097101         -0.33710120              -0.44707302
## 75     0.885968470          0.48967276               0.59282318
## 76     0.994875224          0.39149488               0.35060018
## 77     1.015967906          0.07641832               0.14042416
## 78     0.885968470          0.75245638               0.63896971
## 79     0.076418321          0.28368767               0.21802303
## 80     0.179088744         -1.20442230              -1.25874673
## 81     0.101968440         -0.03818128              -0.28368767
## 82     0.089186102          0.19203379               0.20501110
## 83     0.166173638         -0.47537773              -0.37779383
## 84     0.205011101         -1.34797950              -1.31706374
## 85     0.140424156         -0.15328619              -0.06366298
## 86     0.114767460          0.24416040               0.08918610
## 87     0.127585310          0.17908874              -0.05091800
## 88     0.153286192         -0.39149488              -0.56275157
## 89     0.192033792         -0.65465430              -0.47537773
## 90    -0.786675105         -0.41912210              -0.60806071
## 91    -0.821840794         -0.08918610              -0.14042416
## 92    -0.769453118          0.63896971               0.50406856
## 93    -0.547906151          0.73567430               0.62344075
## 94    -0.858053460         -1.01596791              -0.91459156
## 95    -0.702714800         -0.80413364              -1.01596791
## 96    -0.839809460         -2.10223158              -2.10223158
## 97    -0.735674299         -1.52642702              -1.56855670
## 98    -0.686519159         -1.99828954              -1.99828954
## 99     0.858053460         -0.27046566              -0.32366339
## 100   -0.752456384         -0.48967276              -0.39149488
## 101   -0.804133642         -0.17908874              -0.08918610
## 102   -0.876587631          0.62344075               0.48967276
## 103   -0.562751572          0.67050162               0.53318051
## 104   -0.719096898         -0.99487522              -0.89542793
## 105   -0.533180513          0.68651916               0.54790615
## 106   -0.518569599         -0.78667510              -0.99487522
## 107    0.419122095         -0.14042416              -0.27046566
## 108    0.377793832         -0.07641832              -0.12758531
## 109    0.364163340          0.43305527               0.39149488
```

```
## 110    0.405269820         -0.91459156              -0.82184079
## 111    0.391494881         -0.57772207              -0.41912210
## 112    0.433055267         -0.73567430              -0.68651916
## 113   -0.608060712          0.65465430               0.51856960
## 114   -0.631186204         -0.40526982              -0.59282318
## 115   -0.577722069          0.37779383               0.33710120
## 116   -0.670501625         -0.16617364              -0.07641832
## 117   -0.654654299          0.32366339               0.28368767
## 118   -0.631186204         -0.24416040              -0.23107198
## 119   -0.592823181         -0.56275157              -0.53318051
## 120   -1.912301267         -0.44707302              -0.63896971
## 121   -2.102231578         -0.11476746              -0.17908874
## 122   -1.838492624          0.56275157               0.43305527
## 123   -1.317063743          0.71909690               0.60806071
## 124   -2.426900627         -1.05957037              -0.95396468
## 125   -1.613670183         -0.83980946              -1.08214564
## 126   -2.235558423         -2.42690063              -2.42690063
## 127   -1.715277202         -1.56855670              -1.66232963
## 128   -1.568556698         -2.23555842              -2.23555842
## 129   -0.914591560         -0.29695946              -0.35060018
## 130   -1.773522711         -0.50406856              -0.40526982
## 131   -1.998289537         -0.21802303              -0.11476746
## 132   -2.802161716          0.54790615               0.41912210
## 133   -1.347979505          0.59282318               0.46117919
## 134   -1.662329627         -1.03752256              -0.93409710
## 135   -1.287357980          0.60806071               0.47537773
## 136   -1.258746728         -0.82184079              -1.05957037
## 137   -1.129034575         -0.19203379              -0.29695946
## 138   -1.204422303         -0.10196844              -0.15328619
## 139   -1.231130361          0.41912210               0.36416334
## 140   -1.153437238         -0.93409710              -0.87658763
## 141   -1.178546815         -0.59282318              -0.43305527
## 142   -1.105286345         -0.75245638              -0.70271480
## 143   -1.380240232          0.57772207               0.44707302
## 144   -1.431509438         -0.43305527              -0.62344075
## 145   -1.526427018         -0.20501110              -0.10196844
## 146   -1.486844681          0.31028376               0.27046566
## 147   -1.431509438         -0.25729077              -0.25729077
## 148    1.613670183          1.41400510               1.61367018
## 149    1.204422303          0.50406856               0.76945312
## 150    1.204422303          0.53318051               0.75245638
## 151    1.272922102          0.78667510               0.78667510
## 152    1.332362444          0.40526982               0.71909690
## 153    1.272922102          1.10528634               1.12903457
## 154    1.662329627          1.83849262               1.91230127
## 155    1.568556698          1.77352271               1.77352271
## 156    1.332362444          0.82184079               0.85805346
## 157    1.204422303          0.97421613               0.97421613
## 158    1.715277202          1.34797950               1.44946373
## 159    1.093642789          1.31706374               1.31706374
## 160    1.048482755          1.28735798               1.34797950
## 161    1.093642789          1.17854682               1.15343724
## 162    1.486844681          0.14042416               0.67050162
## 163    1.153437238          1.03752256               1.01596791
## 164    1.414005096          0.89542793               0.89542793
```

```
## 165    1.380240232          0.83980946               0.87658763
## 166    1.048482755          1.15343724               1.20442230
## 167    1.129034575          0.95396468               0.93409710
## 168    1.449463731          1.61367018               1.56855670
## 169    1.526427018          1.66232963               1.66232963
## 170    1.912301267          2.80216172               2.80216172
## 171    2.235558423          0.87658763               0.80413364
## 172    2.102231578          2.10223158               1.99828954
## 173    1.998289537          1.12903457               1.08214564
## 174    1.805055550          1.91230127               2.10223158
## 175    2.426900627          1.71527720               1.71527720
## 176    2.802161716          1.38024023               1.41400510
## 177    1.805055550          2.42690063               2.42690063
## 178    0.218023030          1.56855670               1.52642702
## 179    0.323663386          0.85805346               0.83980946
## 180    0.244160395          1.25874673               1.17854682
## 181    0.231071979          1.48684468               1.48684468
## 182    0.310283763          1.01596791               1.10528634
## 183    0.350600175          0.80413364               0.82184079
## 184    0.283687668          1.20442230               1.25874673
## 185    0.257290773          1.52642702               1.38024023
## 186    0.270465662          1.44946373               1.28735798
## 187    0.296959457          1.08214564               1.03752256
## 188    0.337101205          0.99487522               1.05957037
## 189   -1.015967906          1.05957037               0.99487522
## 190   -1.037522563          1.23113036               1.23113036
## 191   -0.994875224          1.99828954               1.83849262
## 192   -0.895427930          2.23555842               2.23555842
## 193   -1.082145643          0.91459156               0.95396468
## 194   -0.953964677          0.93409710               0.91459156
## 195   -1.059570365          0.25729077               0.68651916
## 196   -0.974216128          0.51856960               0.73567430
## 197   -0.934097101          0.27046566               0.70271480
##     Inv_diff_cooc.H.ADC Inv_diff_norm_cooc.H.ADC IDM_cooc.H.ADC
## 1           -0.37779383              -0.50406856    -0.33710120
## 2           -0.62344075              -0.40526982    -0.68651916
## 3            0.17908874               0.01272434     0.20501110
## 4            0.25729077               0.28368767     0.19203379
## 5           -0.28368767              -0.32366339    -0.29695946
## 6            0.39149488               0.31028376     0.35060018
## 7           -0.73567430              -0.83980946    -0.63896971
## 8           -0.08918610              -0.08918610    -0.07641832
## 9           -0.87658763              -0.93409710    -0.78667510
## 10           0.06366298              -0.05091800     0.08918610
## 11          -0.32366339              -0.25729077    -0.40526982
## 12          -0.25729077              -0.21802303    -0.25729077
## 13          -0.10196844              -0.03818128    -0.06366298
## 14          -0.06366298               0.11476746    -0.05091800
## 15           0.48967276               0.54790615     0.46117919
## 16          -0.35060018              -0.51856960    -0.35060018
## 17          -0.89542793              -0.87658763    -0.83980946
## 18          -0.53318051              -0.63896971    -0.53318051
## 19          -0.03818128              -0.07641832    -0.03818128
## 20           0.44707302               0.32366339     0.48967276
## 21           0.11476746               0.12758531     0.06366298
```

```
## 22          -0.31028376                0.06366298    -0.57772207
## 23          -0.43305527               -0.46117919    -0.44707302
## 24           0.08918610                0.23107198     0.02545075
## 25          -0.11476746                0.03818128    -0.12758531
## 26          -0.47537773               -0.60806071    -0.47537773
## 27           0.28368767                0.41912210     0.14042416
## 28          -0.14042416                0.02545075    -0.14042416
## 29          -0.15328619                0.05091800    -0.17908874
## 30          -0.41912210               -0.47537773    -0.41912210
## 31          -0.78667510               -0.29695946    -0.82184079
## 32          -0.27046566               -0.36416334    -0.27046566
## 33           0.43305527                0.43305527     0.47537773
## 34           0.20501110                0.33710120     0.05091800
## 35          -0.33710120               -0.43305527    -0.36416334
## 36           0.15328619                0.21802303     0.07641832
## 37           0.29695946                0.15328619     0.28368767
## 38          -0.01272434               -0.19203379     0.00000000
## 39          -0.21802303               -0.41912210    -0.16617364
## 40          -0.65465430               -0.62344075    -0.62344075
## 41           0.59282318                0.48967276     0.63896971
## 42          -0.70271480               -0.59282318    -0.67050162
## 43           0.57772207                0.46117919     0.60806071
## 44          -0.81295536               -0.33710120    -0.85805346
## 45          -0.57772207               -0.12758531    -0.70271480
## 46           0.35060018                0.29695946     0.39149488
## 47           0.32366339               -0.06366298     0.44707302
## 48           0.12758531                0.27046566     0.12758531
## 49          -0.50406856               -0.31028376    -0.39149488
## 50           0.54790615                0.57772207     0.54790615
## 51           0.56275157                0.59282318     0.57772207
## 52           0.60806071                0.60806071     0.62344075
## 53           0.62344075                0.63896971     0.65465430
## 54           0.01272434                0.19203379     0.03818128
## 55          -0.81295536               -0.78667510    -0.75245638
## 56          -0.71909690               -0.73567430    -0.56275157
## 57           0.51856960                0.56275157     0.51856960
## 58           0.47537773                0.47537773     0.50406856
## 59          -0.67050162               -0.23107198    -0.60806071
## 60           0.27046566                0.00000000     0.43305527
## 61           0.10196844               -0.02545075     0.25729077
## 62           0.07641832                0.17908874     0.15328619
## 63           0.67050162                0.65465430     0.73567430
## 64           0.50406856                0.36416334     0.56275157
## 65           0.37779383                0.50406856     0.36416334
## 66           0.40526982                0.53318051     0.41912210
## 67          -0.02545075                0.10196844     0.01272434
## 68           0.53318051                0.51856960     0.59282318
## 69          -0.16617364               -0.20501110    -0.08918610
## 70          -0.48967276               -0.57772207    -0.32366339
## 71          -0.68651916               -0.75245638    -0.48967276
## 72           0.63896971                0.62344075     0.67050162
## 73          -0.44707302               -0.65465430    -0.21802303
## 74           0.46117919                0.39149488     0.53318051
## 75          -0.54790615               -0.68651916    -0.37779383
## 76          -0.59282318               -0.53318051    -0.54790615
```

```
## 77          -0.24416040              -0.11476746    -0.19203379
## 78          -0.60806071              -0.70271480    -0.43305527
## 79          -0.40526982              -0.54790615    -0.51856960
## 80           0.41912210               0.40526982     0.37779383
## 81           0.19203379              -0.16617364     0.31028376
## 82          -0.29695946              -0.56275157    -0.23107198
## 83          -0.07641832              -0.15328619    -0.02545075
## 84           0.33710120               0.37779383     0.32366339
## 85          -0.39149488              -0.28368767    -0.46117919
## 86           0.02545075              -0.27046566     0.11476746
## 87           0.16617364              -0.17908874     0.27046566
## 88           0.31028376               0.07641832     0.33710120
## 89          -0.12758531              -0.10196844    -0.10196844
## 90          -0.23107198              -0.48967276    -0.28368767
## 91          -0.75245638              -0.80413364    -0.76945312
## 92          -1.23113036              -1.28735798    -1.12903457
## 93          -1.20442230              -1.20442230    -1.10528634
## 94          -0.51856960              -0.39149488    -0.73567430
## 95          -0.19203379              -0.24416040    -0.24416040
## 96           0.00000000               0.16617364    -0.15328619
## 97          -0.17908874              -0.14042416    -0.31028376
## 98           0.03818128               0.20501110    -0.11476746
## 99           0.21802303               0.25729077     0.29695946
## 100         -0.56275157              -0.67050162    -0.71909690
## 101         -0.91459156              -0.89542793    -0.89542793
## 102         -1.28735798              -1.34797950    -1.17854682
## 103         -1.12903457              -1.23113036    -0.97421613
## 104         -0.46117919              -0.35060018    -0.65465430
## 105         -1.05957037              -1.15343724    -0.93409710
## 106          0.23107198               0.14042416     0.17908874
## 107         -0.05091800               0.08918610    -0.01272434
## 108          0.05091800              -0.01272434     0.16617364
## 109         -0.63896971              -0.71909690    -0.50406856
## 110          0.36416334               0.44707302     0.40526982
## 111          0.14042416               0.24416040     0.21802303
## 112          0.24416040               0.35060018     0.24416040
## 113         -1.15343724              -1.25874673    -1.03752256
## 114         -0.20501110              -0.37779383    -0.20501110
## 115         -1.25874673              -1.17854682    -1.23113036
## 116         -0.85805346              -0.82184079    -0.87658763
## 117         -1.17854682              -1.10528634    -1.15343724
## 118         -0.76945312              -0.76945312    -0.80413364
## 119         -0.36416334              -0.44707302    -0.59282318
## 120         -1.41400510              -1.48684468    -1.38024023
## 121         -1.61367018              -1.66232963    -1.61367018
## 122         -2.42690063              -2.42690063    -2.23555842
## 123         -2.23555842              -1.99828954    -2.10223158
## 124         -1.48684468              -1.44946373    -1.56855670
## 125         -1.34797950              -1.31706374    -1.34797950
## 126         -1.08214564              -1.01596791    -1.28735798
## 127         -1.31706374              -1.12903457    -1.41400510
## 128         -1.03752256              -0.99487522    -1.25874673
## 129         -0.97421613              -0.95396468    -0.95396468
## 130         -1.52642702              -1.52642702    -1.52642702
## 131         -1.77352271              -1.77352271    -1.77352271
```

```
## 132         -2.80216172              -2.80216172    -2.80216172
## 133         -1.91230127              -2.10223158    -1.91230127
## 134         -1.44946373              -1.38024023    -1.48684468
## 135         -1.83849262              -1.91230127    -1.83849262
## 136         -0.95396468              -1.03752256    -1.05957037
## 137         -1.10528634              -1.05957037    -1.20442230
## 138         -1.01596791              -1.08214564    -1.08214564
## 139         -1.56855670              -1.56855670    -1.44946373
## 140         -0.83980946              -0.85805346    -0.91459156
## 141         -0.99487522              -0.97421613    -1.01596791
## 142         -0.93409710              -0.91459156    -0.99487522
## 143         -1.99828954              -2.23555842    -1.99828954
## 144         -1.38024023              -1.41400510    -1.31706374
## 145         -1.71527720              -1.71527720    -1.71527720
## 146         -2.10223158              -1.83849262    -2.42690063
## 147         -1.66232963              -1.61367018    -1.66232963
## 148          0.85805346               0.93409710     0.87658763
## 149          1.91230127               1.91230127     1.77352271
## 150          1.99828954               1.99828954     1.91230127
## 151          2.10223158               2.10223158     2.10223158
## 152          2.23555842               2.42690063     2.23555842
## 153          1.17854682               1.38024023     1.20442230
## 154          0.70271480               0.71909690     0.70271480
## 155          0.73567430               0.75245638     0.76945312
## 156          1.77352271               1.83849262     1.66232963
## 157          1.66232963               1.61367018     1.61367018
## 158          0.76945312               1.01596791     0.75245638
## 159          1.38024023               1.23113036     1.56855670
## 160          1.28735798               1.20442230     1.28735798
## 161          1.25874673               1.34797950     1.25874673
## 162          2.80216172               2.80216172     2.80216172
## 163          1.71527720               1.44946373     1.83849262
## 164          1.48684468               1.66232963     1.44946373
## 165          1.52642702               1.77352271     1.52642702
## 166          1.12903457               1.28735798     1.17854682
## 167          1.83849262               1.71527720     1.99828954
## 168          1.05957037               1.03752256     1.12903457
## 169          0.87658763               0.82184079     0.91459156
## 170          0.75245638               0.73567430     0.82184079
## 171          2.42690063               2.23555842     2.42690063
## 172          0.89542793               0.80413364     1.01596791
## 173          1.61367018               1.52642702     1.71527720
## 174          0.82184079               0.78667510     0.89542793
## 175          0.80413364               0.87658763     0.78667510
## 176          0.97421613               1.15343724     1.03752256
## 177          0.78667510               0.76945312     0.85805346
## 178          0.91459156               0.85805346     0.80413364
## 179          1.56855670               1.56855670     1.48684468
## 180          1.34797950               1.08214564     1.34797950
## 181          0.95396468               0.83980946     0.99487522
## 182          1.10528634               1.10528634     1.15343724
## 183          1.44946373               1.48684468     1.38024023
## 184          0.93409710               0.95396468     0.83980946
## 185          1.20442230               0.97421613     1.23113036
## 186          1.31706374               1.05957037     1.31706374
```

```
## 187          1.41400510               1.25874673     1.41400510
## 188          1.08214564               1.17854682     1.10528634
## 189          0.99487522               0.89542793     0.95396468
## 190          0.71909690               0.70271480     0.68651916
## 191          0.65465430               0.67050162     0.10196844
## 192          0.68651916               0.68651916     0.23107198
## 193          0.83980946               0.91459156     0.71909690
## 194          1.01596791               0.99487522     0.97421613
## 195          1.15343724               1.31706374     1.05957037
## 196          1.03752256               1.12903457     0.93409710
## 197          1.23113036               1.41400510     1.08214564
##     IDM_norm_cooc.H.ADC Inv_var_cooc.H.ADC Correlation_cooc.H.ADC
## 1           -0.41912210        -0.23107198            -0.75245638
## 2           -0.29695946        -0.70271480            -0.44707302
## 3           -0.06366298         0.20501110             0.20501110
## 4            0.27046566         0.17908874             0.48967276
## 5           -0.28368767        -0.36416334            -0.54790615
## 6            0.23107198         0.36416334             0.50406856
## 7           -0.83980946        -0.65465430            -1.01596791
## 8           -0.14042416        -0.03818128            -0.24416040
## 9           -0.89542793        -0.82184079            -1.52642702
## 10          -0.10196844        -0.01272434             0.00000000
## 11          -0.27046566        -0.43305527            -0.31028376
## 12          -0.24416040        -0.27046566            -0.19203379
## 13          -0.01272434        -0.14685214             0.08918610
## 14           0.12758531        -0.12758531             0.35060018
## 15           0.51856960         0.40526982             0.91459156
## 16          -0.50406856        -0.33710120            -0.85805346
## 17          -0.82184079        -0.80413364            -1.15343724
## 18          -0.71909690        -0.68651916            -0.91459156
## 19          -0.12758531        -0.14685214            -0.07641832
## 20           0.25729077         0.39149488             0.51856960
## 21           0.03818128         0.10196844             0.17908874
## 22           0.17908874        -0.29695946             0.44707302
## 23          -0.36416334        -0.54790615            -0.59282318
## 24           0.16617364         0.03818128             0.40526982
## 25           0.07641832        -0.08918610             0.37779383
## 26          -0.70271480        -0.63896971            -0.93409710
## 27           0.41912210         0.31028376             0.78667510
## 28           0.08918610        -0.17908874             0.27046566
## 29           0.06366298        -0.19203379             0.28368767
## 30          -0.39149488        -0.57772207            -0.68651916
## 31          -0.19203379        -0.32366339            -0.10196844
## 32          -0.35060018        -0.47537773            -0.67050162
## 33           0.36416334         0.41912210             0.60806071
## 34           0.39149488         0.07641832             0.71909690
## 35          -0.40526982        -0.28368767            -0.40526982
## 36           0.14042416         0.06366298             0.39149488
## 37          -0.02545075         0.25729077             0.11476746
## 38          -0.33710120         0.27046566            -0.36416334
## 39          -0.46117919        -0.25729077            -0.73567430
## 40          -0.57772207        -0.73567430            -0.99487522
## 41           0.44707302         0.63896971             0.75245638
## 42          -0.48967276        -0.71909690            -0.83980946
## 43           0.43305527         0.47537773             0.68651916
```

```
## 44          -0.23107198        -0.39149488            -0.12758531
## 45           0.19203379        -0.24416040            -0.05091800
## 46           0.32366339         0.44707302            -0.15328619
## 47          -0.15328619         0.43305527            -0.82184079
## 48           0.35060018         0.19203379             0.29695946
## 49          -0.16617364        -0.05091800            -0.87658763
## 50           0.60806071         0.54790615             0.73567430
## 51           0.62344075         0.59282318             0.80413364
## 52           0.57772207         0.62344075             0.70271480
## 53           0.63896971         0.65465430             0.83980946
## 54           0.24416040         0.28368767            -0.02545075
## 55          -0.63896971        -0.67050162            -1.25874673
## 56          -0.62344075        -0.40526982            -1.28735798
## 57           0.56275157         0.57772207             0.57772207
## 58           0.47537773         0.53318051             0.19203379
## 59          -0.08918610        -0.06366298            -0.76945312
## 60           0.05091800         0.15328619            -0.43305527
## 61           0.02545075         0.01272434            -0.53318051
## 62           0.21802303         0.23107198            -0.11476746
## 63           0.65465430         0.71909690             0.93409710
## 64           0.31028376         0.51856960            -0.08918610
## 65           0.53318051         0.50406856             0.54790615
## 66           0.54790615         0.48967276             0.59282318
## 67           0.20501110        -0.02545075             0.06366298
## 68           0.50406856         0.60806071             0.32366339
## 69          -0.21802303        -0.11476746            -1.03752256
## 70          -0.44707302         0.00000000            -1.10528634
## 71          -0.65465430        -0.53318051            -1.77352271
## 72           0.59282318         0.67050162             0.62344075
## 73          -0.53318051        -0.35060018            -1.23113036
## 74           0.40526982         0.56275157            -0.20501110
## 75          -0.54790615        -0.44707302            -1.38024023
## 76          -0.31028376        -0.31028376            -1.17854682
## 77           0.10196844        -0.07641832            -0.56275157
## 78          -0.56275157        -0.48967276            -1.71527720
## 79          -0.68651916        -0.60806071            -1.05957037
## 80           0.33710120         0.46117919             0.53318051
## 81          -0.25729077         0.12758531            -0.47537773
## 82          -0.59282318        -0.51856960            -0.89542793
## 83          -0.11476746        -0.10196844             0.07641832
## 84           0.37779383         0.32366339             0.47537773
## 85          -0.20501110        -0.46117919            -0.16617364
## 86          -0.51856960         0.21802303            -1.08214564
## 87          -0.32366339         0.29695946            -0.95396468
## 88          -0.07641832         0.24416040            -0.21802303
## 89          -0.03818128        -0.16617364             0.15328619
## 90          -0.75245638        -0.56275157            -0.35060018
## 91          -0.87658763        -0.83980946            -0.48967276
## 92          -1.25874673        -1.17854682            -1.56855670
## 93          -1.10528634        -0.99487522            -1.83849262
## 94          -0.47537773        -0.78667510             0.21802303
## 95          -0.43305527        -0.37779383             0.25729077
## 96          -0.05091800        -0.21802303             0.85805346
## 97          -0.17908874        -0.50406856             0.67050162
## 98           0.00000000        -0.20501110             0.87658763
```

```
## 99          0.29695946         0.33710120            -0.06366298
## 100        -0.76945312        -0.76945312            -0.03818128
## 101        -0.85805346        -0.89542793            -0.28368767
## 102        -1.28735798        -1.23113036            -1.61367018
## 103        -1.12903457        -1.01596791            -1.44946373
## 104        -0.37779383        -0.75245638             0.24416040
## 105        -1.03752256        -0.95396468            -1.41400510
## 106         0.01272434         0.14042416             0.33710120
## 107         0.15328619         0.02545075            -0.17908874
## 108         0.11476746         0.05091800            -0.23107198
## 109        -0.60806071        -0.59282318            -1.12903457
## 110         0.48967276         0.35060018             0.41912210
## 111         0.28368767         0.11476746             0.01272434
## 112         0.46117919         0.16617364             0.31028376
## 113        -1.20442230        -1.08214564            -1.48684468
## 114        -0.73567430        -0.41912210            -0.32366339
## 115        -1.05957037        -1.03752256            -1.31706374
## 116        -0.80413364        -0.87658763            -0.25729077
## 117        -0.99487522        -0.97421613            -1.20442230
## 118        -0.78667510        -0.85805346            -0.41912210
## 119        -0.67050162        -0.62344075            -0.33710120
## 120        -1.52642702        -1.41400510            -0.71909690
## 121        -1.77352271        -1.61367018            -0.80413364
## 122        -2.42690063        -2.42690063            -2.23555842
## 123        -1.99828954        -1.99828954            -2.80216172
## 124        -1.41400510        -1.56855670             0.02545075
## 125        -1.38024023        -1.31706374             0.05091800
## 126        -1.23113036        -1.28735798             0.63896971
## 127        -1.31706374        -1.38024023             0.43305527
## 128        -1.17854682        -1.25874673             0.65465430
## 129        -0.95396468        -0.93409710            -0.46117919
## 130        -1.56855670        -1.52642702            -0.37779383
## 131        -1.71527720        -1.77352271            -0.62344075
## 132        -2.80216172        -2.80216172            -2.42690063
## 133        -2.10223158        -2.10223158            -1.99828954
## 134        -1.34797950        -1.48684468             0.03818128
## 135        -1.91230127        -1.83849262            -1.91230127
## 136        -1.15343724        -1.10528634             0.14042416
## 137        -1.01596791        -1.20442230            -0.50406856
## 138        -1.08214564        -1.15343724            -0.57772207
## 139        -1.44946373        -1.44946373            -1.34797950
## 140        -0.91459156        -0.91459156             0.16617364
## 141        -0.97421613        -1.12903457            -0.29695946
## 142        -0.93409710        -1.05957037             0.10196844
## 143        -2.23555842        -2.23555842            -2.10223158
## 144        -1.48684468        -1.34797950            -0.70271480
## 145        -1.66232963        -1.71527720            -0.60806071
## 146        -1.83849262        -1.91230127            -1.66232963
## 147        -1.61367018        -1.66232963            -0.78667510
## 148         1.08214564         1.12903457             0.89542793
## 149         2.10223158         1.71527720             1.91230127
## 150         2.23555842         1.91230127             1.99828954
## 151         1.91230127         2.10223158             1.83849262
## 152         2.42690063         2.23555842             2.10223158
## 153         1.41400510         1.38024023             1.23113036
```

```
## 154          0.76945312         0.73567430            -0.14042416
## 155          0.78667510         0.89542793            -0.27046566
## 156          1.83849262         1.83849262             1.61367018
## 157          1.61367018         1.66232963             1.34797950
## 158          1.12903457         1.10528634             0.95396468
## 159          1.28735798         1.25874673             1.05957037
## 160          1.25874673         1.20442230             0.99487522
## 161          1.38024023         1.31706374             1.17854682
## 162          2.80216172         2.80216172             2.80216172
## 163          1.44946373         1.61367018             1.20442230
## 164          1.71527720         1.56855670             1.56855670
## 165          1.77352271         1.52642702             1.66232963
## 166          1.34797950         1.15343724             1.25874673
## 167          1.66232963         1.99828954             1.44946373
## 168          1.01596791         1.03752256             0.56275157
## 169          0.91459156         1.17854682             0.23107198
## 170          0.75245638         0.78667510            -0.65465430
## 171          1.99828954         2.42690063             1.71527720
## 172          0.85805346         0.93409710            -0.01272434
## 173          1.56855670         1.77352271             1.12903457
## 174          0.83980946         0.87658763            -0.39149488
## 175          0.97421613         0.95396468             0.12758531
## 176          1.31706374         1.08214564             0.97421613
## 177          0.82184079         0.83980946            -0.63896971
## 178          0.73567430         0.75245638             0.46117919
## 179          1.48684468         1.48684468             1.52642702
## 180          0.99487522         1.23113036             1.03752256
## 181          0.80413364         0.80413364             0.82184079
## 182          1.10528634         1.05957037             1.28735798
## 183          1.52642702         1.44946373             1.48684468
## 184          1.03752256         0.85805346             1.15343724
## 185          0.87658763         1.28735798             0.36416334
## 186          0.95396468         1.41400510             0.76945312
## 187          1.15343724         1.34797950             1.10528634
## 188          1.20442230         1.01596791             1.31706374
## 189          0.71909690         0.76945312             1.08214564
## 190          0.70271480         0.68651916             1.01596791
## 191          0.67050162         0.08918610            -0.51856960
## 192          0.68651916         0.37779383            -0.97421613
## 193          0.89542793         0.70271480             1.38024023
## 194          0.93409710         0.91459156             1.41400510
## 195          1.17854682         0.97421613             2.23555842
## 196          1.05957037         0.82184079             1.77352271
## 197          1.23113036         0.99487522             2.42690063
##     Autocorrelation_cooc.H.ADC Tendency_cooc.H.ADC Shade_cooc.H.ADC
## 1                  -1.48684468         -0.83980946       0.54790615
## 2                   0.59282318         -0.48967276      -1.66232963
## 3                  -0.25729077          0.35060018       1.25874673
## 4                   0.00000000          0.10196844      -0.12758531
## 5                  -0.40526982         -0.82184079      -0.89542793
## 6                  -0.01272434          0.46117919      -0.78667510
## 7                   0.33710120         -0.68651916      -0.87658763
## 8                   0.44707302         -0.71909690      -1.52642702
## 9                  -1.34797950         -1.99828954      -0.29695946
## 10                 -1.23113036         -0.20501110       1.01596791
```

```
## 11                  0.50406856         -0.50406856      -1.23113036
## 12                 -1.17854682         -0.10196844       0.32366339
## 13                 -1.77352271         -0.46117919       1.31706374
## 14                 -0.12758531          0.02545075       0.62344075
## 15                 -0.91459156          0.62344075       1.66232963
## 16                 -0.47537773         -0.91459156      -0.27046566
## 17                  0.37779383         -1.44946373      -1.34797950
## 18                 -0.24416040         -0.85805346       0.14042416
## 19                 -1.83849262         -0.36416334       0.65465430
## 20                 -0.39149488          0.27046566       0.27046566
## 21                 -1.15343724         -0.06366298       0.91459156
## 22                  0.14042416          0.19203379       0.63896971
## 23                 -1.71527720         -0.62344075       0.41912210
## 24                  0.01272434          0.16617364       0.15328619
## 25                  0.54790615          0.23107198      -1.20442230
## 26                  0.10196844         -0.87658763      -0.25729077
## 27                  0.65465430          0.65465430      -2.23555842
## 28                 -0.57772207         -0.05091800       0.40526982
## 29                  0.11476746          0.08918610      -0.36416334
## 30                 -1.52642702         -0.70271480       0.35060018
## 31                 -0.19203379         -0.24416040       0.82184079
## 32                 -1.44946373         -0.76945312       0.75245638
## 33                 -0.27046566          0.24416040       0.11476746
## 34                  0.43305527          0.54790615      -1.56855670
## 35                  0.63896971         -0.17908874      -1.91230127
## 36                 -0.02545075          0.14042416      -0.32366339
## 37                  0.28368767         -0.08918610      -0.53318051
## 38                  0.46117919          0.17908874      -0.43305527
## 39                  0.06366298         -0.75245638       0.76945312
## 40                 -1.91230127         -1.56855670       0.25729077
## 41                  0.27046566          0.47537773      -1.10528634
## 42                 -2.23555842         -0.93409710       0.78667510
## 43                 -0.37779383          0.37779383       0.31028376
## 44                 -0.20501110         -0.25729077       0.80413364
## 45                  0.16617364         -0.21802303       0.50406856
## 46                 -1.99828954         -0.78667510       0.99487522
## 47                 -0.23107198         -0.67050162      -1.05957037
## 48                 -0.07641832          0.36416334       0.03818128
## 49                 -0.56275157         -0.95396468       0.39149488
## 50                 -0.29695946          0.41912210       0.29695946
## 51                 -0.08918610          0.51856960       0.19203379
## 52                  0.07641832          0.43305527      -0.19203379
## 53                  0.08918610          0.44707302       0.10196844
## 54                 -0.87658763         -0.23107198       0.20501110
## 55                 -0.89542793         -1.61367018      -0.23107198
## 56                  0.40526982         -1.91230127      -1.03752256
## 57                  0.60806071          0.25729077      -1.31706374
## 58                 -1.66232963         -0.19203379       0.73567430
## 59                 -1.38024023         -1.01596791       0.85805346
## 60                 -0.43305527         -0.43305527       0.37779383
## 61                  0.29695946         -0.73567430      -0.83980946
## 62                 -1.28735798         -0.33710120       0.47537773
## 63                  0.05091800          0.63896971      -0.28368767
## 64                 -0.21802303         -0.47537773       0.24416040
## 65                 -0.06366298          0.33710120       0.53318051
```

```
## 66                  0.15328619          0.39149488       0.12758531
## 67                 -0.46117919          0.03818128      -0.48967276
## 68                  0.31028376         -0.03818128      -0.41912210
## 69                 -2.42690063         -1.08214564       0.70271480
## 70                  0.51856960         -1.03752256      -0.91459156
## 71                 -1.01596791         -2.10223158      -0.59282318
## 72                  0.41912210          0.53318051      -0.31028376
## 73                 -0.62344075         -1.12903457      -0.60806071
## 74                 -0.44707302         -0.63896971       0.36416334
## 75                 -1.20442230         -1.83849262      -0.51856960
## 76                  0.57772207         -1.66232963      -1.44946373
## 77                 -0.41912210         -0.65465430      -0.24416040
## 78                 -1.03752256         -2.23555842      -0.54790615
## 79                 -2.80216172         -1.10528634       0.68651916
## 80                  0.53318051          0.40526982      -1.12903457
## 81                 -0.28368767         -0.44707302      -0.50406856
## 82                 -1.41400510         -0.89542793       0.44707302
## 83                  0.20501110          0.07641832      -0.44707302
## 84                  0.12758531         -0.07641832      -0.15328619
## 85                 -0.48967276         -0.11476746      -0.03818128
## 86                  0.32366339         -1.77352271      -1.17854682
## 87                  0.39149488         -1.05957037      -1.71527720
## 88                 -0.31028376         -0.54790615       0.02545075
## 89                  0.62344075          0.15328619      -1.77352271
## 90                 -0.33710120         -0.57772207       0.00000000
## 91                 -0.82184079         -0.39149488       0.07641832
## 92                 -0.68651916         -1.23113036      -0.67050162
## 93                 -1.05957037         -2.42690063      -0.56275157
## 94                 -0.15328619          0.00000000       0.59282318
## 95                  0.24416040          0.31028376      -0.97421613
## 96                 -0.95396468          0.59282318       1.56855670
## 97                 -0.10196844          0.50406856       0.17908874
## 98                 -0.93409710          0.60806071       1.61367018
## 99                 -1.25874673         -0.32366339       0.48967276
## 100                 0.19203379          0.06366298      -0.46117919
## 101                -0.51856960         -0.14042416      -0.06366298
## 102                -0.70271480         -1.25874673      -0.68651916
## 103                -0.65465430         -1.17854682      -0.63896971
## 104                -0.14042416          0.01272434       0.60806071
## 105                -0.63896971         -1.15343724      -0.62344075
## 106                 0.25729077          0.32366339      -0.95396468
## 107                -1.56855670         -0.29695946       1.20442230
## 108                -0.80413364         -0.37779383       0.08918610
## 109                -0.59282318         -0.97421613      -0.80413364
## 110                 0.03818128          0.21802303       0.23107198
## 111                -1.10528634         -0.27046566       1.05957037
## 112                -0.03818128          0.12758531      -0.20501110
## 113                -0.67050162         -1.20442230      -0.65465430
## 114                -0.32366339         -0.56275157       0.01272434
## 115                 0.56275157         -1.71527720      -1.48684468
## 116                -0.50406856         -0.12758531      -0.05091800
## 117                 0.36416334         -1.48684468      -1.38024023
## 118                 0.48967276         -0.51856960      -1.25874673
## 119                -2.10223158         -0.80413364       0.97421613
## 120                -0.36416334         -0.60806071      -0.02545075
```

```
## 121                -0.85805346         -0.41912210       0.05091800
## 122                -0.76945312         -1.38024023      -0.75245638
## 123                -1.08214564         -2.80216172      -0.57772207
## 124                -0.17908874         -0.02545075       0.56275157
## 125                 0.21802303          0.28368767      -1.01596791
## 126                -0.99487522          0.56275157       1.48684468
## 127                -0.11476746          0.48967276       0.16617364
## 128                -0.97421613          0.57772207       1.52642702
## 129                -1.31706374         -0.35060018       0.46117919
## 130                 0.17908874          0.05091800      -0.47537773
## 131                -0.54790615         -0.16617364      -0.08918610
## 132                -0.78667510         -1.41400510      -0.76945312
## 133                -0.73567430         -1.31706374      -0.71909690
## 134                -0.16617364         -0.01272434       0.57772207
## 135                -0.71909690         -1.28735798      -0.70271480
## 136                 0.23107198          0.29695946      -0.99487522
## 137                -1.61367018         -0.31028376       1.17854682
## 138                -0.83980946         -0.40526982       0.06366298
## 139                -0.60806071         -0.99487522      -0.82184079
## 140                 0.02545075          0.20501110       0.21802303
## 141                -1.12903457         -0.28368767       1.03752256
## 142                -0.05091800          0.11476746      -0.21802303
## 143                -0.75245638         -1.34797950      -0.73567430
## 144                -0.35060018         -0.59282318      -0.01272434
## 145                -0.53318051         -0.15328619      -0.07641832
## 146                 0.35060018         -1.52642702      -1.41400510
## 147                 0.47537773         -0.53318051      -1.28735798
## 148                 0.97421613          0.93409710       1.41400510
## 149                 1.15343724          1.71527720       1.28735798
## 150                 1.28735798          1.99828954       1.12903457
## 151                 1.38024023          1.77352271       0.67050162
## 152                 1.41400510          1.83849262       0.95396468
## 153                 0.89542793          1.20442230       1.15343724
## 154                 0.87658763          0.78667510       0.51856960
## 155                 1.83849262          0.71909690      -1.15343724
## 156                 2.42690063          1.48684468      -1.99828954
## 157                 0.70271480          1.23113036       2.10223158
## 158                 0.73567430          0.91459156       2.23555842
## 159                 1.05957037          1.12903457       1.38024023
## 160                 1.61367018          0.97421613      -0.85805346
## 161                 0.75245638          1.17854682       1.71527720
## 162                 1.34797950          2.80216172       0.33710120
## 163                 1.20442230          1.08214564       1.23113036
## 164                 1.31706374          1.56855670       1.77352271
## 165                 1.48684468          1.61367018       1.08214564
## 166                 1.01596791          1.38024023      -0.14042416
## 167                 1.66232963          1.31706374      -0.10196844
## 168                 0.68651916          0.85805346       1.99828954
## 169                 1.99828954          0.89542793      -0.93409710
## 170                 0.82184079          0.70271480      -0.37779383
## 171                 1.91230127          2.10223158       0.28368767
## 172                 0.95396468          0.82184079      -0.39149488
## 173                 1.03752256          1.01596791       1.34797950
## 174                 0.76945312          0.73567430      -0.17908874
## 175                 2.23555842          0.76945312      -2.10223158
```

```
## 176                 1.08214564          0.99487522       0.43305527
## 177                 0.80413364          0.68651916      -0.33710120
## 178                 0.67050162          0.83980946       1.91230127
## 179                 2.10223158          1.66232963      -1.61367018
## 180                 1.17854682          1.10528634      -0.16617364
## 181                 0.71909690          0.95396468       1.44946373
## 182                 1.52642702          1.41400510      -0.11476746
## 183                 1.44946373          1.28735798       0.71909690
## 184                 0.99487522          1.25874673       0.83980946
## 185                 1.71527720          0.75245638      -1.83849262
## 186                 1.77352271          0.87658763      -2.42690063
## 187                 1.12903457          1.05957037       0.89542793
## 188                 2.80216172          1.44946373      -2.80216172
## 189                 1.10528634          1.03752256       0.87658763
## 190                 0.91459156          1.15343724       0.93409710
## 191                 0.93409710          0.80413364      -0.40526982
## 192                 0.78667510          0.67050162      -0.35060018
## 193                 1.23113036          1.34797950       1.83849262
## 194                 1.56855670          1.52642702      -1.08214564
## 195                 0.83980946          2.23555842       2.42690063
## 196                 1.25874673          1.91230127       1.10528634
## 197                 0.85805346          2.42690063       2.80216172
##     Prominence_cooc.H.ADC IC1_d.H.ADC IC2_d.H.ADC Coarseness_vdif.H.ADC
## 1             -0.93409710 -1.17854682  0.50406856            0.67050162
## 2             -0.78667510  0.29695946 -0.01272434            0.03818128
## 3              0.51856960  0.10196844  0.14042416           -0.12758531
## 4             -0.01272434  0.47537773 -0.15328619           -0.32366339
## 5             -0.91459156  0.36416334 -0.03818128           -0.07641832
## 6              0.28368767 -0.47537773  0.37779383            0.00000000
## 7             -0.80413364 -0.16617364  0.27046566            0.11476746
## 8             -0.59282318  0.24416040  0.02545075           -0.06366298
## 9             -1.71527720 -1.01596791  0.46117919            0.47537773
## 10            -0.10196844 -0.19203379  0.29695946            0.02545075
## 11            -0.73567430  0.51856960 -0.27046566           -0.11476746
## 12            -0.16617364  0.99487522 -1.12903457           -0.29695946
## 13            -0.17908874  0.82184079 -0.71909690           -0.36416334
## 14             0.10196844  0.23107198  0.05091800           -0.16617364
## 15             0.59282318  0.05091800  0.16617364           -0.45411481
## 16            -0.82184079  1.01596791 -1.15343724           -0.27046566
## 17            -1.56855670  0.54790615 -0.33710120           -0.01272434
## 18            -0.89542793  1.48684468 -1.99828954           -0.41912210
## 19            -0.70271480  0.80413364 -0.68651916           -0.33710120
## 20             0.32366339  0.50406856 -0.23107198           -0.45411481
## 21             0.11476746  0.76945312 -0.59282318           -0.37779383
## 22            -0.08918610 -1.61367018  0.57772207            1.52642702
## 23            -0.57772207  0.87658763 -0.89542793           -0.21802303
## 24             0.14042416  0.57772207 -0.36416334           -0.35060018
## 25             0.23107198 -0.02545075  0.17908874           -0.02545075
## 26            -0.85805346  1.56855670 -2.10223158           -0.50406856
## 27             0.60806071 -0.46117919  0.36416334            0.06366298
## 28            -0.05091800 -0.11476746  0.24416040            0.05091800
## 29            -0.06366298 -0.27046566  0.32366339            0.10196844
## 30            -0.71909690  0.93409710 -1.03752256           -0.25729077
## 31            -0.67050162 -1.77352271  0.60806071            1.61367018
## 32            -0.51856960  1.20442230 -1.41400510           -0.40526982
```

```
## 33            0.25729077  0.43305527 -0.11476746           -0.48967276
## 34            0.48967276 -0.99487522  0.44707302            0.50406856
## 35            0.03818128  0.19203379  0.06366298           -0.05091800
## 36           -0.07641832  0.45411481 -0.12758531           -0.28368767
## 37            0.12758531  0.60806071 -0.47537773           -0.39149488
## 38            0.16617364 -1.23113036  0.51856960            0.70271480
## 39           -0.37779383  1.05957037 -1.17854682           -0.47537773
## 40           -1.48684468  1.10528634 -1.20442230           -0.20501110
## 41            0.65465430 -0.10196844  0.23107198           -0.51856960
## 42           -0.95396468  0.65465430 -0.50406856           -0.10196844
## 43            0.40526982  0.33710120 -0.05091800           -0.43305527
## 44           -0.68651916 -1.83849262  0.59282318            1.56855670
## 45           -0.60806071 -1.48684468  0.62344075            1.71527720
## 46           -0.54790615  0.41912210  0.21802303            0.65465430
## 47           -0.53318051 -0.28368767  0.39149488            0.73567430
## 48            0.31028376  0.95396468 -0.20501110            0.46117919
## 49           -0.97421613 -1.52642702  0.65465430            1.66232963
## 50            0.27046566  0.75245638 -0.02545075            0.35060018
## 51            0.37779383  0.70271480  0.01272434            0.33710120
## 52            0.29695946  0.71909690  0.00000000            0.29695946
## 53            0.50406856  0.59282318  0.10196844            0.25729077
## 54           -0.15328619  0.56275157  0.15328619            0.62344075
## 55           -1.52642702 -1.56855670  0.63896971            1.48684468
## 56           -2.80216172 -1.38024023  0.54790615            1.17854682
## 57            0.24416040  0.45411481  0.19203379            0.51856960
## 58           -0.32366339  1.03752256 -0.35060018            0.36416334
## 59           -1.44946373 -1.91230127  0.67050162            1.77352271
## 60           -0.33710120  1.83849262 -1.38024023            0.23107198
## 61           -0.62344075  1.99828954 -1.56855670            0.24416040
## 62           -0.40526982  1.38024023 -0.91459156            0.41912210
## 63            0.62344075 -0.29695946  0.41912210            0.43305527
## 64           -0.43305527  1.17854682 -0.51856960            0.32366339
## 65            0.41912210  0.00000000  0.33710120            0.68651916
## 66            0.39149488  0.27046566  0.28368767            0.56275157
## 67            0.02545075  1.31706374 -0.85805346            0.39149488
## 68            0.15328619  1.15343724 -0.40526982            0.28368767
## 69           -1.03752256  0.31028376  0.25729077            0.71909690
## 70           -1.41400510 -1.41400510  0.56275157            1.28735798
## 71           -1.99828954  2.23555842 -1.52642702            0.63896971
## 72            0.63896971  0.89542793 -0.06366298            0.48967276
## 73           -1.10528634  0.91459156 -0.10196844            0.75245638
## 74           -0.63896971  1.44946373 -0.70271480            0.53318051
## 75           -1.91230127  2.42690063 -1.61367018            0.60806071
## 76           -1.77352271 -0.80413364  0.47537773            1.05957037
## 77           -0.83980946 -0.89542793  0.48967276            1.08214564
## 78           -2.10223158  2.80216172 -1.77352271            0.57772207
## 79           -1.05957037 -0.05091800  0.20501110            0.12758531
## 80            0.33710120  0.35060018  0.03818128           -0.14042416
## 81           -0.24416040  1.25874673 -1.34797950           -0.31028376
## 82           -0.65465430  1.41400510 -1.66232963           -0.24416040
## 83            0.21802303  0.53318051 -0.17908874           -0.08918610
## 84           -0.11476746 -0.51856960  0.40526982            0.27046566
## 85           -0.25729077  0.67050162 -0.39149488           -0.03818128
## 86           -1.08214564  0.97421613 -1.01596791           -0.17908874
## 87           -0.87658763  0.83980946 -0.62344075           -0.19203379
```

```
## 88            -0.44707302  0.85805346 -0.63896971           -0.23107198
## 89             0.17908874 -0.40526982  0.35060018            0.16617364
## 90            -0.47537773  0.32366339 -0.87658763           -0.83980946
## 91            -0.20501110  0.73567430 -1.71527720           -0.87658763
## 92            -1.20442230 -0.03818128 -0.31028376           -0.67050162
## 93            -2.23555842  1.08214564 -2.23555842           -0.62344075
## 94             0.07641832 -0.25729077 -0.08918610           -0.76945312
## 95             0.46117919 -0.06366298 -0.25729077           -0.78667510
## 96             0.56275157 -0.37779383  0.07641832           -0.89542793
## 97             0.36416334 -0.12758531 -0.16617364           -0.82184079
## 98             0.57772207 -0.32366339  0.08918610           -0.85805346
## 99            -0.39149488  1.61367018 -0.80413364            0.54790615
## 100            0.20501110  0.01272434 -0.37779383           -0.73567430
## 101           -0.28368767  0.12758531 -0.56275157           -0.68651916
## 102           -1.23113036 -0.07641832 -0.32366339           -0.70271480
## 103           -1.15343724  0.06366298 -0.28368767           -0.56275157
## 104            0.08918610 -0.23107198 -0.07641832           -0.71909690
## 105           -1.12903457  0.14042416 -0.24416040           -0.54790615
## 106            0.47537773  0.40526982 -0.14042416           -0.53318051
## 107           -0.12758531  1.23113036 -0.60806071            0.40526982
## 108           -0.19203379  1.66232963 -1.44946373            0.19203379
## 109           -0.99487522  1.77352271 -1.48684468            0.37779383
## 110           -0.02545075  1.12903457 -0.46117919            0.21802303
## 111           -0.35060018  1.34797950 -0.99487522            0.20501110
## 112            0.01272434  0.17908874  0.31028376            0.59282318
## 113           -1.17854682  0.03818128 -0.29695946           -0.60806071
## 114           -0.46117919  0.39149488 -0.82184079           -0.75245638
## 115           -1.83849262 -1.15343724  0.43305527           -0.15328619
## 116           -0.27046566  0.21802303 -0.53318051           -0.65465430
## 117           -1.61367018  0.15328619 -0.48967276           -0.59282318
## 118           -0.75245638  0.08918610 -0.41912210           -0.63896971
## 119           -0.56275157 -0.31028376  0.12758531           -0.57772207
## 120           -0.50406856 -0.56275157 -1.28735798           -2.10223158
## 121           -0.23107198 -0.43305527 -2.42690063           -2.42690063
## 122           -1.34797950 -0.75245638 -0.76945312           -1.52642702
## 123           -2.42690063 -0.21802303 -2.80216172           -1.41400510
## 124            0.05091800 -0.93409710 -0.44707302           -1.83849262
## 125            0.43305527 -0.78667510 -0.67050162           -1.91230127
## 126            0.53318051 -0.97421613 -0.21802303           -2.80216172
## 127            0.35060018 -0.87658763 -0.57772207           -1.99828954
## 128            0.54790615 -0.95396468 -0.19203379           -2.23555842
## 129           -0.41912210  0.07641832 -1.23113036           -0.99487522
## 130            0.19203379 -0.71909690 -0.83980946           -1.71527720
## 131           -0.31028376 -0.65465430 -1.08214564           -1.56855670
## 132           -1.38024023 -0.82184079 -0.78667510           -1.61367018
## 133           -1.28735798 -0.68651916 -0.73567430           -1.31706374
## 134            0.06366298 -0.91459156 -0.43305527           -1.66232963
## 135           -1.25874673 -0.63896971 -0.65465430           -1.28735798
## 136            0.44707302 -0.53318051 -0.54790615           -1.25874673
## 137           -0.14042416 -0.15328619 -1.10528634           -1.10528634
## 138           -0.21802303  0.25729077 -1.83849262           -1.23113036
## 139           -1.01596791  0.28368767 -1.91230127           -1.12903457
## 140           -0.03818128 -0.17908874 -0.95396468           -1.17854682
## 141           -0.36416334 -0.01272434 -1.31706374           -1.20442230
## 142            0.00000000 -0.60806071  0.11476746           -0.97421613
```

```
## 143          -1.31706374 -0.70271480 -0.75245638          -1.38024023
## 144          -0.48967276 -0.54790615 -1.25874673          -1.77352271
## 145          -0.29695946 -0.59282318 -1.05957037          -1.48684468
## 146          -1.66232963 -0.62344075 -0.97421613          -1.34797950
## 147          -0.76945312 -0.67050162 -0.93409710          -1.44946373
## 148           0.91459156 -2.23555842  2.42690063           2.42690063
## 149           1.52642702 -0.33710120  1.20442230           0.95396468
## 150           1.71527720 -0.39149488  1.25874673           0.93409710
## 151           1.56855670 -0.36416334  1.23113036           0.89542793
## 152           1.99828954 -0.44707302  1.38024023           0.83980946
## 153           1.25874673 -0.48967276  1.41400510           1.31706374
## 154           0.76945312 -2.42690063  2.23555842           2.23555842
## 155           0.67050162 -1.99828954  1.99828954           1.99828954
## 156           1.48684468 -0.57772207  1.44946373           1.12903457
## 157           1.15343724  0.11476746  1.01596791           0.97421613
## 158           0.78667510 -2.80216172  2.80216172           2.80216172
## 159           1.12903457  1.28735798  0.78667510           0.80413364
## 160           1.01596791  1.52642702  0.75245638           0.82184079
## 161           1.10528634  0.63896971  0.83980946           1.01596791
## 162           2.42690063 -1.25874673  1.77352271           1.03752256
## 163           1.08214564  0.37779383  0.95396468           0.91459156
## 164           1.83849262 -1.03752256  1.61367018           1.38024023
## 165           1.77352271 -0.85805346  1.56855670           1.20442230
## 166           1.31706374  0.62344075  0.87658763           0.99487522
## 167           1.38024023  0.20501110  0.97421613           0.87658763
## 168           0.89542793 -0.83980946  1.52642702           1.41400510
## 169           0.80413364 -2.10223158  2.10223158           2.10223158
## 170           0.71909690  1.71527720  0.76945312           1.34797950
## 171           2.80216172 -0.14042416  1.17854682           1.10528634
## 172           0.83980946 -0.08918610  1.12903457           1.44946373
## 173           0.99487522  0.78667510  0.89542793           1.15343724
## 174           0.73567430  1.91230127  0.73567430           1.25874673
## 175           0.75245638 -1.66232963  1.83849262           1.83849262
## 176           0.95396468 -1.71527720  1.91230127           1.91230127
## 177           0.70271480  2.10223158  0.68651916           1.23113036
## 178           0.87658763 -1.08214564  1.48684468           0.76945312
## 179           1.61367018 -0.73567430  1.28735798           0.17908874
## 180           1.20442230  0.48967276  0.80413364           0.01272434
## 181           0.97421613  0.68651916  0.71909690           0.07641832
## 182           1.44946373 -0.50406856  1.08214564           0.31028376
## 183           1.28735798 -1.44946373  1.71527720           0.85805346
## 184           1.17854682 -0.41912210  0.99487522           0.44707302
## 185           0.85805346  0.02545075  0.82184079           0.15328619
## 186           0.93409710 -0.24416040  0.93409710           0.14042416
## 187           1.05957037 -0.20501110  0.91459156           0.08918610
## 188           1.41400510 -1.34797950  1.66232963           0.78667510
## 189           1.03752256 -0.76945312  0.85805346          -1.03752256
## 190           1.23113036 -0.35060018  0.70271480          -1.08214564
## 191           0.82184079 -1.05957037  1.03752256          -0.91459156
## 192           0.68651916  0.16617364  0.53318051          -0.80413364
## 193           1.34797950 -1.20442230  1.15343724          -0.93409710
## 194           1.91230127 -1.10528634  1.05957037          -0.95396468
## 195           2.10223158 -1.31706374  1.31706374          -1.15343724
## 196           1.66232963 -1.12903457  1.10528634          -1.01596791
## 197           2.23555842 -1.28735798  1.34797950          -1.05957037
```

```
##     Contrast_vdif.H.ADC Busyness_vdif.H.ADC Complexity_vdif.H.ADC
## 1            0.03818128         -1.66232963            0.05091800
## 2           -0.08918610         -0.73567430           -0.14042416
## 3           -1.05957037         -0.31028376           -1.03752256
## 4           -1.34797950          0.21802303           -1.34797950
## 5           -0.01272434         -0.50406856            0.00000000
## 6           -1.28735798         -0.63896971           -1.25874673
## 7            0.17908874         -1.08214564            0.16617364
## 8           -0.32366339         -0.51856960           -0.40526982
## 9            0.44707302         -1.41400510            0.36416334
## 10          -0.56275157         -0.65465430           -0.56275157
## 11          -0.19203379         -0.35060018           -0.23107198
## 12          -0.23107198          0.19203379           -0.16617364
## 13          -0.65465430          0.37779383           -0.65465430
## 14          -0.80413364         -0.27046566           -0.89542793
## 15          -1.91230127          0.97421613           -1.91230127
## 16           0.12758531         -0.01272434            0.12758531
## 17           0.31028376         -0.60806071            0.33710120
## 18           0.27046566          0.75245638            0.25729077
## 19          -0.43305527          0.23107198           -0.41912210
## 20          -1.03752256          1.03752256           -1.31706374
## 21          -0.70271480          0.48967276           -0.70271480
## 22          -1.41400510         -2.23555842           -1.28735798
## 23           0.05091800         -0.11476746            0.06366298
## 24          -1.12903457          0.32366339           -1.05957037
## 25          -0.78667510         -0.62344075           -1.01596791
## 26           0.21802303          1.05957037            0.20501110
## 27          -1.61367018         -0.97421613           -1.61367018
## 28          -0.95396468         -0.87658763           -0.83980946
## 29          -0.93409710         -1.05957037           -0.99487522
## 30           0.07641832         -0.02545075            0.08918610
## 31          -0.50406856         -2.42690063           -0.51856960
## 32          -0.02545075          0.60806071            0.02545075
## 33          -1.38024023          1.01596791           -1.41400510
## 34          -1.66232963         -1.38024023           -1.77352271
## 35          -0.07641832         -0.56275157           -0.17908874
## 36          -1.17854682          0.10196844           -1.08214564
## 37          -0.62344075          0.62344075           -0.68651916
## 38          -0.54790615         -1.71527720           -0.43305527
## 39           0.15328619          0.99487522            0.14042416
## 40           0.14042416         -0.14042416            0.15328619
## 41          -1.44946373          1.17854682           -1.66232963
## 42           0.08918610         -0.39149488            0.11476746
## 43          -1.48684468          0.87658763           -1.83849262
## 44          -0.51856960         -2.80216172           -0.53318051
## 45          -0.60806071         -1.91230127           -0.62344075
## 46          -0.29695946         -0.48967276           -0.44707302
## 47           0.28368767         -0.78667510            0.24416040
## 48          -0.57772207         -0.07641832           -0.63896971
## 49           0.11476746         -1.83849262            0.10196844
## 50          -1.52642702          0.36416334           -1.44946373
## 51          -1.56855670          0.39149488           -1.48684468
## 52          -1.31706374          0.71909690           -1.38024023
## 53          -1.71527720          1.25874673           -1.71527720
## 54          -0.36416334         -0.47537773           -0.47537773
```

```
## 55          0.43305527         -1.77352271          0.59282318
## 56          0.57772207         -1.52642702          0.39149488
## 57         -1.10528634         -0.20501110         -1.23113036
## 58         -0.68651916          0.25729077         -0.67050162
## 59          0.01272434         -1.99828954         -0.01272434
## 60          0.02545075          1.83849262          0.03818128
## 61          0.10196844          1.48684468          0.01272434
## 62         -0.28368767          0.15328619         -0.29695946
## 63         -2.80216172          0.02545075         -2.80216172
## 64         -0.17908874          0.47537773         -0.27046566
## 65         -0.85805346         -0.59282318         -1.10528634
## 66         -0.97421613         -0.40526982         -1.15343724
## 67         -0.11476746          0.24416040         -0.19203379
## 68         -0.71909690          0.82184079         -0.75245638
## 69          0.23107198         -0.70271480          0.23107198
## 70          0.35060018         -1.61367018          0.35060018
## 71          0.67050162         -0.06366298          0.67050162
## 72         -0.99487522          1.91230127         -1.17854682
## 73          0.54790615         -0.44707302          0.54790615
## 74         -0.10196844          0.57772207         -0.15328619
## 75          0.62344075          0.00000000          0.60806071
## 76          0.33710120         -1.20442230          0.29695946
## 77          0.06366298         -1.23113036          0.07641832
## 78          0.63896971          0.07641832          0.65465430
## 79          0.20501110         -0.89542793          0.21802303
## 80         -1.20442230          0.14042416         -1.20442230
## 81         -0.21802303          2.10223158         -0.39149488
## 82          0.19203379          0.65465430          0.17908874
## 83         -0.53318051         -0.16617364         -0.57772207
## 84         -1.08214564         -1.12903457         -1.12903457
## 85          0.00000000         -0.29695946         -0.02545075
## 86          0.25729077          0.28368767          0.27046566
## 87          0.16617364          0.29695946          0.19203379
## 88         -0.25729077          0.63896971         -0.32366339
## 89         -0.39149488         -1.03752256         -0.54790615
## 90         -0.35060018          0.53318051         -0.35060018
## 91         -0.12758531          1.28735798         -0.10196844
## 92          0.47537773         -0.80413364          0.48967276
## 93          0.60806071         -0.05091800          0.63896971
## 94         -0.89542793         -0.33710120         -0.93409710
## 95         -0.76945312          0.06366298         -0.78667510
## 96         -2.10223158          0.93409710         -2.10223158
## 97         -1.77352271          0.35060018         -1.52642702
## 98         -1.99828954          0.95396468         -1.99828954
## 99         -0.27046566          0.17908874         -0.28368767
## 100        -0.59282318         -0.23107198         -0.59282318
## 101        -0.05091800         -0.41912210         -0.05091800
## 102         0.46117919         -0.82184079          0.47537773
## 103         0.50406856         -0.75245638          0.51856960
## 104        -0.87658763         -0.32366339         -0.91459156
## 105         0.51856960         -0.67050162          0.53318051
## 106        -0.75245638          0.11476746         -0.76945312
## 107        -0.15328619         -0.03818128         -0.20501110
## 108        -0.06366298          1.31706374         -0.08918610
## 109         0.59282318          0.01272434          0.57772207
```

```
## 110         -0.73567430          0.67050162           -0.71909690
## 111         -0.46117919          0.91459156           -0.48967276
## 112         -0.82184079         -0.57772207           -0.85805346
## 113          0.48967276         -0.76945312            0.50406856
## 114         -0.33710120          0.54790615           -0.33710120
## 115          0.32366339         -2.10223158            0.28368767
## 116         -0.03818128         -0.36416334           -0.03818128
## 117          0.29695946         -0.83980946            0.32366339
## 118         -0.24416040         -0.43305527           -0.24416040
## 119         -0.40526982         -0.85805346           -0.46117919
## 120         -0.48967276          0.43305527           -0.37779383
## 121         -0.31028376          1.15343724           -0.12758531
## 122          0.37779383         -1.44946373            0.41912210
## 123          0.56275157         -0.25729077            0.62344075
## 124         -1.25874673         -0.71909690           -0.97421613
## 125         -1.01596791         -0.12758531           -0.82184079
## 126         -2.42690063          0.78667510           -2.42690063
## 127         -1.83849262          0.31028376           -1.56855670
## 128         -2.23555842          0.80413364           -2.23555842
## 129         -0.44707302          0.05091800           -0.31028376
## 130         -0.67050162         -0.46117919           -0.60806071
## 131         -0.16617364         -0.93409710           -0.07641832
## 132          0.36416334         -1.48684468            0.40526982
## 133          0.40526982         -1.31706374            0.44707302
## 134         -1.23113036         -0.68651916           -0.95396468
## 135          0.41912210         -1.28735798            0.46117919
## 136         -0.91459156         -0.08918610           -0.80413364
## 137         -0.37779383         -0.21802303           -0.21802303
## 138         -0.20501110          1.20442230           -0.11476746
## 139          0.53318051         -0.19203379            0.56275157
## 140         -0.83980946          0.50406856           -0.73567430
## 141         -0.63896971          0.76945312           -0.50406856
## 142         -1.15343724         -1.17854682           -0.87658763
## 143          0.39149488         -1.34797950            0.43305527
## 144         -0.47537773          0.44707302           -0.36416334
## 145         -0.14042416         -0.91459156           -0.06366298
## 146          0.24416040         -1.56855670            0.31028376
## 147         -0.41912210         -0.99487522           -0.25729077
## 148          1.41400510         -1.15343724            1.41400510
## 149          0.76945312          1.10528634            0.76945312
## 150          0.75245638          1.12903457            0.75245638
## 151          0.78667510          1.52642702            0.78667510
## 152          0.73567430          1.71527720            0.71909690
## 153          1.03752256          0.03818128            1.03752256
## 154          1.77352271         -1.10528634            1.99828954
## 155          1.99828954         -0.95396468            1.77352271
## 156          0.82184079          0.27046566            0.80413364
## 157          0.97421613          0.83980946            0.97421613
## 158          1.28735798         -1.25874673            1.28735798
## 159          1.31706374          2.23555842            1.34797950
## 160          1.38024023          1.99828954            1.31706374
## 161          1.08214564          0.70271480            1.12903457
## 162          0.65465430          0.51856960            0.37779383
## 163          1.15343724          1.23113036            1.15343724
## 164          0.91459156         -0.10196844            0.89542793
```

```
## 165          0.87658763          0.12758531            0.85805346
## 166          1.20442230          0.73567430            1.17854682
## 167          0.95396468          1.56855670            0.95396468
## 168          1.56855670         -0.15328619            1.56855670
## 169          1.71527720         -1.01596791            1.71527720
## 170          2.80216172          0.40526982            2.80216172
## 171          0.85805346          2.42690063            0.83980946
## 172          1.91230127          0.08918610            1.91230127
## 173          1.23113036          1.38024023            1.20442230
## 174          2.23555842          0.46117919            2.10223158
## 175          1.66232963         -0.53318051            1.66232963
## 176          1.34797950         -0.54790615            1.38024023
## 177          2.42690063          0.59282318            2.42690063
## 178          1.52642702         -0.24416040            1.52642702
## 179          0.80413364          0.68651916            0.82184079
## 180          1.12903457          2.80216172            1.05957037
## 181          1.48684468          1.44946373            1.44946373
## 182          0.99487522          0.33710120            0.99487522
## 183          0.83980946         -0.37779383            0.87658763
## 184          1.25874673          0.20501110            1.25874673
## 185          1.61367018          0.85805346            1.61367018
## 186          1.44946373          0.89542793            1.48684468
## 187          1.10528634          1.41400510            1.10528634
## 188          1.01596791         -0.28368767            1.01596791
## 189          1.05957037          1.34797950            1.08214564
## 190          1.17854682          1.77352271            1.23113036
## 191          1.83849262         -0.17908874            1.83849262
## 192          2.10223158          0.41912210            2.23555842
## 193          0.89542793          0.16617364            0.91459156
## 194          0.93409710          0.56275157            0.93409710
## 195          0.68651916          1.61367018            0.68651916
## 196          0.71909690          1.08214564            0.73567430
## 197          0.70271480          1.66232963            0.70271480
##     Strength_vdif.H.ADC SRE_align.H.ADC LRE_align.H.ADC GLNU_align.H.ADC
## 1            1.31706374      0.05091800     -0.67050162      -1.44946373
## 2            0.73567430      0.02545075     -0.65465430      -0.75245638
## 3            0.16617364     -0.41218607      0.21802303      -0.29695946
## 4           -0.53318051     -0.53318051      0.25729077       0.33710120
## 5            0.29695946     -0.14042416     -0.33710120      -0.57772207
## 6            0.63896971     -0.35060018     -0.14042416      -0.51856960
## 7            0.95396468      0.03818128     -0.68651916      -1.23113036
## 8            0.31028376     -0.17908874     -0.24416040      -0.56275157
## 9            1.10528634      0.06366298     -0.82184079      -1.38024023
## 10           0.67050162     -0.46117919      0.16617364      -0.71909690
## 11           0.20501110     -0.08918610     -0.46117919      -0.46117919
## 12          -0.51856960     -0.28368767     -0.12758531       0.15328619
## 13          -0.73567430     -0.41218607      0.19203379       0.41912210
## 14           0.06366298     -0.23107198     -0.20501110      -0.12758531
## 15          -1.25874673     -0.57772207      0.36416334       1.25874673
## 16          -0.27046566     -0.16617364     -0.32366339      -0.05091800
## 17           0.57772207      0.12758531     -0.83980946      -0.76945312
## 18          -1.10528634     -0.29695946     -0.16617364       0.67050162
## 19          -0.56275157     -0.51856960      0.14042416       0.24416040
## 20          -1.23113036     -0.70271480      0.56275157       0.93409710
## 21          -0.80413364     -0.50406856      0.27046566       0.54790615
```

```
## 22          1.71527720      0.10196844     -0.95396468      -1.83849262
## 23         -0.10196844     -0.15328619     -0.31028376      -0.10196844
## 24         -0.63896971     -0.47537773      0.08918610       0.37779383
## 25          0.59282318     -0.21802303     -0.28368767      -0.54790615
## 26         -1.48684468     -0.24416040     -0.19203379       0.82184079
## 27          0.85805346     -0.36416334     -0.11476746      -0.70271480
## 28          0.76945312     -0.32366339     -0.17908874      -0.73567430
## 29          0.91459156     -0.12758531     -0.39149488      -1.03752256
## 30         -0.24416040     -0.19203379     -0.29695946      -0.01272434
## 31          1.99828954      0.28368767     -1.38024023      -2.23555842
## 32         -0.91459156     -0.37779383     -0.03818128       0.44707302
## 33         -1.38024023     -0.65465430      0.50406856       1.12903457
## 34          1.12903457     -0.25729077     -0.25729077      -1.25874673
## 35          0.50406856     -0.06366298     -0.50406856      -0.65465430
## 36         -0.37779383     -0.43305527      0.06366298       0.19203379
## 37         -0.82184079     -0.56275157      0.32366339       0.53318051
## 38          1.34797950     -0.03818128     -0.48967276      -1.41400510
## 39         -1.34797950     -0.48967276      0.17908874       0.76945312
## 40         -0.07641832     -0.10196844     -0.44707302      -0.23107198
## 41         -1.56855670     -0.73567430      0.57772207       1.44946373
## 42          0.25729077     -0.01272434     -0.53318051      -0.53318051
## 43         -1.12903457     -0.75245638      0.62344075       0.91459156
## 44          1.91230127      0.27046566     -1.41400510      -2.42690063
## 45          1.66232963      0.62344075     -1.12903457      -1.91230127
## 46          0.62344075      0.41912210     -0.02545075      -0.67050162
## 47          0.87658763      0.39149488      0.10196844      -1.17854682
## 48         -0.11476746      0.33710120      0.03818128       0.01272434
## 49          1.61367018      0.56275157     -0.87658763      -2.10223158
## 50         -0.68651916      0.15328619      0.47537773       0.56275157
## 51         -0.70271480      0.14042416      0.44707302       0.60806071
## 52         -1.08214564      0.08918610      0.54790615       0.80413364
## 53         -1.52642702     -0.02545075      0.60806071       1.48684468
## 54          0.53318051      0.43305527     -0.15328619      -0.62344075
## 55          1.56855670      0.59282318     -1.01596791      -1.99828954
## 56          1.41400510      0.53318051     -0.70271480      -1.71527720
## 57          0.07641832      0.24416040      0.37779383      -0.11476746
## 58         -0.57772207      0.21802303      0.43305527       0.28368767
## 59          2.10223158      0.63896971     -1.28735798      -2.80216172
## 60         -2.23555842      0.11476746      0.59282318       1.61367018
## 61         -1.77352271      0.25729077      0.39149488       1.08214564
## 62         -0.47537773      0.32366339      0.12758531       0.06366298
## 63         -0.23107198     -0.05091800      0.63896971       0.27046566
## 64         -0.76945312      0.16617364      0.53318051       0.39149488
## 65          0.75245638      0.40526982     -0.05091800      -0.63896971
## 66          0.32366339      0.37779383      0.00000000      -0.50406856
## 67         -0.54790615      0.35060018      0.01272434       0.17908874
## 68         -1.15343724      0.19203379      0.41912210       0.89542793
## 69          0.82184079      0.47537773     -0.36416334      -1.10528634
## 70          1.44946373      0.57772207     -0.89542793      -1.77352271
## 71         -0.08918610      0.54790615     -0.41912210      -0.32366339
## 72         -2.42690063      0.00000000      0.65465430       2.10223158
## 73          0.48967276      0.48967276     -0.27046566      -0.82184079
## 74         -0.83980946      0.31028376      0.48967276       0.43305527
## 75         -0.17908874      0.50406856     -0.35060018      -0.31028376
## 76          1.23113036      0.65465430     -0.71909690      -1.48684468
```

```
## 77          1.28735798      0.60806071     -0.54790615      -1.34797950
## 78         -0.28368767      0.51856960     -0.37779383      -0.19203379
## 79          0.80413364      0.07641832     -0.56275157      -1.12903457
## 80         -0.39149488     -0.39149488      0.28368767       0.20501110
## 81         -2.80216172     -0.44707302      0.51856960       1.91230127
## 82         -0.95396468     -0.31028376      0.11476746       0.40526982
## 83         -0.03818128     -0.11476746     -0.06366298      -0.06366298
## 84          0.97421613     -0.27046566      0.07641832      -1.08214564
## 85          0.15328619      0.01272434     -0.40526982      -0.39149488
## 86         -0.60806071     -0.20501110      0.05091800       0.16617364
## 87         -0.62344075     -0.33710120      0.23107198       0.23107198
## 88         -0.93409710     -0.54790615      0.46117919       0.51856960
## 89          0.93409710     -0.07641832     -0.23107198      -1.05957037
## 90         -0.99487522     -1.03752256      0.24416040       0.48967276
## 91         -1.71527720     -0.93409710     -0.21802303       1.03752256
## 92          0.43305527     -0.78667510     -1.15343724      -0.89542793
## 93         -0.29695946     -0.62344075     -1.08214564      -0.20501110
## 94          0.03818128     -0.91459156     -0.63896971      -0.15328619
## 95         -0.41912210     -0.97421613     -0.07641832       0.12758531
## 96         -1.31706374     -1.05957037     -0.01272434       1.20442230
## 97         -0.71909690     -1.01596791     -0.08918610       0.59282318
## 98         -1.28735798     -0.99487522      0.02545075       1.23113036
## 99         -0.46117919      0.44707302      0.20501110       0.07641832
## 100        -0.05091800     -0.89542793     -0.47537773      -0.07641832
## 101         0.12758531     -0.85805346     -0.80413364      -0.41912210
## 102         0.41912210     -0.83980946     -1.20442230      -0.91459156
## 103         0.46117919     -0.68651916     -0.99487522      -0.85805346
## 104         0.05091800     -0.87658763     -0.57772207      -0.14042416
## 105         0.47537773     -0.60806071     -0.93409710      -0.83980946
## 106        -0.40526982     -0.63896971      0.31028376       0.14042416
## 107        -0.12758531      0.36416334     -0.10196844      -0.02545075
## 108        -1.66232963      0.20501110      0.35060018       1.05957037
## 109        -0.20501110      0.46117919     -0.43305527      -0.27046566
## 110        -0.89542793      0.17908874      0.40526982       0.65465430
## 111        -1.17854682      0.23107198      0.33710120       0.87658763
## 112         0.71909690      0.29695946      0.15328619      -0.59282318
## 113         0.44707302     -0.71909690     -1.03752256      -0.87658763
## 114        -0.97421613     -0.95396468      0.29695946       0.50406856
## 115         1.20442230     -0.59282318     -1.44946373      -1.52642702
## 116         0.14042416     -0.80413364     -0.75245638      -0.40526982
## 117         0.56275157     -0.67050162     -1.31706374      -0.78667510
## 118         0.19203379     -0.76945312     -0.76945312      -0.47537773
## 119         0.60806071     -0.82184079     -0.59282318      -0.68651916
## 120        -1.05957037     -2.42690063     -0.85805346       0.46117919
## 121        -1.99828954     -1.83849262     -1.34797950       0.99487522
## 122         0.36416334     -1.48684468     -2.23555842      -0.99487522
## 123        -0.31028376     -1.28735798     -2.10223158      -0.21802303
## 124         0.00000000     -1.77352271     -1.61367018      -0.17908874
## 125        -0.44707302     -1.99828954     -1.17854682       0.10196844
## 126        -1.44946373     -2.80216172     -1.10528634       1.15343724
## 127        -0.75245638     -2.23555842     -1.23113036       0.57772207
## 128        -1.41400510     -2.10223158     -1.05957037       1.17854682
## 129        -0.48967276     -1.10528634     -0.91459156       0.05091800
## 130        -0.06366298     -1.71527720     -1.52642702      -0.08918610
## 131         0.10196844     -1.61367018     -1.77352271      -0.44707302
```

```
## 132          0.35060018     -1.56855670     -2.42690063      -1.01596791
## 133          0.39149488     -1.38024023     -1.91230127      -0.95396468
## 134          0.01272434     -1.66232963     -1.56855670      -0.16617364
## 135          0.40526982     -1.25874673     -1.83849262      -0.93409710
## 136         -0.43305527     -1.31706374     -0.73567430       0.11476746
## 137         -0.15328619     -1.12903457     -1.25874673      -0.03818128
## 138         -1.91230127     -1.20442230     -0.60806071       1.01596791
## 139         -0.21802303     -1.08214564     -1.48684468      -0.28368767
## 140         -1.01596791     -1.23113036     -0.51856960       0.63896971
## 141         -1.20442230     -1.17854682     -0.62344075       0.85805346
## 142          0.70271480     -1.15343724     -0.97421613      -0.60806071
## 143          0.37779383     -1.41400510     -1.99828954      -0.97421613
## 144         -1.03752256     -1.91230127     -0.78667510       0.47537773
## 145          0.11476746     -1.52642702     -1.66232963      -0.43305527
## 146          0.54790615     -1.34797950     -2.80216172      -0.80413364
## 147          0.17908874     -1.44946373     -1.71527720      -0.48967276
## 148          2.42690063      1.91230127      0.75245638      -1.61367018
## 149         -0.14042416      1.17854682      1.71527720       1.34797950
## 150         -0.16617364      1.15343724      1.61367018       1.41400510
## 151         -0.50406856      1.10528634      1.99828954       1.52642702
## 152         -0.78667510      1.01596791      2.23555842       1.99828954
## 153          1.05957037      1.52642702      1.01596791       0.02545075
## 154          2.23555842      2.10223158      0.71909690      -1.56855670
## 155          1.77352271      1.77352271      0.78667510      -1.28735798
## 156          0.83980946      1.28735798      1.44946373       0.35060018
## 157          0.02545075      1.25874673      1.56855670       0.83980946
## 158          2.80216172      2.42690063      0.67050162      -1.66232963
## 159         -1.61367018      1.12903457      2.10223158       2.23555842
## 160         -0.87658763      1.31706374      1.48684468       1.71527720
## 161          0.21802303      1.38024023      1.31706374       0.62344075
## 162          0.33710120      0.99487522      2.42690063       0.78667510
## 163         -0.25729077      1.20442230      1.91230127       0.95396468
## 164          1.08214564      1.48684468      1.10528634       0.00000000
## 165          0.99487522      1.44946373      1.15343724       0.03818128
## 166          0.08918610      1.41400510      1.17854682       0.71909690
## 167         -0.59282318      1.23113036      1.52642702       1.56855670
## 168          1.17854682      1.56855670      0.91459156      -0.36416334
## 169          1.83849262      1.99828954      0.73567430      -1.31706374
## 170          0.65465430      1.83849262      0.85805346       0.21802303
## 171         -1.83849262      1.03752256      2.80216172       2.80216172
## 172          1.03752256      1.61367018      0.95396468      -0.24416040
## 173         -0.32366339      1.34797950      1.77352271       1.10528634
## 174          0.51856960      1.66232963      0.93409710       0.25729077
## 175          1.48684468      2.80216172      0.76945312      -1.20442230
## 176          1.52642702      2.23555842      0.83980946      -1.15343724
## 177          0.28368767      1.71527720      0.89542793       0.31028376
## 178          1.15343724      1.08214564      0.82184079      -0.37779383
## 179          0.24416040      0.85805346      1.41400510       0.73567430
## 180         -2.10223158      0.83980946      1.83849262       2.42690063
## 181         -0.35060018      0.89542793      1.28735798       0.97421613
## 182          0.68651916      0.95396468      1.08214564       0.36416334
## 183          1.38024023      0.91459156      1.25874673      -0.35060018
## 184          0.89542793      1.05957037      0.87658763       0.08918610
## 185         -0.01272434      0.93409710      1.23113036       0.70271480
## 186         -0.02545075      0.87658763      1.34797950       0.75245638
```

```
## 187         -0.33710120      0.82184079      1.66232963       1.31706374
## 188          1.25874673      0.97421613      0.97421613      -0.33710120
## 189         -0.36416334      0.68651916      1.38024023       1.28735798
## 190         -0.85805346      0.75245638      0.99487522       1.66232963
## 191          1.01596791      0.78667510      0.68651916      -0.25729077
## 192          0.27046566      0.80413364      0.70271480       0.29695946
## 193          0.78667510      0.76945312      0.80413364       0.32366339
## 194          0.23107198      0.73567430      1.05957037       0.68651916
## 195         -0.67050162      0.67050162      1.12903457       1.77352271
## 196         -0.19203379      0.70271480      1.03752256       1.38024023
## 197         -0.65465430      0.71909690      1.20442230       1.83849262
##     RLNU_align.H.ADC RP_align.H.ADC LGRE_align.H.ADC HGRE_align.H.ADC
## 1        -1.44946373     0.14042416       0.01272434       0.31028376
## 2        -0.75245638     0.08918610      -0.12758531      -0.65465430
## 3        -0.31028376    -0.46117919       0.05091800      -2.42690063
## 4         0.33710120    -0.56275157      -0.36416334      -0.21802303
## 5        -0.57772207    -0.08918610      -0.21802303      -0.41912210
## 6        -0.51856960    -0.28368767      -0.23107198       0.23107198
## 7        -1.23113036     0.12758531      -0.25072018      -0.19203379
## 8        -0.56275157    -0.15328619      -0.10836573      -0.59282318
## 9        -1.38024023     0.21151259      -0.39149488       0.51856960
## 10       -0.71909690    -0.47537773      -0.02545075      -1.10528634
## 11       -0.46117919    -0.01272434      -0.33710120      -0.83980946
## 12        0.15328619    -0.29695946      -0.19203379      -0.27046566
## 13        0.43305527    -0.44707302      -0.14042416      -1.17854682
## 14       -0.12758531    -0.17908874      -0.07641832      -1.25874673
## 15        1.25874673    -0.65465430      -0.03818128      -1.41400510
## 16       -0.05091800    -0.10196844      -0.05091800      -0.57772207
## 17       -0.76945312     0.24416040      -0.35060018      -0.60806071
## 18        0.67050162    -0.24416040       0.06366298      -1.66232963
## 19        0.24416040    -0.48967276      -0.06366298       0.16617364
## 20        0.93409710    -0.78667510      -0.67050162       0.48967276
## 21        0.54790615    -0.53318051      -0.41912210      -0.06366298
## 22       -1.83849262     0.25729077      -0.48967276       0.54790615
## 23       -0.10196844    -0.12758531      -0.31696648       0.27046566
## 24        0.37779383    -0.41912210       0.03818128      -0.99487522
## 25       -0.54790615    -0.16617364      -0.01272434      -0.16617364
## 26        0.82184079    -0.21802303       0.07641832      -1.71527720
## 27       -0.70271480    -0.36416334      -0.15328619      -1.61367018
## 28       -0.73567430    -0.27046566       0.00000000       0.28368767
## 29       -1.03752256    -0.07641832      -0.08918610       0.14042416
## 30       -0.03818128    -0.14042416      -0.16617364       0.25729077
## 31       -2.23555842     0.41912210      -0.46117919       0.63896971
## 32        0.44707302    -0.37779383      -0.29031717      -0.95396468
## 33        1.12903457    -0.71909690      -0.40526982      -0.11476746
## 34       -1.25874673    -0.19203379      -0.31696648       0.17908874
## 35       -0.63896971     0.00000000      -0.10836573      -0.67050162
## 36        0.17908874    -0.43305527      -0.20501110       0.15328619
## 37        0.46117919    -0.62344075      -0.63896971      -0.97421613
## 38       -1.34797950     0.01272434      -0.29031717       0.19203379
## 39        0.76945312    -0.50406856      -0.17908874      -2.23555842
## 40       -0.23107198    -0.05091800      -0.37779383       0.12758531
## 41        1.44946373    -0.83980946      -0.43305527       0.50406856
## 42       -0.53318051     0.03818128      -0.25072018       0.32366339
## 43        0.91459156    -0.85805346      -0.65465430       0.43305527
```

```
## 44       -2.42690063     0.40526982      -0.47537773       0.62344075
## 45       -1.99828954     0.62344075       0.23107198       0.60806071
## 46       -0.67050162     0.37779383       0.31028376       0.47537773
## 47       -1.17854682     0.32366339       0.47537773      -0.68651916
## 48        0.01272434     0.31028376       0.65465430      -0.53318051
## 49       -1.91230127     0.56275157       0.24416040       0.57772207
## 50        0.56275157     0.07641832       0.54790615      -0.07641832
## 51        0.60806071     0.05091800       0.57772207      -0.46117919
## 52        0.80413364    -0.03818128       0.41912210      -0.44707302
## 53        1.48684468    -0.20501110       0.44707302      -0.32366339
## 54       -0.62344075     0.44707302       0.56275157       0.10196844
## 55       -2.10223158     0.60806071       0.25729077       0.59282318
## 56       -1.77352271     0.54790615       0.32366339       0.56275157
## 57       -0.11476746     0.21151259       0.43305527      -0.40526982
## 58        0.28368767     0.15328619       0.61573253      -0.70271480
## 59       -2.80216172     0.65465430       0.27046566       0.65465430
## 60        1.61367018    -0.06366298       0.28368767      -2.10223158
## 61        0.99487522     0.23107198       0.14042416      -1.20442230
## 62        0.06366298     0.29695946       0.59282318      -1.03752256
## 63        0.25729077    -0.23107198       0.35060018      -0.29695946
## 64        0.39149488     0.06366298       0.46117919      -0.33710120
## 65       -0.65465430     0.39149488       0.50406856       0.11476746
## 66       -0.50406856     0.36416334       0.53318051      -0.43305527
## 67        0.20501110     0.33710120       0.63896971      -0.08918610
## 68        0.89542793     0.11476746       0.61573253      -1.23113036
## 69       -1.08214564     0.47537773       0.39149488       0.41912210
## 70       -1.71527720     0.57772207       0.33710120       0.53318051
## 71       -0.32366339     0.53318051       0.76945312      -0.31028376
## 72        1.99828954    -0.35060018       0.67050162      -2.80216172
## 73       -0.82184079     0.48967276       0.73567430       0.08918610
## 74        0.41912210     0.27046566       0.68651916      -0.10196844
## 75       -0.29695946     0.50406856       0.70271480      -0.05091800
## 76       -1.48684468     0.63896971       0.80413364       0.21802303
## 77       -1.41400510     0.59282318       0.75245638       0.44707302
## 78       -0.19203379     0.51856960       0.78667510      -0.15328619
## 79       -1.10528634     0.17908874       0.02545075       0.40526982
## 80        0.19203379    -0.40526982       0.11476746      -0.51856960
## 81        1.91230127    -0.57772207       0.08918610      -1.77352271
## 82        0.40526982    -0.32366339       0.12758531      -1.08214564
## 83       -0.06366298    -0.11476746       0.17908874      -1.83849262
## 84       -1.12903457    -0.31028376       0.20501110      -0.48967276
## 85       -0.39149488     0.02545075       0.15328619      -0.73567430
## 86        0.16617364    -0.25729077       0.19203379      -0.71909690
## 87        0.23107198    -0.33710120       0.10196844       0.24416040
## 88        0.53318051    -0.60806071      -0.27046566       0.39149488
## 89       -1.05957037    -0.02545075       0.16617364       0.29695946
## 90        0.50406856    -1.05957037      -1.05957037       0.36416334
## 91        1.05957037    -0.93409710      -0.95396468      -0.85805346
## 92       -0.89542793    -0.70271480      -0.89542793       0.03818128
## 93       -0.20501110    -0.51856960      -0.62344075      -0.17908874
## 94       -0.15328619    -0.91459156      -0.99487522      -1.31706374
## 95        0.12758531    -0.95396468      -1.01596791      -0.24416040
## 96        1.20442230    -1.03752256      -0.97421613      -1.48684468
## 97        0.59282318    -0.99487522      -0.85805346      -0.47537773
## 98        1.23113036    -1.01596791      -0.80413364      -1.44946373
```

```
## 99        0.07641832     0.43305527       0.71909690      -1.01596791
## 100      -0.07641832    -0.89542793      -0.87658763      -1.91230127
## 101      -0.41912210    -0.82184079      -0.91459156      -0.76945312
## 102      -0.91459156    -0.76945312      -1.03752256       0.02545075
## 103      -0.85805346    -0.63896971      -0.70271480       0.06366298
## 104      -0.14042416    -0.87658763      -0.82184079      -1.28735798
## 105      -0.83980946    -0.54790615      -0.60806071       0.07641832
## 106       0.14042416    -0.68651916      -0.44707302      -0.23107198
## 107      -0.01272434     0.35060018       0.48967276      -0.36416334
## 108       1.08214564     0.16617364       0.29695946      -0.82184079
## 109      -0.27046566     0.46117919       0.51856960      -0.12758531
## 110       0.65465430     0.10196844       0.36416334      -0.54790615
## 111       0.87658763     0.19203379       0.40526982      -1.12903457
## 112      -0.59282318     0.28368767       0.37779383      -0.35060018
## 113      -0.87658763    -0.67050162      -0.73567430       0.05091800
## 114       0.51856960    -0.97421613      -0.93409710       0.37779383
## 115      -1.52642702    -0.39149488      -0.71909690       0.20501110
## 116      -0.40526982    -0.75245638      -0.75245638      -0.75245638
## 117      -0.78667510    -0.59282318      -0.78667510      -0.62344075
## 118      -0.47537773    -0.73567430      -0.76945312      -0.87658763
## 119      -0.68651916    -0.80413364      -0.83980946       0.46117919
## 120       0.47537773    -2.80216172      -2.80216172       0.33710120
## 121       1.01596791    -1.83849262      -1.91230127      -0.91459156
## 122      -0.99487522    -1.44946373      -1.71527720      -0.02545075
## 123      -0.21802303    -1.25874673      -1.31706374      -0.20501110
## 124      -0.17908874    -1.77352271      -2.10223158      -1.38024023
## 125       0.10196844    -1.91230127      -2.23555842      -0.28368767
## 126       1.15343724    -2.42690063      -1.99828954      -1.56855670
## 127       0.57772207    -2.10223158      -1.61367018      -0.50406856
## 128       1.17854682    -2.23555842      -1.52642702      -1.52642702
## 129       0.05091800    -1.10528634      -1.08214564      -1.05957037
## 130      -0.08918610    -1.71527720      -1.66232963      -1.99828954
## 131      -0.44707302    -1.61367018      -1.77352271      -0.80413364
## 132      -1.01596791    -1.56855670      -2.42690063      -0.03818128
## 133      -0.95396468    -1.34797950      -1.34797950       0.00000000
## 134      -0.16617364    -1.66232963      -1.56855670      -1.34797950
## 135      -0.93409710    -1.28735798      -1.28735798       0.01272434
## 136       0.11476746    -1.41400510      -1.25874673      -0.25729077
## 137      -0.02545075    -1.12903457      -1.12903457      -0.39149488
## 138       1.03752256    -1.20442230      -1.23113036      -0.89542793
## 139      -0.28368767    -1.08214564      -1.10528634      -0.14042416
## 140       0.63896971    -1.23113036      -1.20442230      -0.56275157
## 141       0.85805346    -1.17854682      -1.15343724      -1.15343724
## 142      -0.60806071    -1.15343724      -1.17854682      -0.37779383
## 143      -0.97421613    -1.38024023      -1.38024023      -0.01272434
## 144       0.48967276    -1.99828954      -1.83849262       0.35060018
## 145      -0.43305527    -1.52642702      -1.41400510      -0.78667510
## 146      -0.80413364    -1.31706374      -1.48684468      -0.63896971
## 147      -0.48967276    -1.48684468      -1.44946373      -0.93409710
## 148      -1.56855670     1.91230127       1.05957037       2.23555842
## 149       1.34797950     1.17854682       1.44946373       1.31706374
## 150       1.41400510     1.12903457       1.52642702       0.99487522
## 151       1.52642702     1.05957037       1.25874673       1.01596791
## 152       2.10223158     0.99487522       1.31706374       1.10528634
## 153       0.02545075     1.52642702       1.48684468       1.44946373
```

```
## 154      -1.61367018     2.23555842       1.08214564       2.42690063
## 155      -1.31706374     1.83849262       1.15343724       2.10223158
## 156       0.35060018     1.28735798       1.28735798       1.05957037
## 157       0.83980946     1.23113036       1.63751531       0.91459156
## 158      -1.66232963     2.80216172       1.10528634       2.80216172
## 159       2.23555842     1.03752256       1.12903457       0.68651916
## 160       1.66232963     1.31706374       0.93409710       0.80413364
## 161       0.62344075     1.38024023       1.56855670       0.83980946
## 162       0.78667510     0.97421613       1.20442230       1.15343724
## 163       0.95396468     1.15343724       1.34797950       1.08214564
## 164       0.00000000     1.48684468       1.38024023       1.48684468
## 165       0.03818128     1.44946373       1.41400510       1.03752256
## 166       0.73567430     1.41400510       1.71527720       1.28735798
## 167       1.56855670     1.20442230       1.63751531       0.78667510
## 168      -0.35060018     1.56855670       1.23113036       1.83849262
## 169      -1.28735798     1.99828954       1.17854682       1.99828954
## 170       0.21802303     1.77352271       2.23555842       1.12903457
## 171       2.80216172     0.87658763       1.77352271       0.67050162
## 172      -0.24416040     1.61367018       1.99828954       1.41400510
## 173       1.10528634     1.34797950       1.83849262       1.25874673
## 174       0.27046566     1.66232963       1.91230127       1.34797950
## 175      -1.20442230     2.42690063       2.80216172       1.52642702
## 176      -1.15343724     2.10223158       2.10223158       1.91230127
## 177       0.31028376     1.71527720       2.42690063       1.23113036
## 178      -0.36416334     1.25874673       0.83980946       1.77352271
## 179       0.71909690     0.85805346       0.89542793       0.93409710
## 180       2.42690063     0.82184079       0.85805346       0.71909690
## 181       0.97421613     0.91459156       0.91459156       0.82184079
## 182       0.36416334     1.01596791       0.99487522       0.70271480
## 183      -0.37779383     0.93409710       1.03752256       0.95396468
## 184       0.08918610     1.10528634       0.95396468       0.87658763
## 185       0.70271480     0.95396468       1.01596791       0.89542793
## 186       0.75245638     0.89542793       0.87658763       1.56855670
## 187       1.31706374     0.80413364       0.82184079       1.71527720
## 188      -0.33710120     1.08214564       0.97421613       1.61367018
## 189       1.28735798     0.67050162      -0.68651916       1.66232963
## 190       1.71527720     0.75245638      -0.54790615       0.85805346
## 191      -0.25729077     0.78667510      -0.53318051       1.38024023
## 192       0.29695946     0.83980946       0.21802303       1.20442230
## 193       0.32366339     0.76945312      -0.57772207       0.76945312
## 194       0.68651916     0.73567430      -0.59282318       1.17854682
## 195       1.77352271     0.68651916      -0.56275157       0.73567430
## 196       1.38024023     0.71909690      -0.51856960       0.97421613
## 197       1.83849262     0.70271480      -0.50406856       0.75245638
##     LGSRE_align.H.ADC HGSRE_align.H.ADC LGHRE_align.H.ADC HGLRE_align.H.ADC
## 1          0.03818128        0.41912210       -0.39149488       -0.80413364
## 2         -0.07641832       -0.07641832       -0.37779383       -0.82184079
## 3          0.06366298       -2.42690063       -0.27046566        0.60806071
## 4         -0.37779383       -0.50406856        0.05091800       -0.10196844
## 5         -0.25729077       -0.12758531       -0.25729077       -0.54790615
## 6         -0.31028376       -0.01272434        0.00000000       -0.53318051
## 7         -0.20501110        0.21802303       -0.47537773       -1.31706374
## 8         -0.06366298       -0.47537773       -0.16617364       -0.36416334
## 9         -0.32366339        0.47537773       -0.46117919       -0.83980946
## 10        -0.04454874       -1.03752256       -0.43305527        0.31028376
```

```
## 11        -0.28368767       -0.32366339       -0.13400197       -0.62344075
## 12        -0.23107198       -0.11476746       -0.08918610       -0.41912210
## 13        -0.15328619       -1.20442230       -0.15328619        0.40526982
## 14        -0.11476746       -1.05957037       -0.17908874       -0.15328619
## 15        -0.12758531       -1.66232963       -0.11476746        0.56275157
## 16        -0.10196844       -0.35060018       -0.21802303       -0.59282318
## 17        -0.27046566        0.08918610       -0.44707302       -1.34797950
## 18         0.08918610       -1.52642702       -0.31028376       -0.14042416
## 19        -0.14042416       -0.10196844       -0.06366298       -0.24416040
## 20        -0.64679211       -0.28368767       -0.62344075        0.39149488
## 21        -0.39149488       -0.27046566        0.21802303       -0.23107198
## 22        -0.48967276        0.54790615       -0.67050162       -0.89542793
## 23        -0.33710120        0.11476746       -0.13400197       -0.73567430
## 24        -0.04454874       -0.89542793       -0.10196844       -0.08918610
## 25         0.02545075       -0.14042416       -0.40526982       -0.48967276
## 26         0.07641832       -1.44946373       -0.24416040       -0.19203379
## 27        -0.08918610       -1.56855670       -0.36416334        0.05091800
## 28        -0.01272434        0.01272434       -0.32366339       -0.43305527
## 29        -0.02545075        0.03818128       -0.33710120       -0.75245638
## 30        -0.16617364        0.10196844       -0.29695946       -0.40526982
## 31        -0.44707302        0.63896971       -0.59282318       -2.42690063
## 32        -0.36416334       -0.73567430        0.01908716       -0.12758531
## 33        -0.40526982       -0.82184079        0.15328619        0.46117919
## 34        -0.19203379       -0.08918610       -0.51856960       -0.35060018
## 35         0.05091800       -0.46117919       -0.50406856       -0.60806071
## 36        -0.29695946       -0.15328619        0.01908716       -0.27046566
## 37        -0.60806071       -1.31706374       -0.68651916        0.27046566
## 38        -0.17908874        0.00000000       -0.48967276       -0.57772207
## 39        -0.24416040       -2.23555842        0.06366298        0.44707302
## 40        -0.35060018        0.12758531       -0.28368767       -0.78667510
## 41        -0.43305527       -0.37779383        0.23761110        0.47537773
## 42        -0.21802303        0.43305527       -0.35060018       -1.44946373
## 43        -0.64679211       -0.59282318       -0.60806071        0.57772207
## 44        -0.46117919        0.62344075       -0.65465430       -2.80216172
## 45         0.24416040        0.60806071        0.14042416       -2.10223158
## 46         0.29695946        0.46117919        0.63896971       -0.85805346
## 47         0.47537773       -0.48967276        0.37779383       -0.25729077
## 48         0.62344075       -0.31028376        0.41912210       -0.39149488
## 49         0.25729077        0.57772207        0.10196844       -1.91230127
## 50         0.51856960       -0.51856960        0.60806071        0.07641832
## 51         0.53318051       -0.83980946        0.56275157        0.17908874
## 52         0.37779383       -0.99487522        0.76945312        0.41912210
## 53         0.33710120       -1.17854682        0.70271480        0.48967276
## 54         0.65465430        0.02545075        0.31028376       -0.76945312
## 55         0.27046566        0.59282318        0.12758531       -1.99828954
## 56         0.40526982        0.56275157        0.27046566       -1.83849262
## 57         0.39149488       -0.68651916        0.62344075       -0.06366298
## 58         0.58525594       -0.78667510        0.59282318        0.19203379
## 59         0.31028376        0.65465430        0.16617364       -2.23555842
## 60         0.23107198       -2.10223158        0.80413364        0.62344075
## 61         0.14042416       -1.48684468       -0.05091800        0.14042416
## 62         0.58525594       -0.56275157        0.43305527       -0.29695946
## 63         0.28368767       -1.23113036        0.71909690        0.59282318
## 64         0.36416334       -0.75245638        0.68651916        0.43305527
## 65         0.50406856       -0.03818128        0.48967276       -0.67050162
```

```
## 66          0.54790615       -0.29695946        0.35060018       -0.37779383
## 67          0.60806071       -0.02545075        0.40526982       -0.68651916
## 68          0.56275157       -1.61367018        0.53318051        0.29695946
## 69          0.46117919        0.51856960        0.29695946       -1.71527720
## 70          0.43305527        0.53318051        0.23761110       -1.61367018
## 71          0.76945312        0.14042416        0.54790615       -1.17854682
## 72          0.67050162       -2.80216172        0.78667510        0.65465430
## 73          0.73567430        0.36416334        0.46117919       -0.91459156
## 74          0.68651916       -0.53318051        0.75245638        0.28368767
## 75          0.71909690        0.37779383        0.50406856       -1.48684468
## 76          0.80413364        0.40526982        0.44707302       -1.52642702
## 77          0.75245638        0.48967276        0.36416334       -1.66232963
## 78          0.78667510        0.17908874        0.51856960       -1.23113036
## 79          0.00000000        0.50406856       -0.19203379       -1.77352271
## 80          0.11476746       -0.71909690        0.08918610       -0.03818128
## 81          0.01272434       -1.99828954        0.25729077        0.63896971
## 82          0.12758531       -1.01596791        0.11476746       -0.05091800
## 83          0.16617364       -1.34797950       -0.02545075        0.25729077
## 84          0.20501110       -0.67050162       -0.07641832        0.06366298
## 85          0.17908874       -0.39149488       -0.20501110       -0.44707302
## 86          0.19203379       -0.70271480       -0.01272434       -0.07641832
## 87          0.10196844       -0.16617364        0.19203379       -0.11476746
## 88         -0.41912210       -0.17908874        0.39149488        0.37779383
## 89          0.15328619        0.05091800       -0.03818128       -0.56275157
## 90         -1.05957037       -0.20501110       -0.57772207        0.35060018
## 91         -0.99487522       -0.93409710       -0.73567430        0.02545075
## 92         -0.78667510        0.31028376       -1.03752256       -0.99487522
## 93         -0.54790615        0.16617364       -0.76945312       -1.25874673
## 94         -0.93409710       -1.10528634       -0.99487522       -0.17908874
## 95         -1.03752256       -0.62344075       -0.70271480        0.11476746
## 96         -0.95396468       -1.77352271       -0.91459156        0.53318051
## 97         -0.89542793       -0.85805346       -0.80413364        0.16617364
## 98         -0.85805346       -1.71527720       -0.82184079        0.54790615
## 99          0.70271480       -0.54790615        0.67050162       -0.28368767
## 100        -0.82184079       -1.38024023       -0.97421613        0.24416040
## 101        -0.80413364       -0.41912210       -1.01596791       -0.47537773
## 102        -0.97421613        0.29695946       -1.05957037       -1.01596791
## 103        -0.68651916        0.33710120       -0.83980946       -0.95396468
## 104        -0.83980946       -1.08214564       -0.85805346       -0.16617364
## 105        -0.56275157        0.35060018       -0.75245638       -0.93409710
## 106        -0.47537773       -0.60806071        0.03818128        0.12758531
## 107         0.48967276       -0.05091800        0.33710120       -0.70271480
## 108         0.32366339       -0.91459156        0.65465430        0.03818128
## 109         0.63896971        0.20501110        0.28368767       -1.15343724
## 110         0.35060018       -0.76945312        0.57772207       -0.01272434
## 111         0.41912210       -1.25874673        0.47537773        0.21802303
## 112         0.44707302       -0.24416040        0.32366339       -0.32366339
## 113        -0.71909690        0.32366339       -0.93409710       -0.97421613
## 114        -1.01596791       -0.19203379       -0.53318051        0.36416334
## 115        -0.67050162        0.39149488       -0.95396468       -1.56855670
## 116        -0.73567430       -0.40526982       -0.89542793       -0.46117919
## 117        -0.75245638        0.07641832       -0.87658763       -1.38024023
## 118        -0.76945312       -0.33710120       -0.78667510       -0.63896971
## 119        -0.91459156        0.44707302       -0.71909690       -0.87658763
## 120        -2.80216172       -0.23107198       -1.31706374        0.32366339
```

```
## 121       -2.10223158       -0.97421613       -1.38024023        0.00000000
## 122       -1.52642702        0.24416040       -2.42690063       -1.10528634
## 123       -1.28735798        0.15328619       -1.44946373       -1.28735798
## 124       -1.83849262       -1.15343724       -2.10223158       -0.21802303
## 125       -2.42690063       -0.65465430       -1.34797950        0.08918610
## 126       -1.91230127       -1.91230127       -1.83849262        0.50406856
## 127       -1.77352271       -0.87658763       -1.52642702        0.15328619
## 128       -1.71527720       -1.83849262       -1.56855670        0.51856960
## 129       -1.08214564       -0.57772207       -1.08214564       -0.31028376
## 130       -1.61367018       -1.41400510       -1.99828954        0.23107198
## 131       -1.56855670       -0.44707302       -2.23555842       -0.51856960
## 132       -1.99828954        0.23107198       -2.80216172       -1.12903457
## 133       -1.34797950        0.27046566       -1.61367018       -1.05957037
## 134       -1.66232963       -1.12903457       -1.66232963       -0.20501110
## 135       -1.31706374        0.28368767       -1.41400510       -1.03752256
## 136       -1.25874673       -0.63896971       -1.25874673        0.10196844
## 137       -1.12903457       -0.06366298       -1.17854682       -0.71909690
## 138       -1.23113036       -0.95396468       -1.10528634        0.01272434
## 139       -1.10528634        0.19203379       -1.23113036       -1.20442230
## 140       -1.20442230       -0.80413364       -1.12903457       -0.02545075
## 141       -1.17854682       -1.28735798       -1.15343724        0.20501110
## 142       -1.15343724       -0.25729077       -1.20442230       -0.33710120
## 143       -1.38024023        0.25729077       -1.91230127       -1.08214564
## 144       -2.23555842       -0.21802303       -1.28735798        0.33710120
## 145       -1.41400510       -0.43305527       -1.77352271       -0.50406856
## 146       -1.44946373        0.06366298       -1.71527720       -1.41400510
## 147       -1.48684468       -0.36416334       -1.48684468       -0.65465430
## 148        1.08214564        2.23555842        0.97421613        0.70271480
## 149        1.41400510        1.15343724        1.71527720        1.28735798
## 150        1.44946373        0.93409710        1.61367018        1.41400510
## 151        1.23113036        0.87658763        2.23555842        1.71527720
## 152        1.17854682        0.82184079        1.91230127        1.83849262
## 153        1.71527720        1.38024023        1.17854682        0.93409710
## 154        1.10528634        2.42690063        1.01596791        0.68651916
## 155        1.28735798        2.10223158        1.12903457        0.71909690
## 156        1.25874673        1.03752256        1.77352271        1.15343724
## 157        1.59070879        0.95396468        1.66232963        1.44946373
## 158        1.15343724        2.80216172        1.03752256        0.67050162
## 159        1.05957037        0.68651916        2.80216172        2.23555842
## 160        0.93409710        0.76945312        0.87658763        1.34797950
## 161        1.59070879        1.10528634        1.31706374        1.05957037
## 162        1.12903457        0.80413364        1.99828954        2.10223158
## 163        1.20442230        0.97421613        1.83849262        1.77352271
## 164        1.38024023        1.31706374        1.41400510        0.97421613
## 165        1.48684468        1.20442230        1.20442230        1.03752256
## 166        1.66232963        1.34797950        1.28735798        0.95396468
## 167        1.52642702        0.75245638        1.52642702        1.56855670
## 168        1.34797950        1.91230127        1.15343724        0.75245638
## 169        1.31706374        1.99828954        1.08214564        0.78667510
## 170        2.23555842        1.44946373        1.56855670        0.87658763
## 171        1.77352271        0.67050162        2.42690063        2.80216172
## 172        1.99828954        1.61367018        1.38024023        0.91459156
## 173        1.83849262        1.12903457        2.10223158        1.52642702
## 174        1.91230127        1.66232963        1.44946373        0.82184079
## 175        2.80216172        1.71527720        1.34797950        0.80413364
```

```
## 176        2.10223158        1.77352271        1.23113036        0.76945312
## 177        2.42690063        1.52642702        1.48684468        0.85805346
## 178        0.83980946        1.83849262        0.83980946        0.73567430
## 179        0.89542793        0.99487522        0.95396468        1.20442230
## 180        0.85805346        0.70271480        1.10528634        2.42690063
## 181        0.91459156        0.85805346        0.99487522        1.17854682
## 182        0.97421613        0.78667510        0.91459156        1.48684468
## 183        1.03752256        1.05957037        0.85805346        1.25874673
## 184        0.99487522        1.17854682        0.82184079        1.01596791
## 185        1.01596791        1.01596791        0.93409710        1.12903457
## 186        0.87658763        1.28735798        1.05957037        1.10528634
## 187        0.82184079        1.25874673        1.25874673        1.66232963
## 188        0.95396468        1.41400510        0.89542793        0.99487522
## 189       -0.87658763        1.23113036        0.73567430        1.61367018
## 190       -0.62344075        0.89542793        0.17908874        1.23113036
## 191       -0.50406856        1.56855670       -0.63896971        0.89542793
## 192        0.21802303        1.48684468        0.07641832        0.83980946
## 193       -0.57772207        0.83980946       -0.56275157        1.08214564
## 194       -0.70271480        1.08214564        0.20501110        1.31706374
## 195       -0.59282318        0.71909690       -0.54790615        1.91230127
## 196       -0.53318051        0.91459156       -0.23107198        1.38024023
## 197       -0.51856960        0.73567430       -0.41912210        1.99828954
##     GLNU_norm_align.H.ADC RLNU_norm_align.H.ADC GLVAR_align.H.ADC
## 1            -0.038181279            0.28368767        0.35060018
## 2            -0.146852138            0.20501110        0.20501110
## 3            -0.224542726           -0.44707302       -1.48684468
## 4            -0.475377728           -0.65465430       -0.36416334
## 5            -0.146852138            0.00000000        0.17908874
## 6            -0.303614872           -0.28368767       -0.44707302
## 7            -0.146852138            0.25729077       -0.11476746
## 8            -0.270465662           -0.07641832        0.19203379
## 9             0.025450750            0.35060018        0.57772207
## 10           -0.391494881           -0.48967276       -0.99487522
## 11           -0.391494881            0.11476746       -0.19203379
## 12           -0.391494881           -0.23107198       -0.35060018
## 13           -0.224542726           -0.46117919       -0.82184079
## 14           -0.257290773           -0.14042416       -0.65465430
## 15           -0.391494881           -0.75245638       -0.93409710
## 16           -0.303614872           -0.06366298       -0.06366298
## 17           -0.146852138            0.40526982        0.31028376
## 18           -0.391494881           -0.24416040       -0.25729077
## 19           -0.303614872           -0.56275157       -0.12758531
## 20           -0.006362044           -0.89542793       -2.23555842
## 21           -0.391494881           -0.53318051       -0.62344075
## 22            0.038181279            0.39149488       -0.83980946
## 23           -0.063662985           -0.04454874       -0.39149488
## 24           -0.303614872           -0.50406856       -0.28368767
## 25           -0.095575319           -0.12758531        0.39149488
## 26           -0.504068562           -0.19203379       -0.23107198
## 27           -0.095575319           -0.37779383       -0.41912210
## 28           -0.185557381           -0.29695946       -0.14042416
## 29           -0.224542726            0.02545075        0.00000000
## 30           -0.114767460           -0.08918610       -0.27046566
## 31            0.076418321            0.51856960        0.51856960
## 32           -0.391494881           -0.41912210       -0.80413364
```

```
## 33          -0.475377728          -0.85805346       -1.34797950
## 34          -0.050917999          -0.20501110        0.36416334
## 35          -0.185557381           0.15328619       -0.07641832
## 36          -0.475377728          -0.47537773       -0.46117919
## 37           0.012724345          -0.73567430       -1.83849262
## 38          -0.025450750           0.16617364       -0.03818128
## 39          -0.391494881          -0.54790615       -1.20442230
## 40          -0.224542726           0.10196844       -0.21802303
## 41          -0.391494881          -0.93409710       -2.10223158
## 42          -0.076418321           0.17908874        0.37779383
## 43          -0.006362044          -0.95396468       -2.42690063
## 44           0.050917999           0.47537773        0.50406856
## 45           0.638969706           0.63896971        0.48967276
## 46           0.489672758           0.33037484       -0.16617364
## 47           0.475377728           0.33037484       -0.57772207
## 48           0.350600175           0.24416040       -0.29695946
## 49           0.577722069           0.57772207        0.47537773
## 50           0.350600175          -0.21802303       -0.73567430
## 51           0.350600175          -0.25729077       -0.59282318
## 52           0.350600175          -0.36416334       -1.41400510
## 53           0.303614872          -0.63896971       -1.71527720
## 54           0.533180513           0.41912210       -0.02545075
## 55           0.623440754           0.62344075        0.59282318
## 56           0.608060712           0.54790615        0.62344075
## 57           0.405269820           0.01272434       -0.78667510
## 58           0.350600175          -0.01272434       -0.48967276
## 59           0.654654299           0.65465430        0.60806071
## 60           0.433055267          -0.32366339       -1.99828954
## 61           0.562751572           0.08918610       -1.38024023
## 62           0.447073025           0.21802303       -0.54790615
## 63           0.405269820          -0.67050162       -1.77352271
## 64           0.547906151          -0.17908874       -1.10528634
## 65           0.504068562           0.31028376       -0.37779383
## 66           0.518569599           0.29695946       -0.63896971
## 67           0.405269820           0.27046566       -0.31028376
## 68           0.303614872          -0.11476746       -0.47537773
## 69           0.461179190           0.44707302       -0.08918610
## 70           0.592823181           0.59282318        0.33710120
## 71           0.752456384           0.53318051        0.40526982
## 72           0.702714800          -0.76945312       -2.80216172
## 73           0.786675105           0.46117919        0.15328619
## 74           0.719096898           0.07641832       -0.85805346
## 75           0.735674299           0.48967276        0.41912210
## 76           0.686519159           0.60806071        0.65465430
## 77           0.804133642           0.56275157        0.53318051
## 78           0.769453118           0.50406856        0.46117919
## 79           0.063662985           0.23107198       -0.10196844
## 80           0.089186102          -0.59282318       -0.60806071
## 81           0.114767460          -0.60806071       -1.91230127
## 82           0.101968440          -0.40526982       -1.08214564
## 83           0.166173638          -0.02545075       -0.87658763
## 84           0.179088744          -0.35060018        0.01272434
## 85           0.192033792           0.12758531        0.32366339
## 86           0.134001972          -0.27046566        0.16617364
## 87           0.134001972          -0.39149488       -0.15328619
```

```
## 88          0.153286192          -0.71909690       -1.44946373
## 89          0.205011101           0.05091800        0.28368767
## 90         -0.858053460          -1.12903457       -1.56855670
## 91         -0.895427930          -0.91459156       -1.12903457
## 92         -0.804133642          -0.43305527        0.10196844
## 93         -0.562751572          -0.15328619        0.44707302
## 94         -0.974216128          -0.83980946       -0.70271480
## 95         -0.953964677          -0.97421613       -1.25874673
## 96         -0.994875224          -1.10528634       -0.97421613
## 97         -0.934097101          -1.08214564       -0.67050162
## 98         -0.914591560          -1.05957037       -0.95396468
## 99          0.670501625           0.37779383       -0.53318051
## 100        -0.839809460          -0.82184079       -0.89542793
## 101        -0.821840794          -0.68651916        0.27046566
## 102        -1.059570365          -0.51856960        0.08918610
## 103        -0.577722069          -0.31028376        0.12758531
## 104        -0.876587631          -0.80413364       -0.68651916
## 105        -0.547906151          -0.16617364        0.14042416
## 106        -0.518569599          -0.78667510       -1.23113036
## 107         0.224542726           0.36416334       -0.01272434
## 108         0.257290773           0.03818128       -1.05957037
## 109         0.270465662           0.43305527        0.56275157
## 110         0.224542726          -0.10196844       -0.40526982
## 111         0.244160395           0.06366298       -0.50406856
## 112         0.283687668           0.19203379       -0.32366339
## 113        -0.592823181          -0.33710120        0.11476746
## 114        -0.654654299          -1.03752256       -1.52642702
## 115        -0.670501625           0.14042416        0.63896971
## 116        -0.608060712          -0.62344075        0.29695946
## 117        -0.631186204          -0.04454874        0.25729077
## 118        -0.686519159          -0.57772207       -0.20501110
## 119        -0.631186204          -0.70271480       -0.17908874
## 120        -1.715277202          -2.80216172       -1.66232963
## 121        -1.838492624          -1.83849262       -1.17854682
## 122        -1.568556698          -1.41400510        0.03818128
## 123        -1.317063743          -1.28735798        0.43305527
## 124        -2.235558423          -1.77352271       -0.76945312
## 125        -2.102231578          -1.91230127       -1.31706374
## 126        -2.426900627          -2.42690063       -1.03752256
## 127        -1.998289537          -2.23555842       -0.71909690
## 128        -1.912301267          -2.10223158       -1.01596791
## 129        -1.082145643          -0.99487522       -0.56275157
## 130        -1.662329627          -1.71527720       -0.91459156
## 131        -1.613670183          -1.56855670        0.23107198
## 132        -2.802161716          -1.44946373        0.02545075
## 133        -1.347979505          -1.34797950        0.06366298
## 134        -1.773522711          -1.66232963       -0.75245638
## 135        -1.287357980          -1.31706374        0.07641832
## 136        -1.258746728          -1.61367018       -1.28735798
## 137        -1.217667759          -1.01596791       -0.05091800
## 138        -1.153437238          -1.20442230       -1.15343724
## 139        -1.129034575          -0.87658763        0.54790615
## 140        -1.217667759          -1.25874673       -0.43305527
## 141        -1.178546815          -1.17854682       -0.51856960
## 142        -1.105286345          -1.15343724       -0.33710120
```

```
## 143          -1.380240232           -1.38024023        0.05091800
## 144          -1.486844681           -1.99828954       -1.61367018
## 145          -1.414005096           -1.52642702        0.24416040
## 146          -1.449463731           -1.23113036        0.21802303
## 147          -1.526427018           -1.48684468       -0.24416040
## 148           1.526427018            1.99828954        1.91230127
## 149           1.117081708            1.05957037        0.99487522
## 150           1.117081708            1.03752256        1.10528634
## 151           1.117081708            0.95396468        0.78667510
## 152           1.048482755            0.83980946        0.73567430
## 153           1.414005096            1.52642702        1.34797950
## 154           1.662329627            2.42690063        2.10223158
## 155           1.613670183            1.83849262        2.42690063
## 156           1.204422303            1.20442230        0.97421613
## 157           1.117081708            1.17854682        1.15343724
## 158           1.715277202            2.80216172        2.23555842
## 159           1.258746728            0.99487522        0.68651916
## 160           1.486844681            1.28735798        0.80413364
## 161           1.287357980            1.34797950        1.12903457
## 162           1.204422303            0.82184079        0.71909690
## 163           1.449463731            1.08214564        0.85805346
## 164           1.347979505            1.48684468        1.20442230
## 165           1.380240232            1.44946373        1.05957037
## 166           1.204422303            1.41400510        1.23113036
## 167           1.048482755            1.12903457        1.17854682
## 168           1.317063743            1.56855670        1.31706374
## 169           1.568556698            2.10223158        1.61367018
## 170           2.102231578            1.77352271        1.66232963
## 171           1.838492624            0.78667510        0.67050162
## 172           2.426900627            1.61367018        1.44946373
## 173           1.912301267            1.25874673        0.95396468
## 174           1.998289537            1.66232963        1.71527720
## 175           1.773522711            2.23555842        2.80216172
## 176           2.802161716            1.91230127        1.99828954
## 177           2.235558423            1.71527720        1.83849262
## 178           0.821840794            1.38024023        1.28735798
## 179           0.839809460            0.87658763        1.08214564
## 180           0.876587631            0.85805346        0.70271480
## 181           0.858053460            0.91459156        0.87658763
## 182           0.953964677            1.15343724        0.93409710
## 183           0.974216128            0.97421613        1.38024023
## 184           0.994875224            1.31706374        1.56855670
## 185           0.904968201            1.01596791        1.48684468
## 186           0.904968201            0.93409710        1.25874673
## 187           0.934097101            0.80413364        0.76945312
## 188           1.015967906            1.23113036        1.52642702
## 189          -0.719096898            0.67050162        0.75245638
## 190          -0.735674299            0.75245638        0.83980946
## 191          -0.702714800            0.89542793        1.41400510
## 192          -0.533180513            1.10528634        1.77352271
## 193          -1.015967906            0.76945312        1.01596791
## 194          -0.786675105            0.73567430        0.82184079
## 195          -1.037522563            0.68651916        0.89542793
## 196          -0.769453118            0.70271480        1.03752256
## 197          -0.752456384            0.71909690        0.91459156
```

```
##     RLVAR_align.H.ADC Entropy_align.H.ADC  SZSE.H.ADC  LZSE.H.ADC LGLZE.H.ADC
## 1         -0.59282318         -1.20442230  0.24416040 -0.85805346  0.19203379
## 2         -0.54790615         -0.82184079  0.08918610 -0.80413364  0.03818128
## 3          0.21802303         -0.05091800 -0.85805346  0.62344075 -0.12117390
## 4          0.05091800          0.31028376 -0.39149488 -0.05091800 -0.21802303
## 5         -0.35060018         -0.54790615 -0.16617364 -0.17908874 -0.08918610
## 6         -0.15328619         -0.23107198 -0.65465430  0.14042416 -0.41218607
## 7         -0.60806071         -0.89542793  0.35060018 -0.76945312 -0.03818128
## 8         -0.23107198         -0.37779383 -0.35060018 -0.01272434 -0.44707302
## 9         -0.65465430         -1.34797950  0.21802303 -1.01596791 -0.25729077
## 10         0.08918610         -0.10196844 -0.57772207  0.08918610  0.12758531
## 11        -0.40526982         -0.50406856  0.17908874 -0.63896971 -0.06366298
## 12        -0.11476746         -0.03818128  0.07641832 -0.57772207 -0.16617364
## 13         0.15328619          0.17908874 -0.60806071  0.54790615  0.00000000
## 14        -0.19203379         -0.25729077  0.15328619 -0.62344075  0.07641832
## 15         0.32366339          0.48967276 -0.83980946  0.44707302  0.02545075
## 16        -0.39149488         -0.17908874 -0.32366339 -0.27046566 -0.24416040
## 17        -0.63896971         -0.91459156  0.29695946 -0.89542793 -0.32366339
## 18        -0.20501110          0.05091800 -0.07641832 -0.48967276  0.06366298
## 19        -0.01272434          0.16617364 -0.62344075  0.24416040 -0.27046566
## 20         0.60806071          0.41912210 -0.71909690  0.48967276 -0.63896971
## 21         0.20501110          0.22454273 -0.53318051  0.47537773 -0.43305527
## 22        -0.68651916         -1.77352271  0.03818128 -0.91459156 -0.41218607
## 23        -0.37779383         -0.33710120  0.37779383 -0.99487522 -0.12117390
## 24        -0.03818128          0.20501110 -0.36416334 -0.21802303  0.10196844
## 25        -0.31028376         -0.36416334 -0.47537773  0.01272434  0.16617364
## 26        -0.21802303          0.06366298 -0.10196844 -0.37779383 -0.05091800
## 27        -0.12758531         -0.28368767 -0.46117919 -0.15328619 -0.07641832
## 28        -0.24416040         -0.35060018 -0.33710120 -0.20501110 -0.10196844
## 29        -0.36416334         -0.62344075 -0.25729077 -0.33710120 -0.23107198
## 30        -0.27046566         -0.20501110 -0.50406856  0.31028376 -0.31028376
## 31        -0.76945312         -2.42690063  0.60806071 -2.42690063 -0.33710120
## 32        -0.08918610          0.14042416 -0.31028376  0.32366339 -0.36416334
## 33         0.44707302          0.56275157 -1.28735798  0.65465430 -0.50406856
## 34        -0.33710120         -0.71909690 -0.75245638 -0.06366298 -0.17908874
## 35        -0.51856960         -0.65465430 -0.01272434 -0.71909690  0.01272434
## 36        -0.05091800          0.12758531 -0.44707302  0.05091800 -0.14042416
## 37         0.24416040          0.08918610 -0.51856960  0.10196844 -0.62344075
## 38        -0.48967276         -1.10528634 -0.82184079  0.17908874  0.05091800
## 39         0.07641832          0.22454273 -0.19203379 -0.23107198 -0.28368767
## 40        -0.41912210         -0.43305527 -0.08918610 -0.54790615 -0.20501110
## 41         0.63896971          0.62344075 -0.89542793  0.53318051 -0.46117919
## 42        -0.50406856         -0.68651916  0.20501110 -0.59282318 -0.19203379
## 43         0.76945312          0.51856960 -0.91459156  0.63896971 -0.67050162
## 44        -0.85805346         -2.80216172  0.56275157 -2.80216172 -0.37779383
## 45        -0.44707302         -2.10223158  0.63118620 -2.04749877  0.35060018
## 46         0.33710120         -0.29695946  0.36416334 -0.32366339  0.24416040
## 47         0.43305527         -0.40526982  0.19203379 -0.03818128  0.44707302
## 48         0.37779383         -0.01272434  0.32366339 -0.12758531  0.60806071
## 49        -0.28368767         -1.83849262  0.59282318 -1.61367018  0.32366339
## 50         0.71909690          0.53318051  0.16617364  0.07641832  0.48967276
## 51         0.67050162          0.54790615  0.11476746 -0.14042416  0.56275157
## 52         0.87658763          0.59282318  0.05091800  0.11476746  0.29695946
## 53         0.91459156          0.63896971 -0.43305527  0.41912210  0.37779383
## 54         0.17908874         -0.39149488  0.44707302 -0.68651916  0.57772207
```

```
## 55        -0.43305527         -1.99828954  0.63118620 -2.04749877  0.33710120
## 56        -0.14042416         -1.91230127  0.50406856 -1.05957037  0.65465430
## 57         0.56275157          0.25729077 -0.02545075 -0.02545075  0.43305527
## 58         0.68651916          0.37779383  0.02545075  0.19203379  0.51856960
## 59        -0.46117919         -2.23555842  0.65465430 -2.23555842  0.39149488
## 60         0.95396468          0.57772207  0.01272434  0.46117919  0.27046566
## 61         0.59282318          0.15328619  0.14042416  0.02545075  0.11476746
## 62         0.39149488          0.00000000  0.39149488 -0.41912210  0.59282318
## 63         0.89542793          0.60806071 -0.97421613  0.57772207  0.23107198
## 64         0.80413364          0.44707302 -0.29695946  0.50406856  0.36416334
## 65         0.29695946         -0.21802303  0.40526982 -0.47537773  0.41912210
## 66         0.35060018         -0.14042416 -0.23107198  0.29695946  0.46117919
## 67         0.36416334          0.02545075  0.27046566 -0.16617364  0.63896971
## 68         0.65465430          0.50406856 -0.03818128  0.03818128  0.50406856
## 69         0.03818128         -0.70271480  0.33710120 -0.28368767  0.25729077
## 70        -0.29695946         -1.66232963  0.57772207 -1.56855670  0.54790615
## 71         0.14042416         -0.57772207  0.51856960 -0.95396468  0.71909690
## 72         1.28735798          0.65465430 -0.21802303  0.51856960  0.53318051
## 73         0.25729077         -0.67050162  0.53318051 -1.08214564  0.73567430
## 74         0.83980946          0.47537773 -0.17908874  0.33710120  0.70271480
## 75         0.19203379         -0.41912210  0.47537773 -0.83980946  0.67050162
## 76        -0.10196844         -0.97421613  0.54790615 -1.12903457  0.83980946
## 77        -0.02545075         -1.23113036  0.43305527 -0.40526982  0.80413364
## 78         0.16617364         -0.47537773  0.46117919 -0.73567430  0.75245638
## 79        -0.47537773         -0.85805346 -0.14042416 -0.35060018 -0.39149488
## 80         0.12758531          0.29695946 -0.70271480  0.21802303 -0.01272434
## 81         0.62344075          0.36416334 -0.67050162  0.35060018 -0.29695946
## 82         0.01272434          0.19203379 -0.15328619  0.16617364 -0.02545075
## 83         0.02545075         -0.16617364 -0.78667510  0.60806071 -0.15328619
## 84         0.00000000         -0.31028376 -0.05091800 -0.46117919  0.21802303
## 85        -0.25729077         -0.44707302  0.06366298 -0.53318051  0.14042416
## 86         0.06366298          0.01272434 -0.41912210  0.06366298  0.17908874
## 87         0.23107198          0.11476746 -0.28368767 -0.11476746  0.08918610
## 88         0.50406856          0.43305527 -0.59282318  0.43305527 -0.35060018
## 89        -0.17908874         -0.63896971 -0.37779383 -0.24416040  0.20501110
## 90        -0.32366339          0.24416040 -0.99487522  0.36416334 -1.05957037
## 91        -0.67050162          0.10196844 -0.80413364 -0.29695946 -0.99487522
## 92        -0.99487522         -1.03752256 -0.11476746 -1.44946373 -0.80413364
## 93        -0.89542793         -0.87658763 -0.24416040 -1.03752256 -0.59282318
## 94        -0.87658763         -0.59282318 -0.54790615 -0.87658763 -0.82184079
## 95        -0.57772207          0.07641832 -1.01596791  0.12758531 -1.03752256
## 96        -0.56275157          0.33710120 -1.20442230  0.39149488 -0.85805346
## 97        -0.62344075          0.32366339 -0.87658763 -0.31028376 -0.83980946
## 98        -0.53318051          0.35060018 -1.12903457  0.40526982 -0.76945312
## 99         0.48967276          0.03818128  0.41912210 -0.36416334  0.76945312
## 100       -0.71909690         -0.53318051 -1.17854682  0.59282318 -0.95396468
## 101       -0.91459156         -0.78667510 -0.63896971 -0.67050162 -0.78667510
## 102       -1.03752256         -1.05957037 -0.20501110 -1.48684468 -0.91459156
## 103       -0.93409710         -0.95396468  0.00000000 -1.31706374 -0.65465430
## 104       -0.78667510         -0.56275157 -0.48967276 -0.82184079 -0.73567430
## 105       -0.80413364         -0.93409710  0.12758531 -1.28735798 -0.57772207
## 106        0.10196844          0.27046566 -0.73567430  0.15328619 -0.48967276
## 107        0.28368767         -0.08918610  0.28368767 -0.44707302  0.62344075
## 108        0.51856960          0.40526982  0.23107198 -0.08918610  0.28368767
## 109       -0.06366298         -0.46117919  0.48967276 -0.93409710  0.68651916
```

```
## 110        0.57772207          0.46117919 -0.12758531  0.20501110  0.31028376
## 111        0.54790615          0.39149488  0.25729077 -0.10196844  0.47537773
## 112        0.41912210         -0.12758531  0.31028376 -0.25729077  0.40526982
## 113       -0.95396468         -0.99487522 -0.06366298 -1.34797950 -0.70271480
## 114       -0.16617364          0.28368767 -0.95396468  0.37779383 -0.97421613
## 115       -1.12903457         -1.41400510  0.10196844 -1.41400510 -0.60806071
## 116       -0.82184079         -0.73567430 -0.56275157 -0.65465430 -0.68651916
## 117       -1.01596791         -1.17854682 -0.27046566 -0.97421613 -0.87658763
## 118       -0.83980946         -0.75245638 -0.40526982 -0.78667510 -0.71909690
## 119       -0.75245638         -0.76945312 -0.68651916 -0.50406856 -1.01596791
## 120       -1.31706374         -0.32366339 -1.99828954  0.23107198 -2.80216172
## 121       -1.48684468         -0.48967276 -1.77352271 -0.56275157 -2.23555842
## 122       -2.23555842         -1.56855670 -1.31706374 -1.83849262 -1.61367018
## 123       -1.83849262         -1.38024023 -1.41400510 -1.52642702 -1.31706374
## 124       -1.77352271         -1.15343724 -1.56855670 -1.23113036 -1.66232963
## 125       -1.41400510         -0.51856960 -2.10223158 -0.19203379 -2.42690063
## 126       -1.38024023         -0.15328619 -2.80216172  0.27046566 -1.77352271
## 127       -1.44946373         -0.19203379 -1.83849262 -0.60806071 -1.71527720
## 128       -1.34797950         -0.11476746 -2.23555842  0.28368767 -1.52642702
## 129       -1.15343724         -0.60806071 -0.93409710 -0.70271480 -1.08214564
## 130       -1.52642702         -1.08214564 -2.42690063  0.56275157 -1.99828954
## 131       -1.91230127         -1.31706374 -1.66232963 -1.15343724 -1.56855670
## 132       -2.80216172         -1.61367018 -1.38024023 -1.91230127 -1.91230127
## 133       -1.99828954         -1.48684468 -1.23113036 -1.71527720 -1.34797950
## 134       -1.56855670         -1.12903457 -1.52642702 -1.20442230 -1.48684468
## 135       -1.61367018         -1.44946373 -1.15343724 -1.66232963 -1.28735798
## 136       -1.23113036         -0.27046566 -1.71527720 -0.07641832 -1.25874673
## 137       -1.20442230         -0.80413364 -1.05957037 -0.75245638 -1.12903457
## 138       -1.10528634         -0.06366298 -1.10528634 -0.39149488 -1.23113036
## 139       -1.25874673         -1.01596791 -0.76945312 -1.25874673 -1.10528634
## 140       -1.05957037         -0.02545075 -1.34797950  0.00000000 -1.20442230
## 141       -1.08214564         -0.07641832 -1.08214564 -0.43305527 -1.15343724
## 142       -1.17854682         -0.83980946 -1.03752256 -0.51856960 -1.17854682
## 143       -2.10223158         -1.52642702 -1.25874673 -1.77352271 -1.41400510
## 144       -1.28735798         -0.24416040 -1.91230127  0.25729077 -2.10223158
## 145       -1.66232963         -1.25874673 -1.61367018 -1.10528634 -1.38024023
## 146       -2.42690063         -1.71527720 -1.44946373 -1.38024023 -1.83849262
## 147       -1.71527720         -1.28735798 -1.48684468 -1.17854682 -1.44946373
## 148        0.75245638          0.71909690  2.23555842  0.70271480  1.15343724
## 149        1.77352271          1.83849262  1.38024023  1.31706374  1.38024023
## 150        1.66232963          1.91230127  1.31706374  1.15343724  1.56855670
## 151        1.99828954          2.10223158  1.25874673  1.34797950  1.12903457
## 152        2.23555842          2.42690063  0.87658763  1.83849262  1.23113036
## 153        1.17854682          0.99487522  1.61367018  0.89542793  1.61367018
## 154        0.53318051          0.68651916  2.42690063  0.68651916  1.17854682
## 155        0.85805346          0.70271480  1.77352271  0.78667510  1.77352271
## 156        1.48684468          1.34797950  1.17854682  1.20442230  1.31706374
## 157        1.71527720          1.56855670  1.23113036  1.44946373  1.44946373
## 158        0.47537773          0.67050162  2.80216172  0.67050162  1.25874673
## 159        2.42690063          1.99828954  1.20442230  1.99828954  1.10528634
## 160        1.52642702          1.25874673  1.34797950  1.23113036  0.95396468
## 161        1.41400510          1.10528634  1.48684468  0.97421613  1.66232963
## 162        2.10223158          2.23555842  0.73567430  2.42690063  1.05957037
## 163        1.83849262          1.66232963  0.93409710  2.10223158  1.20442230
## 164        1.31706374          1.03752256  1.52642702  0.93409710  1.28735798
```

```
## 165        1.34797950          1.08214564  0.99487522  1.52642702  1.34797950
## 166        1.38024023          1.15343724  1.41400510  1.12903457  1.71527720
## 167        1.61367018          1.77352271  1.15343724  1.25874673  1.41400510
## 168        1.05957037          0.83980946  1.44946373  1.08214564  1.08214564
## 169        0.73567430          0.73567430  2.10223158  0.71909690  1.52642702
## 170        1.12903457          0.91459156  1.83849262  0.82184079  1.99828954
## 171        2.80216172          2.80216172  1.01596791  2.23555842  1.48684468
## 172        1.25874673          0.85805346  1.91230127  0.76945312  2.10223158
## 173        1.91230127          1.71527720  1.03752256  1.56855670  1.91230127
## 174        1.20442230          0.97421613  1.71527720  0.85805346  1.83849262
## 175        0.93409710          0.78667510  1.99828954  0.75245638  2.80216172
## 176        0.97421613          0.75245638  1.56855670  0.99487522  2.42690063
## 177        1.15343724          0.93409710  1.66232963  0.87658763  2.23555842
## 178        0.46117919          0.82184079  1.08214564  1.01596791  0.78667510
## 179        1.10528634          1.38024023  0.80413364  1.48684468  0.91459156
## 180        1.56855670          1.52642702  0.82184079  1.61367018  0.85805346
## 181        1.01596791          1.28735798  1.05957037  1.41400510  0.89542793
## 182        1.03752256          1.05957037  0.78667510  2.80216172  0.87658763
## 183        0.99487522          1.01596791  1.12903457  0.95396468  1.03752256
## 184        0.78667510          0.95396468  1.28735798  0.91459156  0.97421613
## 185        1.08214564          1.12903457  0.89542793  1.28735798  0.99487522
## 186        1.23113036          1.23113036  0.95396468  1.17854682  0.93409710
## 187        1.44946373          1.61367018  0.83980946  1.91230127  0.82184079
## 188        0.82184079          0.87658763  0.91459156  1.10528634  1.01596791
## 189        0.70271480          1.31706374  0.71909690  1.66232963 -0.93409710
## 190       -0.07641832          1.20442230  0.76945312  1.05957037 -0.75245638
## 191       -0.97421613          0.76945312  1.10528634  0.73567430 -0.51856960
## 192       -0.73567430          0.80413364  0.97421613  0.80413364  0.15328619
## 193       -0.70271480          0.89542793  0.85805346  0.83980946 -0.53318051
## 194        0.27046566          1.17854682  0.70271480  1.38024023 -0.89542793
## 195        0.31028376          1.44946373  0.67050162  1.71527720 -0.56275157
## 196        0.11476746          1.41400510  0.75245638  1.03752256 -0.54790615
## 197        0.40526982          1.48684468  0.68651916  1.77352271 -0.47537773
##     HGLZE.H.ADC SZLGE.H.ADC SZHGE.H.ADC LZLGE.H.ADC LZHGE.H.ADC GLNU_area.H.ADC
## 1   -0.29695946  0.23761110  0.14042416 -0.75245638 -0.78667510     -1.44946373
## 2   -0.20501110  0.06366298  0.11476746 -0.60806071 -0.95396468     -0.75245638
## 3   -2.80216172 -0.21802303 -2.10223158  0.06366298  0.70271480     -0.31028376
## 4   -0.28368767 -0.31028376 -0.40526982 -0.12758531 -0.02545075      0.33710120
## 5   -1.38024023  0.00000000 -1.20442230 -0.14042416  0.11476746     -0.57772207
## 6    0.31028376 -0.39149488 -0.50406856  0.54790615 -0.10196844     -0.53318051
## 7    0.44707302  0.03818128  0.51856960 -0.63896971 -1.20442230     -1.23113036
## 8   -0.37779383 -0.44707302 -0.44707302  0.44707302  0.02545075     -0.54790615
## 9   -0.10196844 -0.29695946  0.08918610 -0.44707302 -0.97421613     -1.34797950
## 10  -1.10528634  0.17908874 -1.31706374 -0.59282318  0.19203379     -0.71909690
## 11  -0.76945312 -0.05091800 -0.35060018 -0.33710120 -0.70271480     -0.46117919
## 12   0.05091800 -0.14042416  0.19203379 -0.20501110 -0.87658763      0.15328619
## 13  -1.91230127  0.02545075 -1.48684468 -0.24416040  0.59282318      0.41912210
## 14  -1.12903457  0.10196844 -0.82184079 -0.57772207 -0.50406856     -0.12758531
## 15  -1.52642702  0.01272434 -1.61367018 -0.21802303  0.51856960      1.25874673
## 16   0.50406856 -0.33710120  0.20501110 -0.05091800 -0.48967276     -0.05091800
## 17  -0.47537773 -0.25729077 -0.01272434  0.00000000 -0.89542793     -0.87658763
## 18  -0.63896971  0.07641832 -0.39149488 -0.51856960 -0.43305527      0.67050162
## 19  -0.12758531 -0.27046566 -0.53318051  0.31028376  0.23107198      0.24416040
## 20   0.47537773 -0.63896971 -0.24416040 -0.10196844  0.20501110      0.93409710
## 21   0.28368767 -0.41218607 -0.21802303  1.71527720  0.07641832      0.54790615
```

```
## 22   0.24416040 -0.24416040  0.10196844 -0.91459156 -0.83980946     -1.91230127
## 23  -0.21802303 -0.12758531  0.24416040 -0.35060018 -1.08214564     -0.06366298
## 24  -0.56275157  0.11476746 -0.76945312 -0.40526982 -0.16617364      0.37779383
## 25   0.46117919  0.20501110 -0.05091800 -0.67050162 -0.20501110     -0.56275157
## 26  -0.57772207 -0.11476746 -0.28368767 -0.28368767 -0.33710120      0.82184079
## 27  -0.65465430 -0.16617364 -0.99487522 -0.36416334 -0.03818128     -0.70271480
## 28   0.35060018 -0.02545075  0.00000000 -0.02545075 -0.44707302     -0.73567430
## 29   0.43305527 -0.19203379  0.21802303  0.07641832 -0.68651916     -1.03752256
## 30  -0.75245638 -0.37779383 -0.75245638  0.02545075  0.43305527     -0.03818128
## 31   0.60806071 -0.07641832  0.62344075 -0.85805346 -2.42690063     -2.23555842
## 32  -0.32366339 -0.36416334 -0.25729077  0.50406856  0.31028376      0.44707302
## 33  -0.39149488 -0.50406856 -1.52642702  2.23555842  0.57772207      0.97421613
## 34   0.48967276 -0.20501110 -0.31028376 -0.43305527 -0.19203379     -1.25874673
## 35  -0.31028376  0.05091800 -0.08918610 -0.62344075 -0.82184079     -0.65465430
## 36   0.16617364 -0.15328619 -0.29695946 -0.08918610 -0.14042416      0.19203379
## 37  -0.46117919 -0.59282318 -0.91459156 -0.71909690  0.03818128      0.53318051
## 38   0.32366339  0.08918610 -0.78667510 -0.54790615  0.06366298     -1.41400510
## 39  -1.83849262 -0.32366339 -1.38024023  0.11476746  0.08918610      0.78667510
## 40   0.15328619 -0.28368767  0.17908874 -0.32366339 -0.80413364     -0.25729077
## 41   0.63896971 -0.46117919  0.12758531  0.97421613  0.27046566      1.44946373
## 42   0.33710120 -0.06366298  0.35060018 -0.16617364 -0.99487522     -0.51856960
## 43   0.36416334 -0.67050162 -0.93409710  0.93409710  0.41912210      0.91459156
## 44   0.59282318 -0.17908874  0.60806071 -0.93409710 -2.80216172     -2.42690063
## 45   0.56275157  0.51856960  0.57772207 -0.48967276 -2.10223158     -1.83849262
## 46   0.19203379  0.19203379  0.16617364  0.46117919 -0.65465430     -0.67050162
## 47  -1.48684468  0.40526982 -1.41400510  0.28368767  0.12758531     -1.17854682
## 48  -0.91459156  0.59282318 -0.80413364  0.19203379  0.00000000      0.01272434
## 49   0.65465430  0.48967276  0.65465430 -0.47537773 -1.91230127     -2.10223158
## 50  -0.11476746  0.39149488 -0.23107198  0.39149488 -0.11476746      0.56275157
## 51  -0.33710120  0.56275157 -0.46117919  0.25729077 -0.21802303      0.60806071
## 52   0.25729077  0.27046566 -0.06366298  0.70271480 -0.12758531      0.80413364
## 53  -0.51856960  0.32366339 -1.05957037  0.51856960  0.28368767      1.48684468
## 54  -0.23107198  0.67050162  0.07641832  0.12758531 -1.01596791     -0.59282318
## 55   0.57772207  0.50406856  0.59282318 -0.50406856 -1.99828954     -1.99828954
## 56   0.27046566  0.75245638  0.31028376 -0.27046566 -1.17854682     -1.77352271
## 57  -0.54790615  0.36416334 -0.95396468  0.29695946 -0.15328619     -0.11476746
## 58  -0.41912210  0.53318051 -0.41912210  0.32366339  0.24416040      0.28368767
## 59   0.62344075  0.57772207  0.63896971 -0.39149488 -2.23555842     -2.80216172
## 60  -1.05957037  0.25729077 -1.01596791  1.56855670  0.33710120      1.61367018
## 61  -0.59282318  0.12758531 -0.73567430 -0.23107198  0.01272434      1.03752256
## 62  -0.83980946  0.60806071 -0.67050162  0.14042416 -0.36416334      0.06366298
## 63  -1.31706374  0.15328619 -1.99828954  0.83980946  0.54790615      0.25729077
## 64  -1.34797950  0.33710120 -1.34797950  0.67050162  0.53318051      0.39149488
## 65   0.06366298  0.37779383  0.01272434  0.37779383 -0.85805346     -0.63896971
## 66  -0.93409710  0.41912210 -1.23113036  0.41912210  0.25729077     -0.50406856
## 67  -0.53318051  0.62344075 -0.51856960  0.15328619 -0.17908874      0.20501110
## 68  -0.85805346  0.46117919 -0.97421613  0.33710120  0.05091800      0.89542793
## 69   0.53318051  0.23761110  0.33710120  0.43305527 -0.75245638     -1.12903457
## 70  -1.28735798  0.70271480 -0.15328619 -0.29695946 -1.31706374     -1.71527720
## 71   0.07641832  0.71909690  0.29695946  0.20501110 -1.23113036     -0.32366339
## 72  -1.99828954  0.43305527 -1.91230127  0.82184079  0.56275157      2.10223158
## 73   0.03818128  0.80413364  0.50406856  0.08918610 -1.38024023     -0.76945312
## 74  -1.25874673  0.68651916 -1.44946373  0.53318051  0.32366339      0.43305527
## 75   0.54790615  0.63896971  0.56275157  0.23107198 -1.34797950     -0.29695946
## 76   0.21802303  0.87658763  0.54790615 -0.03818128 -1.25874673     -1.48684468
```

```
## 77   0.29695946  0.85805346  0.23107198 -0.07641832 -0.41912210     -1.38024023
## 78   0.11476746  0.76945312  0.28368767  0.16617364 -1.10528634     -0.19203379
## 79   0.51856960 -0.43305527  0.32366339  0.10196844 -0.76945312     -1.15343724
## 80   0.23107198 -0.10196844 -0.43305527  0.17908874  0.10196844      0.17908874
## 81  -1.77352271 -0.41218607 -1.56855670  0.47537773  0.44707302      1.91230127
## 82  -0.89542793 -0.08918610 -0.71909690  0.27046566  0.29695946      0.40526982
## 83  -2.10223158 -0.23107198 -2.23555842  0.36416334  0.63896971     -0.07641832
## 84  -0.40526982  0.28368767 -0.07641832 -0.65465430 -0.32366339     -1.08214564
## 85  -0.67050162  0.16617364 -0.57772207 -0.41912210 -0.57772207     -0.39149488
## 86  -1.08214564  0.14042416 -1.03752256 -0.25729077  0.21802303      0.16617364
## 87  -0.27046566 -0.01272434 -0.27046566 -0.17908874 -0.01272434      0.23107198
## 88  -0.95396468 -0.35060018 -1.08214564  1.01596791  0.40526982      0.51856960
## 89  -0.14042416  0.21802303 -0.70271480 -0.46117919 -0.25729077     -1.05957037
## 90  -0.99487522 -0.99487522 -1.12903457  0.75245638  0.37779383      0.48967276
## 91  -0.16617364 -0.95396468 -0.11476746 -0.15328619 -0.28368767      1.10528634
## 92  -0.01272434 -0.75245638  0.44707302 -1.10528634 -1.52642702     -0.83980946
## 93   0.10196844 -0.57772207  0.27046566 -0.82184079 -1.12903457     -0.20501110
## 94  -1.17854682 -0.76945312 -0.85805346 -1.08214564 -0.53318051     -0.15328619
## 95   0.40526982 -1.01596791 -0.17908874 -0.11476746 -0.06366298      0.12758531
## 96  -1.61367018 -0.85805346 -1.71527720 -0.83980946  0.48967276      1.20442230
## 97  -0.35060018 -0.83980946 -0.47537773 -0.80413364 -0.23107198      0.59282318
## 98  -1.56855670 -0.80413364 -1.66232963 -0.78667510  0.50406856      1.23113036
## 99  -0.82184079  0.78667510 -0.65465430  0.24416040 -0.35060018      0.07641832
## 100 -2.23555842 -0.93409710 -2.42690063 -0.31028376  0.62344075     -0.08918610
## 101 -0.70271480 -0.78667510 -0.60806071 -1.03752256 -0.60806071     -0.41912210
## 102 -0.02545075 -0.87658763  0.43305527 -1.17854682 -1.56855670     -0.85805346
## 103  0.01272434 -0.65465430  0.47537773 -0.99487522 -1.44946373     -0.80413364
## 104 -1.15343724 -0.73567430 -0.83980946 -1.05957037 -0.51856960     -0.14042416
## 105  0.02545075 -0.53318051  0.48967276 -0.95396468 -1.41400510     -0.78667510
## 106  0.41912210 -0.47537773 -0.16617364  0.40526982 -0.05091800      0.14042416
## 107 -0.43305527  0.65465430 -0.32366339 -0.01272434 -0.46117919     -0.01272434
## 108 -0.15328619  0.29695946 -0.10196844  0.62344075 -0.27046566      1.12903457
## 109 -0.60806071  0.82184079  0.03818128 -0.19203379 -1.03752256     -0.27046566
## 110 -0.24416040  0.31028376 -0.54790615  0.56275157  0.17908874      0.65465430
## 111 -1.41400510  0.44707302 -1.25874673  0.21802303  0.15328619      0.87658763
## 112  0.14042416  0.47537773  0.06366298  0.35060018 -0.39149488     -0.60806071
## 113  0.00000000 -0.68651916  0.46117919 -1.01596791 -1.48684468     -0.82184079
## 114 -0.97421613 -0.91459156 -1.10528634  0.78667510  0.39149488      0.50406856
## 115  0.20501110 -0.56275157  0.53318051 -1.12903457 -1.28735798     -1.52642702
## 116 -0.68651916 -0.70271480 -0.59282318 -0.97421613 -0.59282318     -0.40526982
## 117 -0.48967276 -0.82184079 -0.02545075 -0.68651916 -0.91459156     -0.89542793
## 118 -0.78667510 -0.71909690 -0.36416334 -0.87658763 -0.71909690     -0.47537773
## 119  0.17908874 -1.05957037  0.15328619 -0.56275157 -0.67050162     -0.68651916
## 120 -1.03752256 -2.42690063 -1.17854682 -0.53318051  0.35060018      0.46117919
## 121 -0.19203379 -2.23555842 -0.14042416 -1.34797950 -0.31028376      1.05957037
## 122 -0.07641832 -1.52642702  0.37779383 -2.42690063 -1.77352271     -0.97421613
## 123  0.08918610 -1.31706374  0.25729077 -1.56855670 -1.15343724     -0.21802303
## 124 -1.23113036 -1.56855670 -0.89542793 -2.23555842 -0.56275157     -0.17908874
## 125  0.37779383 -2.80216172 -0.20501110 -1.31706374 -0.08918610      0.10196844
## 126 -1.71527720 -1.83849262 -1.83849262 -1.61367018  0.46117919      1.15343724
## 127 -0.36416334 -1.77352271 -0.48967276 -1.52642702 -0.24416040      0.57772207
## 128 -1.66232963 -1.66232963 -1.77352271 -1.48684468  0.47537773      1.17854682
## 129 -0.87658763 -1.10528634 -0.68651916 -1.23113036 -0.37779383      0.05091800
## 130 -2.42690063 -2.10223158 -2.80216172 -1.41400510  0.60806071     -0.10196844
## 131 -0.73567430 -1.61367018 -0.63896971 -1.99828954 -0.63896971     -0.44707302
```

```
## 132 -0.08918610 -1.91230127  0.36416334 -2.80216172 -1.83849262     -0.99487522
## 133 -0.05091800 -1.34797950  0.40526982 -1.83849262 -1.66232963     -0.93409710
## 134 -1.20442230 -1.48684468 -0.87658763 -2.10223158 -0.54790615     -0.16617364
## 135 -0.03818128 -1.28735798  0.41912210 -1.71527720 -1.61367018     -0.91459156
## 136  0.39149488 -1.25874673 -0.19203379 -1.15343724 -0.07641832      0.11476746
## 137 -0.44707302 -1.12903457 -0.33710120 -1.28735798 -0.47537773     -0.02545075
## 138 -0.17908874 -1.23113036 -0.12758531 -0.76945312 -0.29695946      1.08214564
## 139 -0.62344075 -1.08214564  0.02545075 -1.38024023 -1.05957037     -0.28368767
## 140 -0.25729077 -1.20442230 -0.56275157 -0.89542793  0.16617364      0.63896971
## 141 -1.44946373 -1.17854682 -1.28735798 -1.25874673  0.14042416      0.85805346
## 142  0.12758531 -1.15343724  0.05091800 -1.20442230 -0.40526982     -0.62344075
## 143 -0.06366298 -1.38024023  0.39149488 -1.91230127 -1.71527720     -0.95396468
## 144 -1.01596791 -1.99828954 -1.15343724 -0.37779383  0.36416334      0.47537773
## 145 -0.71909690 -1.41400510 -0.62344075 -1.77352271 -0.62344075     -0.43305527
## 146 -0.50406856 -1.71527720 -0.03818128 -1.44946373 -0.93409710     -1.01596791
## 147 -0.80413364 -1.44946373 -0.37779383 -1.66232963 -0.73567430     -0.48967276
## 148  2.80216172  1.38024023  2.80216172  0.59282318  0.68651916     -1.61367018
## 149  1.31706374  1.25874673  1.23113036  1.41400510  1.23113036      1.34797950
## 150  1.17854682  1.48684468  1.12903457  1.20442230  1.12903457      1.41400510
## 151  1.66232963  1.10528634  1.38024023  1.83849262  1.20442230      1.52642702
## 152  1.08214564  1.15343724  0.85805346  1.61367018  1.52642702      1.99828954
## 153  1.23113036  1.71527720  1.44946373  1.03752256  0.87658763      0.02545075
## 154  2.23555842  1.41400510  2.23555842  0.57772207  0.67050162     -1.56855670
## 155  1.71527720  1.99828954  1.66232963  0.71909690  0.82184079     -1.31706374
## 156  1.03752256  1.20442230  0.93409710  1.25874673  1.17854682      0.35060018
## 157  1.10528634  1.44946373  1.17854682  1.28735798  1.44946373      0.83980946
## 158  2.42690063  1.52642702  2.42690063  0.65465430  0.65465430     -1.66232963
## 159  0.85805346  1.08214564  0.89542793  2.80216172  1.66232963      2.23555842
## 160  1.01596791  0.95396468  0.97421613  0.76945312  1.31706374      1.66232963
## 161  0.97421613  1.56855670  1.03752256  1.05957037  1.01596791      0.62344075
## 162  0.76945312  0.99487522  0.68651916  2.10223158  2.23555842      0.76945312
## 163  0.75245638  1.17854682  0.78667510  1.77352271  2.10223158      0.95396468
## 164  1.41400510  1.23113036  1.41400510  1.38024023  0.89542793      0.00000000
## 165  0.91459156  1.28735798  0.80413364  1.44946373  1.48684468      0.03818128
## 166  1.05957037  1.61367018  1.08214564  1.08214564  1.15343724      0.73567430
## 167  0.95396468  1.34797950  0.91459156  1.31706374  1.34797950      1.56855670
## 168  1.99828954  1.05957037  1.77352271  1.48684468  0.93409710     -0.36416334
## 169  0.78667510  1.83849262  1.28735798  0.68651916  0.76945312     -1.28735798
## 170  1.44946373  1.91230127  1.61367018  1.15343724  0.80413364      0.21802303
## 171  0.68651916  1.31706374  0.70271480  1.99828954  2.42690063      2.80216172
## 172  1.38024023  2.23555842  1.91230127  0.95396468  0.73567430     -0.23107198
## 173  0.80413364  1.77352271  0.76945312  1.66232963  1.61367018      1.01596791
## 174  2.10223158  1.66232963  2.10223158  1.17854682  0.75245638      0.27046566
## 175  1.56855670  2.80216172  1.99828954  0.91459156  0.78667510     -1.20442230
## 176  1.77352271  2.42690063  1.48684468  0.89542793  0.99487522     -1.10528634
## 177  1.52642702  2.10223158  1.56855670  1.10528634  0.85805346      0.31028376
## 178  1.91230127  0.35060018  1.71527720  0.99487522  0.91459156     -0.37779383
## 179  1.61367018  0.89542793  1.15343724  1.12903457  1.38024023      0.71909690
## 180  0.70271480  0.54790615  0.75245638  1.52642702  1.83849262      2.42690063
## 181  0.93409710  0.91459156  0.99487522  1.23113036  1.56855670      0.99487522
## 182  0.67050162  0.83980946  0.67050162  1.34797950  2.80216172      0.36416334
## 183  1.12903457  1.12903457  1.34797950  0.48967276  1.03752256     -0.35060018
## 184  0.99487522  1.01596791  1.05957037  0.63896971  0.95396468      0.08918610
## 185  0.83980946  0.97421613  0.87658763  0.73567430  1.41400510      0.70271480
## 186  1.20442230  0.93409710  1.20442230  0.80413364  1.28735798      0.75245638
```

```
## 187  0.89542793  0.73567430  0.83980946  2.42690063  1.77352271      1.31706374
## 188  1.28735798  1.03752256  1.01596791  0.60806071  1.08214564     -0.33710120
## 189  0.87658763 -0.97421613  0.82184079  1.91230127  1.71527720      1.28735798
## 190  1.25874673 -0.89542793  1.31706374  0.85805346  1.05957037      1.71527720
## 191  1.34797950 -0.48967276  1.83849262 -0.73567430  0.71909690     -0.24416040
## 192  1.48684468 -0.03818128  1.52642702  0.01272434  0.83980946      0.29695946
## 193  0.82184079 -0.51856960  0.95396468 -0.70271480  0.97421613      0.32366339
## 194  1.83849262 -1.03752256  1.25874673  0.87658763  1.25874673      0.68651916
## 195  0.71909690 -0.62344075  0.71909690 -0.06366298  1.91230127      1.77352271
## 196  1.15343724 -0.60806071  1.10528634  0.03818128  1.10528634      1.38024023
## 197  0.73567430 -0.54790615  0.73567430  0.05091800  1.99828954      1.83849262
##      ZSNU.H.ADC   ZSP.H.ADC GLNU_norm.H.ADC ZSNU_norm.H.ADC GLVAR_area.H.ADC
## 1   -1.48684468  0.31028376      0.00000000      0.28368767      -0.03818128
## 2   -0.75245638  0.21802303     -0.28368767      0.17908874       0.44707302
## 3   -0.32366339 -1.23113036     -0.01272434     -1.25874673      -2.42690063
## 4    0.32366339 -0.43305527     -0.42607834     -0.41912210      -0.51856960
## 5   -0.59282318 -0.19203379     -0.15328619     -0.08918610      -0.01272434
## 6   -0.53318051 -0.62344075     -0.21151259     -0.80413364      -1.20442230
## 7   -1.23113036  0.33710120     -0.21151259      0.39149488       0.39149488
## 8   -0.54790615 -0.39149488     -0.15328619     -0.33710120      -1.17854682
## 9   -1.34797950  0.37779383      0.01272434      0.27046566       0.27046566
## 10  -0.71909690 -0.54790615     -0.28368767     -0.70271480      -0.97421613
## 11  -0.35060018  0.16617364     -0.42607834      0.24416040       0.06366298
## 12   0.21802303  0.11476746     -0.47537773      0.19203379       0.08918610
## 13   0.41912210 -0.82184079     -0.24416040     -0.73567430      -0.80413364
## 14  -0.07641832  0.17908874     -0.35060018      0.21802303      -0.36416334
## 15   1.15343724 -0.93409710     -0.39149488     -1.23113036      -0.87658763
## 16  -0.03818128 -0.23107198     -0.42607834     -0.35060018      -0.11476746
## 17  -0.97421613  0.32366339     -0.10836573      0.33710120      -0.16617364
## 18   0.70271480 -0.02545075     -0.50406856     -0.01272434      -0.06366298
## 19   0.24416040 -0.70271480     -0.37779383     -0.76945312      -0.60806071
## 20   0.95396468 -0.85805346     -0.05091800     -0.85805346      -1.61367018
## 21   0.54790615 -0.65465430     -0.35060018     -0.65465430      -0.76945312
## 22  -2.10223158  0.24416040      0.05091800      0.15328619      -0.28368767
## 23  -0.05091800  0.39149488     -0.24416040      0.41912210       0.28368767
## 24   0.39149488 -0.31028376     -0.47537773     -0.40526982       0.00000000
## 25  -0.56275157 -0.46117919     -0.32366339     -0.56275157       0.46117919
## 26   0.83980946 -0.08918610     -0.47537773     -0.06366298      -0.15328619
## 27  -0.70271480 -0.41912210     -0.15328619     -0.57772207      -0.48967276
## 28  -0.73567430 -0.29695946     -0.10836573     -0.32366339       0.40526982
## 29  -1.03752256 -0.15328619     -0.19203379     -0.24416040       0.29695946
## 30  -0.06366298 -0.59282318     -0.08280052     -0.59282318      -1.34797950
## 31  -2.23555842  0.60806071      0.06366298      0.63896971       0.51856960
## 32   0.44707302 -0.53318051     -0.28368767     -0.31028376      -0.82184079
## 33   0.93409710 -1.83849262     -0.08280052     -1.91230127      -2.80216172
## 34  -1.25874673 -0.56275157     -0.06366298     -1.05957037       0.03818128
## 35  -0.63896971  0.12758531     -0.24416040      0.05091800      -0.07641832
## 36   0.19203379 -0.50406856     -0.42607834     -0.50406856      -0.44707302
## 37   0.53318051 -0.51856960     -0.03818128     -0.60806071      -1.25874673
## 38  -1.61367018 -0.76945312      0.02545075     -1.08214564      -0.85805346
## 39   0.78667510 -0.17908874     -0.35060018     -0.16617364      -1.03752256
## 40  -0.28368767 -0.01272434     -0.31028376     -0.02545075      -0.37779383
## 41   1.34797950 -1.17854682     -0.12758531     -1.38024023      -1.77352271
## 42  -0.51856960  0.19203379     -0.17908874      0.29695946       0.37779383
## 43   0.91459156 -1.44946373     -0.02545075     -1.41400510      -1.83849262
```

```
## 44  -2.42690063  0.59282318      0.03818128      0.62344075       0.50406856
## 45  -1.87412132  0.63118620      0.63896971      0.60042452       0.63896971
## 46  -0.67050162  0.27046566      0.48967276      0.16617364      -0.46117919
## 47  -1.20442230  0.00000000      0.50406856     -0.05091800      -1.23113036
## 48   0.01272434  0.10196844      0.39149488      0.14042416      -0.50406856
## 49  -1.99828954  0.57772207      0.57772207      0.57772207       0.60806071
## 50   0.56275157 -0.06366298      0.33710120     -0.07641832      -0.67050162
## 51   0.60806071  0.02545075      0.30361487     -0.17908874      -0.32366339
## 52   0.80413364 -0.12758531      0.39149488     -0.20501110      -0.99487522
## 53   1.48684468 -0.63896971      0.33710120     -0.82184079      -1.15343724
## 54  -0.57772207  0.44707302      0.44005334      0.40526982      -0.27046566
## 55  -1.87412132  0.63118620      0.62344075      0.60042452       0.62344075
## 56  -1.77352271  0.50406856      0.60806071      0.50406856       0.65465430
## 57  -0.20501110 -0.07641832      0.39149488     -0.28368767      -0.05091800
## 58   0.28368767 -0.16617364      0.36416334     -0.21802303      -0.62344075
## 59  -2.80216172  0.65465430      0.65465430      0.65465430       0.53318051
## 60   1.61367018 -0.33710120      0.46826666     -0.23107198      -1.31706374
## 61   1.01596791 -0.05091800      0.56275157     -0.12758531      -0.83980946
## 62   0.06366298  0.36416334      0.41912210      0.20501110      -0.56275157
## 63   0.17908874 -1.41400510      0.51856960     -1.71527720      -2.23555842
## 64   0.37779383 -0.60806071      0.54052868     -0.68651916      -1.56855670
## 65  -0.65465430  0.40526982      0.44005334      0.23107198      -0.53318051
## 66  -0.50406856 -0.37779383      0.46826666     -0.48967276      -1.28735798
## 67   0.20501110  0.08918610      0.33710120      0.02545075      -0.29695946
## 68   0.85805346 -0.14042416      0.30361487     -0.27046566      -0.75245638
## 69  -1.10528634  0.23107198      0.54052868      0.10196844      -0.08918610
## 70  -1.71527720  0.56275157      0.59282318      0.56275157       0.01272434
## 71  -0.31028376  0.51856960      0.70271480      0.48967276       0.41912210
## 72   2.10223158 -0.57772207      0.77803527     -0.63896971      -1.71527720
## 73  -0.76945312  0.53318051      0.77803527      0.53318051       0.25729077
## 74   0.40526982 -0.36416334      0.71909690     -0.54790615      -1.01596791
## 75  -0.29695946  0.48967276      0.68651916      0.47537773       0.43305527
## 76  -1.38024023  0.54790615      0.75245638      0.54790615       0.56275157
## 77  -1.44946373  0.43305527      0.80413364      0.35060018       0.33710120
## 78  -0.14042416  0.46117919      0.73567430      0.46117919       0.11476746
## 79  -1.12903457 -0.10196844      0.07641832     -0.15328619      -0.10196844
## 80   0.15328619 -0.68651916      0.08918610     -0.95396468      -0.31028376
## 81   1.91230127 -0.80413364      0.17908874     -0.89542793      -1.66232963
## 82   0.43305527 -0.28368767      0.12758531     -0.19203379      -0.78667510
## 83  -0.24416040 -1.08214564      0.20501110     -1.15343724      -1.91230127
## 84  -1.05957037  0.01272434      0.14042416      0.00000000       0.47537773
## 85  -0.40526982  0.07641832      0.16617364      0.11476746      -0.20501110
## 86   0.16617364 -0.44707302      0.11476746     -0.51856960      -0.57772207
## 87   0.23107198 -0.27046566      0.10196844     -0.36416334      -0.02545075
## 88   0.51856960 -0.75245638      0.15328619     -0.75245638      -1.38024023
## 89  -1.08214564 -0.24416040      0.19203379     -0.47537773       0.48967276
## 90   0.48967276 -1.15343724     -0.85805346     -1.20442230      -1.44946373
## 91   1.23113036 -0.67050162     -0.91459156     -0.67050162      -0.70271480
## 92  -0.83980946  0.14042416     -0.83980946      0.32366339       0.20501110
## 93  -0.15328619 -0.03818128     -0.56275157      0.08918610       0.10196844
## 94  -0.10196844 -0.32366339     -0.97421613     -0.14042416      -0.40526982
## 95   0.11476746 -0.99487522     -0.87658763     -1.28735798      -1.08214564
## 96   1.10528634 -1.38024023     -0.99487522     -1.56855670      -0.91459156
## 97   0.59282318 -0.73567430     -0.95396468     -0.78667510      -0.33710120
## 98   1.12903457 -1.28735798     -0.93409710     -1.48684468      -0.89542793
```

```
## 99   0.07641832  0.41912210      0.67050162      0.25729077      -0.54790615
## 100 -0.25729077 -1.61367018     -0.80413364     -1.52642702      -1.99828954
## 101 -0.43305527 -0.40526982     -0.82184079     -0.29695946      -0.23107198
## 102 -0.85805346  0.05091800     -1.05957037      0.31028376       0.19203379
## 103 -0.80413364  0.25729077     -0.57772207      0.37779383       0.23107198
## 104 -0.08918610 -0.25729077     -0.89542793     -0.11476746      -0.39149488
## 105 -0.78667510  0.35060018     -0.54790615      0.43305527       0.24416040
## 106  0.12758531 -0.71909690     -0.51856960     -0.83980946      -1.05957037
## 107 -0.01272434  0.29695946      0.21802303      0.03818128       0.32366339
## 108  1.25874673  0.03818128      0.27046566      0.01272434      -0.68651916
## 109 -0.21802303  0.47537773      0.24416040      0.51856960       0.59282318
## 110  0.63896971 -0.21802303      0.23107198     -0.37779383      -0.12758531
## 111  0.89542793  0.06366298      0.25729077      0.06366298      -0.63896971
## 112 -0.60806071  0.15328619      0.28368767      0.07641832       0.36416334
## 113 -0.82184079  0.20501110     -0.62344075      0.36416334       0.21802303
## 114  0.50406856 -1.10528634     -0.65465430     -1.10528634      -1.41400510
## 115 -1.41400510  0.28368767     -0.67050162      0.44707302       0.54790615
## 116 -0.41912210 -0.35060018     -0.60806071     -0.25729077      -0.21802303
## 117 -0.99487522 -0.11476746     -0.59282318      0.12758531      -0.17908874
## 118 -0.36416334 -0.20501110     -0.68651916     -0.03818128       0.05091800
## 119 -0.68651916 -0.48967276     -0.63896971     -0.43305527      -0.47537773
## 120  0.46117919 -2.10223158     -1.71527720     -1.99828954      -1.52642702
## 121  1.17854682 -1.66232963     -1.91230127     -1.61367018      -0.73567430
## 122 -0.93409710 -0.97421613     -1.66232963     -0.53318051       0.14042416
## 123 -0.16617364 -1.12903457     -1.31706374     -0.91459156       0.07641832
## 124 -0.12758531 -1.48684468     -2.23555842     -1.17854682      -0.43305527
## 125  0.08918610 -1.91230127     -1.77352271     -2.10223158      -1.12903457
## 126  1.05957037 -2.42690063     -2.42690063     -2.80216172      -0.95396468
## 127  0.57772207 -1.77352271     -2.10223158     -1.66232963      -0.35060018
## 128  1.08214564 -2.23555842     -1.99828954     -2.23555842      -0.93409710
## 129  0.05091800 -0.78667510     -1.08214564     -0.71909690      -0.59282318
## 130 -0.27046566 -2.80216172     -1.56855670     -2.42690063      -2.10223158
## 131 -0.46117919 -1.56855670     -1.61367018     -1.34797950      -0.25729077
## 132 -0.95396468 -1.03752256     -2.80216172     -0.62344075       0.12758531
## 133 -0.89542793 -0.89542793     -1.34797950     -0.44707302       0.16617364
## 134 -0.11476746 -1.34797950     -1.83849262     -1.12903457      -0.41912210
## 135 -0.87658763 -0.83980946     -1.28735798     -0.39149488       0.17908874
## 136  0.10196844 -1.71527720     -1.25874673     -1.77352271      -1.10528634
## 137 -0.02545075 -0.87658763     -1.23113036     -0.99487522       0.31028376
## 138  1.20442230 -1.05957037     -1.12903457     -1.01596791      -0.71909690
## 139 -0.23107198 -0.47537773     -1.17854682     -0.10196844       0.57772207
## 140  0.62344075 -1.31706374     -1.20442230     -1.44946373      -0.14042416
## 141  0.87658763 -1.01596791     -1.15343724     -0.97421613      -0.65465430
## 142 -0.62344075 -0.95396468     -1.10528634     -0.93409710       0.35060018
## 143 -0.91459156 -0.91459156     -1.44946373     -0.46117919       0.15328619
## 144  0.47537773 -1.99828954     -1.48684468     -1.83849262      -1.48684468
## 145 -0.44707302 -1.52642702     -1.41400510     -1.31706374      -0.24416040
## 146 -1.01596791 -1.20442230     -1.38024023     -0.87658763      -0.19203379
## 147 -0.37779383 -1.25874673     -1.52642702     -1.03752256       0.02545075
## 148 -1.56855670  2.23555842      1.52642702      2.23555842       2.23555842
## 149  1.38024023  1.20442230      1.10528634      1.25874673       1.01596791
## 150  1.44946373  1.31706374      1.04848275      1.15343724       1.17854682
## 151  1.52642702  1.12903457      1.19138485      1.10528634       0.87658763
## 152  1.99828954  0.85805346      1.10528634      0.80413364       0.82184079
## 153  0.02545075  1.61367018      1.27292210      1.61367018       1.25874673
```

```
## 154 -1.52642702  2.42690063      1.66232963      2.42690063       2.42690063
## 155 -1.31706374  1.77352271      1.61367018      1.83849262       2.80216172
## 156  0.31028376  1.17854682      1.19138485      1.01596791       1.38024023
## 157  0.82184079  1.08214564      1.15343724      1.08214564       1.03752256
## 158 -1.66232963  2.80216172      1.71527720      2.80216172       1.99828954
## 159  2.23555842  0.97421613      1.33236244      1.05957037       0.78667510
## 160  1.66232963  1.23113036      1.48684468      1.23113036       0.93409710
## 161  0.65465430  1.48684468      1.23113036      1.44946373       1.08214564
## 162  0.73567430  0.67050162      1.38024023      0.67050162       0.67050162
## 163  0.97421613  0.87658763      1.43150944      0.85805346       0.73567430
## 164  0.00000000  1.52642702      1.27292210      1.48684468       1.10528634
## 165  0.03818128  0.93409710      1.33236244      0.95396468       0.80413364
## 166  0.75245638  1.38024023      1.10528634      1.31706374       1.23113036
## 167  1.56855670  1.10528634      1.04848275      1.03752256       0.97421613
## 168 -0.47537773  1.44946373      1.43150944      1.38024023       1.34797950
## 169 -1.28735798  2.10223158      1.56855670      2.10223158       1.44946373
## 170  0.25729077  1.83849262      1.83849262      1.77352271       1.71527720
## 171  2.80216172  0.89542793      2.32067171      0.89542793       0.70271480
## 172 -0.17908874  1.91230127      2.32067171      1.91230127       1.61367018
## 173  0.99487522  0.95396468      1.91230127      0.91459156       0.85805346
## 174  0.27046566  1.71527720      1.77352271      1.71527720       1.77352271
## 175 -1.15343724  1.99828954      2.10223158      1.99828954       2.10223158
## 176 -1.17854682  1.56855670      2.80216172      1.56855670       1.66232963
## 177  0.35060018  1.66232963      1.99828954      1.66232963       1.52642702
## 178 -0.48967276  1.15343724      0.82184079      1.17854682       1.31706374
## 179  0.68651916  0.82184079      0.83980946      0.76945312       1.20442230
## 180  2.42690063  0.76945312      0.97421613      0.78667510       0.71909690
## 181  1.03752256  1.01596791      0.89542793      1.12903457       0.95396468
## 182  0.29695946  0.73567430      1.01596791      0.75245638       0.68651916
## 183 -0.33710120  1.28735798      0.91459156      1.28735798       1.83849262
## 184  0.14042416  1.34797950      0.95396468      1.41400510       1.28735798
## 185  0.71909690  0.91459156      0.87658763      0.93409710       1.05957037
## 186  0.76945312  1.03752256      0.85805346      0.99487522       1.41400510
## 187  1.31706374  0.78667510      0.93409710      0.83980946       0.76945312
## 188 -0.39149488  1.05957037      0.99487522      0.97421613       1.91230127
## 189  1.28735798  0.71909690     -0.71909690      0.73567430       0.75245638
## 190  1.83849262  0.83980946     -0.75245638      0.87658763       0.99487522
## 191 -0.19203379  1.41400510     -0.70271480      1.52642702       1.56855670
## 192  0.33710120  1.25874673     -0.53318051      1.34797950       1.48684468
## 193  0.36416334  0.99487522     -1.01596791      1.20442230       1.12903457
## 194  0.67050162  0.75245638     -0.73567430      0.71909690       0.83980946
## 195  1.71527720  0.68651916     -1.03752256      0.68651916       0.89542793
## 196  1.41400510  0.80413364     -0.78667510      0.82184079       1.15343724
## 197  1.77352271  0.70271480     -0.76945312      0.70271480       0.91459156
##     ZSVAR.H.ADC Entropy_area.H.ADC Max_cooc.W.ADC Average_cooc.W.ADC
## 1   -0.68651916        -1.41400510     0.16617364        -0.87658763
## 2   -0.73567430        -0.85805346    -0.19851827         0.44707302
## 3    1.71527720         0.41912210    -0.23107198        -0.91459156
## 4    0.00000000         0.07641832    -0.48967276         0.35060018
## 5   -0.01272434        -0.53318051    -0.29695946         0.00000000
## 6    0.27046566         0.01272434    -0.35060018         0.75245638
## 7   -0.54790615        -1.12903457    -0.15328619         0.56275157
## 8    0.12758531        -0.32366339    -0.12758531         0.43305527
## 9   -0.93409710        -1.31706374    -0.11476746         0.31028376
## 10   0.08918610        -0.15328619    -0.25072018        -0.75245638
```

```
## 11  -0.53318051        -0.67050162    -0.32366339         0.48967276
## 12  -0.49685779        -0.39149488    -0.44005334        -0.50406856
## 13   1.31706374         0.43305527    -0.05091800        -1.48684468
## 14  -0.49685779        -0.63896971    -0.37779383         0.67050162
## 15   0.71909690         0.57772207    -0.21802303        -0.11476746
## 16  -0.19203379        -0.12758531    -0.33710120         0.24416040
## 17  -0.63896971        -0.97421613    -0.17908874         0.39149488
## 18  -0.36416334        -0.21802303    -0.50406856        -0.25729077
## 19   0.43305527         0.31028376    -0.16617364        -0.97421613
## 20   0.85805346         0.46117919     0.08918610         0.01272434
## 21   1.01596791         0.32366339    -0.41912210         0.21802303
## 22  -0.85805346        -1.83849262     0.05091800        -1.56855670
## 23  -0.80413364        -0.89542793    -0.06366298        -1.99828954
## 24  -0.15328619         0.10196844    -0.47537773         0.20501110
## 25   0.03818128        -0.10196844    -0.25072018        -0.80413364
## 26  -0.25729077        -0.16617364    -0.46117919        -0.37779383
## 27  -0.14042416        -0.24416040    -0.28368767        -0.47537773
## 28  -0.11476746        -0.36416334    -0.07641832        -0.93409710
## 29  -0.28368767        -0.43305527    -0.31028376        -0.73567430
## 30   0.62344075        -0.06366298     0.00000000        -1.61367018
## 31  -1.66232963        -2.42690063     0.14042416        -1.77352271
## 32   0.75245638         0.05091800    -0.36416334         0.07641832
## 33   1.91230127         0.65465430    -0.14042416         0.14042416
## 34  -0.20501110        -0.27046566    -0.08918610        -0.85805346
## 35  -0.70271480        -0.65465430    -0.27046566        -0.60806071
## 36   0.19203379         0.14042416    -0.39149488         0.25729077
## 37   0.24416040         0.03818128    -0.03818128         0.08918610
## 38   0.17908874        -0.83980946    -0.02545075        -0.59282318
## 39  -0.06366298        -0.17908874    -0.44005334        -0.24416040
## 40  -0.46117919        -0.40526982    -0.19851827        -0.65465430
## 41   1.05957037         0.59282318    -0.40526982        -0.06366298
## 42  -0.40526982        -0.82184079    -0.10196844        -1.91230127
## 43   2.10223158         0.60806071     0.10196844         0.02545075
## 44  -1.77352271        -2.80216172     0.02545075        -1.83849262
## 45  -1.24481987        -2.10223158     0.83079160        -1.66232963
## 46  -0.16617364        -0.47537773     0.63896971        -0.03818128
## 47   0.20501110        -0.56275157     0.56275157         0.54790615
## 48   0.07641832        -0.14042416     0.57772207        -0.99487522
## 49  -1.08214564        -1.91230127     0.80413364        -2.42690063
## 50   0.33710120         0.21802303     0.47537773         0.12758531
## 51  -0.02545075         0.17908874     0.46117919        -0.07641832
## 52   0.35060018         0.29695946     0.44707302         0.23107198
## 53   0.70271480         0.62344075     0.67050162         0.33710120
## 54  -0.44707302        -0.70271480     0.69459421        -1.71527720
## 55  -1.24481987        -1.99828954     0.85805346        -2.80216172
## 56  -0.75245638        -1.71527720     0.73567430        -0.63896971
## 57   0.06366298         0.15328619     0.51856960         0.59282318
## 58   0.48967276         0.24416040     0.60806071        -0.39149488
## 59  -1.44946373        -2.23555842     0.89542793        -2.23555842
## 60   0.97421613         0.37779383     0.54052868        -0.19203379
## 61   0.29695946         0.08918610     0.76945312        -0.46117919
## 62  -0.21802303        -0.29695946     0.54052868        -0.41912210
## 63   1.10528634         0.63896971     0.48967276         0.10196844
## 64   0.93409710         0.51856960     0.75245638        -0.57772207
## 65  -0.32366339        -0.46117919     0.62344075        -1.52642702
```

```
## 66   0.50406856         0.20501110     0.59282318        -0.71909690
## 67   0.01272434        -0.01272434     0.50406856        -0.76945312
## 68   0.23107198         0.33710120     0.65465430         0.11476746
## 69  -0.10196844        -0.48967276     0.71909690        -0.27046566
## 70  -1.05957037        -1.77352271     0.69459421         0.80413364
## 71  -0.60806071        -0.78667510     0.95396468        -0.89542793
## 72   1.20442230         0.56275157     0.78667510         0.82184079
## 73  -0.71909690        -1.10528634     0.87658763        -1.01596791
## 74   0.63896971         0.50406856     1.01596791        -0.48967276
## 75  -0.57772207        -0.54790615     0.93409710        -0.44707302
## 76  -0.65465430        -1.38024023     0.97421613        -0.29695946
## 77  -0.12758531        -1.15343724     0.99487522        -2.10223158
## 78  -0.43305527        -0.50406856     0.91459156        -0.67050162
## 79  -0.27046566        -0.60806071     0.11476746        -0.28368767
## 80   0.32366339         0.48967276     0.01272434         0.70271480
## 81   0.65465430         0.47537773    -0.01272434        -0.02545075
## 82   0.53318051        -0.02545075     0.03818128         0.53318051
## 83   1.56855670         0.35060018     0.06366298        -0.20501110
## 84  -0.33710120        -0.68651916     0.15328619        -1.44946373
## 85  -0.37779383        -0.44707302     0.07641832        -1.28735798
## 86   0.14042416         0.19203379     0.17908874         0.83980946
## 87  -0.05091800         0.06366298     0.19203379         0.78667510
## 88   0.82184079         0.36416334     0.20501110         0.76945312
## 89  -0.23107198        -0.33710120     0.12758531         0.57772207
## 90   0.73567430         0.25729077    -0.68651916        -0.51856960
## 91  -0.24416040        -0.11476746    -0.80413364        -0.33710120
## 92  -1.34797950        -1.25874673    -0.75245638        -1.10528634
## 93  -1.01596791        -0.73567430    -0.54790615        -0.68651916
## 94  -0.91459156        -0.76945312    -0.85805346         0.63896971
## 95   0.02545075         0.16617364    -0.70271480         0.19203379
## 96   0.56275157         0.53318051    -0.83980946        -0.14042416
## 97  -0.39149488         0.00000000    -0.82184079        -0.08918610
## 98   0.57772207         0.54790615    -0.73567430        -0.12758531
## 99  -0.17908874        -0.28368767     0.83079160        -0.40526982
## 100  1.41400510         0.23107198    -0.76945312        -0.21802303
## 101 -0.82184079        -0.62344075    -0.71909690        -1.34797950
## 102 -1.38024023        -1.28735798    -0.87658763        -1.12903457
## 103 -1.20442230        -1.20442230    -0.57772207        -1.05957037
## 104 -0.87658763        -0.75245638    -0.78667510         0.65465430
## 105 -1.15343724        -1.17854682    -0.53318051        -1.03752256
## 106  0.28368767         0.28368767    -0.51856960         0.41912210
## 107 -0.31028376        -0.20501110     0.40526982         0.32366339
## 108  0.11476746         0.11476746     0.36416334        -0.31028376
## 109 -0.56275157        -0.87658763     0.39149488         0.51856960
## 110  0.47537773         0.44707302     0.37779383         0.29695946
## 111  0.21802303         0.02545075     0.41912210        -0.54790615
## 112 -0.03818128        -0.35060018     0.43305527         0.06366298
## 113 -1.28735798        -1.23113036    -0.65465430        -1.08214564
## 114  0.76945312         0.27046566    -0.56275157         0.73567430
## 115 -1.17854682        -1.66232963    -0.59282318        -0.32366339
## 116 -0.76945312        -0.57772207    -0.60806071        -1.31706374
## 117 -0.95396468        -1.08214564    -0.63896971         0.37779383
## 118 -0.83980946        -0.80413364    -0.67050162         0.47537773
## 119 -0.62344075        -0.71909690    -0.62344075        -0.05091800
## 120  0.37779383        -0.07641832    -1.56855670        -0.53318051
```

```
## 121 -1.03752256        -0.37779383    -1.99828954        -0.36416334
## 122 -2.42690063        -1.56855670    -1.77352271        -1.23113036
## 123 -1.91230127        -0.95396468    -1.31706374        -0.70271480
## 124 -1.71527720        -1.01596791    -2.42690063         0.60806071
## 125 -0.67050162        -0.19203379    -1.61367018         0.17908874
## 126  0.10196844         0.39149488    -2.23555842        -0.16617364
## 127 -1.31706374        -0.31028376    -2.10223158        -0.10196844
## 128  0.16617364         0.40526982    -1.71527720        -0.15328619
## 129 -0.99487522        -0.51856960    -0.95396468        -0.43305527
## 130  1.23113036        -0.08918610    -1.83849262        -0.23107198
## 131 -1.52642702        -0.93409710    -1.66232963        -1.41400510
## 132 -2.80216172        -1.61367018    -2.80216172        -1.25874673
## 133 -2.10223158        -1.48684468    -1.38024023        -1.17854682
## 134 -1.61367018        -0.99487522    -1.91230127         0.62344075
## 135 -1.99828954        -1.44946373    -1.28735798        -1.15343724
## 136 -0.35060018        -0.03818128    -1.25874673         0.40526982
## 137 -1.10528634        -0.41912210    -1.15343724         0.28368767
## 138 -0.59282318        -0.23107198    -1.23113036        -0.35060018
## 139 -1.41400510        -1.05957037    -1.17854682         0.50406856
## 140 -0.08918610         0.12758531    -1.20442230         0.27046566
## 141 -0.51856960        -0.25729077    -1.12903457        -0.56275157
## 142 -0.78667510        -0.59282318    -1.10528634         0.05091800
## 143 -2.23555842        -1.52642702    -1.48684468        -1.20442230
## 144  0.39149488        -0.05091800    -1.34797950         0.71909690
## 145 -1.48684468        -0.91459156    -1.41400510        -1.38024023
## 146 -1.83849262        -1.34797950    -1.44946373         0.36416334
## 147 -1.56855670        -1.03752256    -1.52642702         0.46117919
## 148 -0.47537773         0.70271480     1.66232963        -0.83980946
## 149  1.15343724         1.38024023     1.08214564         1.48684468
## 150  0.87658763         1.28735798     1.05957037         1.34797950
## 151  1.17854682         1.48684468     1.03752256         1.56855670
## 152  1.61367018         2.42690063     1.34797950         1.61367018
## 153  0.40526982         0.87658763     1.39692360        -0.62344075
## 154 -0.89542793         0.68651916     1.71527720        -0.95396468
## 155  0.05091800         0.73567430     1.48684468         0.93409710
## 156  0.95396468         1.23113036     1.15343724         1.77352271
## 157  1.25874673         1.41400510     1.25874673         1.08214564
## 158 -1.12903457         0.67050162     1.83849262        -0.82184079
## 159  1.99828954         1.66232963     1.19138485         1.23113036
## 160  1.08214564         1.20442230     1.56855670         1.01596791
## 161  0.68651916         1.05957037     1.19138485         1.05957037
## 162  2.23555842         2.80216172     1.10528634         1.41400510
## 163  1.83849262         1.91230127     1.52642702         0.95396468
## 164  0.54790615         0.99487522     1.28735798        -0.17908874
## 165  1.28735798         1.34797950     1.23113036         0.87658763
## 166  0.89542793         1.12903457     1.12903457         0.85805346
## 167  1.03752256         1.52642702     1.31706374         1.44946373
## 168  0.80413364         0.97421613     1.44946373         1.17854682
## 169 -0.41912210         0.71909690     1.39692360         2.23555842
## 170  0.31028376         0.82184079     2.10223158         0.68651916
## 171  2.42690063         2.23555842     1.61367018         2.42690063
## 172  0.15328619         0.80413364     1.77352271         0.16617364
## 173  1.48684468         1.83849262     2.80216172         0.99487522
## 174  0.36416334         0.93409710     1.99828954         1.03752256
## 175  0.25729077         0.75245638     2.23555842         1.12903457
```

```
## 176  0.78667510         0.78667510     2.42690063        -0.78667510
## 177  0.41912210         0.95396468     1.91230127         0.91459156
## 178  0.59282318         0.91459156     0.28368767         1.15343724
## 179  1.12903457         1.77352271     0.23107198         1.91230127
## 180  1.52642702         1.71527720     0.21802303         1.38024023
## 181  1.34797950         1.10528634     0.24416040         1.66232963
## 182  2.80216172         1.56855670     0.25729077         1.20442230
## 183  0.51856960         0.89542793     0.31028376        -0.01272434
## 184  0.46117919         1.01596791     0.27046566         0.03818128
## 185  0.99487522         1.31706374     0.32366339         2.80216172
## 186  0.83980946         1.17854682     0.33710120         2.10223158
## 187  1.77352271         1.61367018     0.35060018         1.99828954
## 188  0.67050162         1.03752256     0.29695946         1.71527720
## 189  1.66232963         1.44946373    -0.91459156         0.97421613
## 190  0.60806071         1.08214564    -1.01596791         1.10528634
## 191 -0.97421613         0.76945312    -0.99487522         0.15328619
## 192 -0.29695946         0.85805346    -0.89542793         0.89542793
## 193 -0.07641832         0.83980946    -1.08214564         1.83849262
## 194  0.91459156         1.25874673    -0.93409710         1.52642702
## 195  1.38024023         1.99828954    -1.05957037         1.25874673
## 196  0.44707302         1.15343724    -1.03752256         1.31706374
## 197  1.44946373         2.10223158    -0.97421613         1.28735798
##     Variance_cooc.W.ADC DAVE_cooc.W.ADC DVAR_cooc.W.ADC DENT_cooc.W.ADC
## 1            0.36416334      0.28368767      0.85805346      0.14042416
## 2           -0.21802303     -0.05091800     -0.05091800     -0.10196844
## 3            1.41400510      0.44707302      1.44946373      0.37779383
## 4            0.65465430      0.23107198      0.32366339      0.17908874
## 5            0.15328619      0.33710120      0.29695946      0.25729077
## 6            1.83849262      1.01596791      1.52642702      0.63896971
## 7            0.70271480      0.73567430      0.91459156      0.59282318
## 8           -0.10196844     -0.11476746      0.36416334     -0.17908874
## 9           -0.16617364      0.32366339      0.46117919      0.16617364
## 10           1.34797950      0.68651916      1.61367018      0.56275157
## 11          -0.02545075      0.15328619      0.11476746      0.06366298
## 12           0.57772207      0.39149488      0.57772207      0.31028376
## 13          -0.53318051     -1.56855670     -0.47537773     -1.34797950
## 14           0.05091800     -0.19203379     -0.19203379     -0.28368767
## 15           0.25729077     -0.75245638     -0.39149488     -0.75245638
## 16          -0.14042416      0.05091800      0.31028376      0.01272434
## 17          -0.41912210     -0.06366298     -0.10196844     -0.14042416
## 18           0.16617364      0.37779383      0.53318051      0.29695946
## 19           0.68651916      0.35060018      1.05957037      0.28368767
## 20           0.85805346      0.36416334      0.59282318      0.32366339
## 21           0.43305527      0.06366298      0.33710120      0.08918610
## 22          -0.15328619     -0.65465430     -0.56275157     -0.73567430
## 23          -1.61367018     -1.71527720     -1.28735798     -1.71527720
## 24           0.47537773      0.10196844      0.20501110      0.07641832
## 25          -0.60806071     -1.12903457     -1.31706374     -1.08214564
## 26           0.44707302      0.47537773      0.67050162      0.44707302
## 27           0.78667510      0.19203379      0.21802303      0.10196844
## 28          -0.06366298     -0.17908874     -0.14042416     -0.25729077
## 29           0.40526982      0.12758531      0.06366298      0.02545075
## 30          -1.71527720     -1.77352271     -1.41400510     -1.77352271
## 31          -0.65465430     -0.71909690     -0.87658763     -0.97421613
## 32           0.53318051      0.31028376      0.68651916      0.27046566
```

```
## 33          0.93409710      0.43305527      0.76945312      0.40526982
## 34          0.33710120     -0.35060018     -0.50406856     -0.44707302
## 35         -0.07641832      0.24416040     -0.01272434      0.11476746
## 36          0.82184079      0.41912210      0.65465430      0.35060018
## 37          1.28735798      0.75245638      1.41400510      0.60806071
## 38          0.83980946      0.50406856      1.08214564      0.41912210
## 39          0.48967276      0.29695946      0.51856960      0.24416040
## 40         -1.17854682     -1.28735798     -0.85805346     -1.28735798
## 41          0.67050162     -0.32366339     -0.25729077     -0.32366339
## 42         -0.80413364     -0.70271480     -0.57772207     -0.71909690
## 43          0.91459156      0.40526982      0.63896971      0.36416334
## 44         -0.67050162     -0.73567430     -0.89542793     -0.99487522
## 45         -0.85805346     -1.17854682     -1.20442230     -1.25874673
## 46          0.28368767      0.08918610      0.44707302      0.12758531
## 47          1.71527720      1.15343724      2.10223158      0.65465430
## 48         -0.29695946     -0.63896971     -0.76945312     -0.59282318
## 49         -1.41400510     -1.31706374     -1.44946373     -1.38024023
## 50          0.17908874     -0.37779383     -0.28368767     -0.33710120
## 51          0.08918610     -0.57772207     -0.35060018     -0.41912210
## 52          0.62344075      0.02545075      0.24416040     -0.02545075
## 53          1.38024023      0.53318051      0.89542793      0.50406856
## 54         -1.20442230     -1.61367018     -1.48684468     -1.44946373
## 55         -1.77352271     -1.66232963     -1.52642702     -1.66232963
## 56         -0.08918610      0.48967276      0.47537773      0.33710120
## 57          0.32366339     -0.10196844     -0.15328619     -0.12758531
## 58          0.89542793      0.46117919      1.23113036      0.46117919
## 59         -1.10528634     -0.83980946     -0.82184079     -1.05957037
## 60          0.37779383      0.03818128      0.62344075      0.03818128
## 61          0.76945312      0.57772207      0.80413364      0.54790615
## 62         -0.19203379     -0.29695946      0.03818128     -0.21802303
## 63          0.99487522      0.16617364      0.60806071      0.20501110
## 64         -2.42690063     -2.80216172     -2.42690063     -2.42690063
## 65         -0.46117919     -1.15343724     -1.08214564     -1.03752256
## 66         -0.51856960     -1.23113036     -1.17854682     -1.12903457
## 67         -0.31028376     -0.39149488     -0.54790615     -0.43305527
## 68          1.48684468      0.76945312      1.38024023      0.62344075
## 69         -0.36416334     -0.20501110      0.27046566     -0.24416040
## 70          0.50406856      0.62344075      0.87658763      0.43305527
## 71         -1.66232963     -1.25874673     -1.38024023     -1.20442230
## 72          1.52642702      0.56275157      1.17854682      0.57772207
## 73         -0.87658763     -0.40526982     -0.59282318     -0.46117919
## 74         -2.80216172     -2.42690063     -2.80216172     -2.10223158
## 75         -1.56855670     -1.20442230     -1.34797950     -1.15343724
## 76         -0.48967276      0.01272434     -0.29695946     -0.11476746
## 77         -1.38024023     -1.34797950     -1.25874673     -1.31706374
## 78         -1.44946373     -1.01596791     -1.10528634     -0.89542793
## 79         -0.37779383     -0.24416040      0.25729077     -0.27046566
## 80          0.46117919     -0.01272434      0.19203379     -0.03818128
## 81         -0.39149488     -0.62344075     -0.27046566     -0.48967276
## 82          0.14042416      0.21802303      0.56275157      0.19203379
## 83         -0.56275157     -0.93409710     -0.99487522     -0.82184079
## 84          0.12758531     -0.41912210      0.16617364     -0.40526982
## 85         -1.23113036     -1.38024023     -1.56855670     -1.41400510
## 86         -0.70271480     -0.99487522      0.07641832     -0.05091800
## 87         -0.54790615     -1.10528634      0.00000000     -0.91459156
```

```
## 88          -1.83849262     -1.83849262     -1.83849262     -1.83849262
## 89          -0.68651916     -1.03752256     -1.23113036      0.39149488
## 90          -1.99828954     -1.99828954     -1.99828954     -1.99828954
## 91          -0.75245638     -0.87658763     -0.93409710     -0.83980946
## 92          -0.95396468     -0.47537773     -0.65465430     -0.56275157
## 93          -1.48684468     -1.05957037     -1.12903457     -1.01596791
## 94           0.02545075     -0.23107198     -0.21802303     -0.08918610
## 95           1.05957037      0.63896971      1.01596791      0.51856960
## 96           0.23107198     -0.78667510     -0.41912210     -0.78667510
## 97           0.07641832     -0.59282318     -0.36416334     -0.47537773
## 98           0.24416040     -0.76945312     -0.40526982     -0.76945312
## 99          -0.17908874     -0.28368767      0.05091800     -0.19203379
## 100         -0.57772207     -0.95396468     -1.01596791     -0.93409710
## 101         -1.28735798     -1.44946373     -1.66232963     -1.52642702
## 102         -0.97421613     -0.48967276     -0.67050162     -0.57772207
## 103         -0.91459156     -0.44707302     -0.62344075     -0.51856960
## 104          0.03818128     -0.21802303     -0.20501110     -0.07641832
## 105         -0.89542793     -0.43305527     -0.60806071     -0.50406856
## 106          1.08214564      0.65465430      1.03752256      0.53318051
## 107          0.31028376      0.20501110      0.41912210      0.21802303
## 108         -0.73567430     -0.85805346     -0.91459156     -0.80413364
## 109         -0.62344075     -0.12758531     -0.51856960     -0.29695946
## 110         -0.11476746     -0.33710120     -0.16617364     -0.31028376
## 111         -0.23107198     -0.67050162     -0.06366298     -0.54790615
## 112          0.56275157      0.27046566      0.39149488      0.23107198
## 113         -0.93409710     -0.46117919     -0.63896971     -0.53318051
## 114         -1.91230127     -1.91230127     -1.91230127     -1.91230127
## 115         -0.50406856      0.00000000     -0.31028376     -0.23107198
## 116         -1.25874673     -1.41400510     -1.61367018     -1.48684468
## 117         -0.43305527     -0.07641832     -0.11476746     -0.20501110
## 118         -0.03818128      0.14042416      0.10196844     -0.01272434
## 119          0.27046566      0.07641832      0.43305527      0.00000000
## 120         -2.23555842     -2.23555842     -2.23555842     -2.80216172
## 121         -0.78667510     -0.91459156     -0.97421613     -1.10528634
## 122         -1.05957037     -0.54790615     -0.73567430     -0.68651916
## 123         -1.52642702     -1.08214564     -1.15343724     -1.23113036
## 124          0.00000000     -0.27046566     -0.24416040     -0.16617364
## 125          1.01596791      0.59282318      0.97421613      0.47537773
## 126          0.20501110     -0.82184079     -0.44707302     -0.87658763
## 127          0.06366298     -0.60806071     -0.37779383     -0.60806071
## 128          0.21802303     -0.80413364     -0.43305527     -0.85805346
## 129         -0.20501110     -0.31028376      0.02545075     -0.35060018
## 130         -0.59282318     -0.97421613     -1.03752256     -1.17854682
## 131         -1.34797950     -1.52642702     -1.77352271     -1.61367018
## 132         -1.08214564     -0.56275157     -0.75245638     -0.70271480
## 133         -1.01596791     -0.51856960     -0.70271480     -0.63896971
## 134          0.01272434     -0.25729077     -0.23107198     -0.15328619
## 135         -0.99487522     -0.50406856     -0.68651916     -0.62344075
## 136          1.03752256      0.60806071      0.99487522      0.48967276
## 137          0.29695946      0.17908874      0.40526982      0.05091800
## 138         -0.76945312     -0.89542793     -0.95396468     -0.95396468
## 139         -0.63896971     -0.14042416     -0.53318051     -0.37779383
## 140         -0.12758531     -0.36416334     -0.17908874     -0.39149488
## 141         -0.24416040     -0.68651916     -0.07641832     -0.67050162
## 142          0.54790615      0.25729077      0.37779383      0.15328619
```

```
## 143         -1.03752256     -0.53318051     -0.71909690     -0.65465430
## 144         -2.10223158     -2.10223158     -2.10223158     -2.23555842
## 145         -1.31706374     -1.48684468     -1.71527720     -1.56855670
## 146         -0.44707302     -0.08918610     -0.12758531     -0.36416334
## 147         -0.05091800      0.11476746      0.08918610     -0.06366298
## 148         -0.32366339      0.71909690     -0.32366339      0.78667510
## 149          1.20442230      1.28735798      0.82184079      1.23113036
## 150          1.12903457      1.12903457      0.75245638      1.17854682
## 151          1.66232963      1.56855670      1.28735798      1.52642702
## 152          2.23555842      1.91230127      1.91230127      1.99828954
## 153         -0.25729077      0.54790615     -0.33710120      0.75245638
## 154         -0.71909690      0.51856960     -0.46117919      0.73567430
## 155          0.95396468      1.83849262      1.48684468      1.71527720
## 156          1.31706374      1.44946373      0.95396468      1.34797950
## 157          1.91230127      1.77352271      2.42690063      1.91230127
## 158         -0.01272434      0.99487522      0.35060018      0.87658763
## 159          1.44946373      1.61367018      1.71527720      1.56855670
## 160          1.77352271      2.10223158      1.77352271      2.23555842
## 161          0.87658763      1.31706374      1.12903457      1.31706374
## 162          1.99828954      1.66232963      1.66232963      1.66232963
## 163         -1.12903457     -0.16617364     -0.83980946      0.67050162
## 164          0.63896971      0.83980946      0.17908874      0.89542793
## 165          0.59282318      0.80413364      0.12758531      0.85805346
## 166          0.80413364      1.25874673      0.54790615      1.15343724
## 167          2.42690063      2.80216172      2.80216172      2.80216172
## 168          0.75245638      1.41400510      1.34797950      1.28735798
## 169          1.61367018      2.23555842      1.83849262      1.83849262
## 170         -0.47537773      0.78667510     -0.08918610      0.82184079
## 171          2.80216172      1.99828954      2.23555842      2.42690063
## 172          0.11476746      1.23113036      0.50406856      1.12903457
## 173         -1.15343724     -0.15328619     -1.05957037      0.68651916
## 174         -0.40526982      0.82184079     -0.03818128      0.83980946
## 175          0.60806071      1.52642702      0.78667510      1.38024023
## 176         -0.28368767      0.70271480     -0.02545075      0.80413364
## 177         -0.33710120      0.91459156      0.15328619      0.95396468
## 178          0.73567430      1.34797950      1.31706374      1.25874673
## 179          1.56855670      1.48684468      1.25874673      1.48684468
## 180          0.71909690      1.08214564      0.83980946      1.08214564
## 181          1.17854682      1.71527720      1.56855670      1.61367018
## 182          0.41912210      0.95396468      0.23107198      0.99487522
## 183          1.15343724      1.20442230      1.20442230      1.20442230
## 184         -0.27046566      0.67050162     -0.48967276      0.76945312
## 185          0.35060018      0.93409710      1.15343724      1.44946373
## 186          0.51856960      0.85805346      1.10528634      0.93409710
## 187         -0.82184079     -0.02545075     -0.78667510      0.71909690
## 188          0.39149488      0.89542793      0.01272434      1.77352271
## 189         -0.83980946     -0.03818128     -0.80413364      0.70271480
## 190          0.19203379      0.97421613      0.28368767      0.97421613
## 191          0.10196844      1.17854682      0.48967276      1.05957037
## 192         -0.35060018      0.87658763      0.14042416      0.91459156
## 193          0.97421613      1.38024023      0.93409710      1.41400510
## 194          2.10223158      2.42690063      1.99828954      2.10223158
## 195          1.23113036      1.03752256      0.70271480      1.01596791
## 196          1.10528634      1.10528634      0.73567430      1.10528634
## 197          1.25874673      1.05957037      0.71909690      1.03752256
```

```
##     SAVE_cooc.W.ADC SVAR_cooc.W.ADC SENT_cooc.W.ADC ASM_cooc.W.ADC
## 1       -0.87658763      0.15328619     -0.23107198     0.03818128
## 2        0.46117919     -0.23107198     -1.34797950    -0.13400197
## 3       -0.91459156      1.41400510      0.59282318    -0.17908874
## 4        0.39149488      0.73567430      0.17908874    -0.41218607
## 5        0.01272434      0.06366298      0.11476746    -0.24416040
## 6        0.70271480      1.83849262     -0.87658763    -0.36416334
## 7        0.56275157      0.44707302     -1.71527720    -0.15328619
## 8        0.44707302     -0.06366298     -1.56855670    -0.08280052
## 9        0.36416334     -0.32366339     -2.23555842    -0.03818128
## 10      -0.75245638      1.20442230      0.62344075    -0.20501110
## 11       0.50406856     -0.02545075     -1.20442230    -0.24416040
## 12      -0.46117919      0.47537773      0.32366339    -0.36416334
## 13      -1.48684468     -0.37779383      0.63896971     0.00000000
## 14       0.65465430      0.12758531     -0.89542793    -0.24416040
## 15      -0.10196844      0.57772207      0.33710120    -0.08280052
## 16       0.31028376     -0.14042416     -1.17854682    -0.24416040
## 17       0.43305527     -0.56275157     -1.44946373    -0.10196844
## 18      -0.24416040      0.01272434      0.37779383    -0.41218607
## 19      -0.97421613      0.65465430      0.68651916    -0.17908874
## 20       0.02545075      0.89542793      0.41912210    -0.46117919
## 21       0.28368767      0.48967276     -0.33710120    -0.33710120
## 22      -1.56855670     -0.08918610     -0.21802303     0.05091800
## 23      -1.99828954     -1.44946373      0.20501110     0.02545075
## 24       0.25729077      0.62344075     -0.46117919    -0.41218607
## 25      -0.80413364     -0.39149488     -1.28735798    -0.13400197
## 26      -0.33710120      0.24416040      0.47537773    -0.46117919
## 27      -0.43305527      0.85805346     -0.76945312    -0.30361487
## 28      -0.93409710      0.05091800      0.05091800    -0.11476746
## 29      -0.73567430      0.41912210     -0.63896971    -0.17908874
## 30      -1.61367018     -1.61367018      0.44707302     0.01272434
## 31      -1.77352271     -0.48967276      0.02545075     0.06366298
## 32       0.10196844      0.35060018      0.53318051    -0.30361487
## 33       0.16617364      0.93409710      0.71909690    -0.49685779
## 34      -0.83980946      0.50406856     -0.51856960    -0.06366298
## 35      -0.60806071     -0.07641832     -0.95396468    -0.28368767
## 36       0.32366339      0.83980946     -0.83980946    -0.41218607
## 37       0.11476746      1.23113036      0.43305527    -0.49685779
## 38      -0.59282318      0.78667510     -0.67050162    -0.01272434
## 39      -0.23107198      0.43305527      0.48967276    -0.32366339
## 40      -0.65465430     -1.34797950      0.40526982    -0.02545075
## 41      -0.05091800      0.80413364      0.60806071    -0.36416334
## 42      -1.91230127     -0.82184079      0.19203379    -0.05091800
## 43       0.05091800      0.95396468      0.76945312    -0.46117919
## 44      -1.83849262     -0.50406856      0.01272434    -0.24416040
## 45      -1.66232963     -0.71909690     -0.03818128     0.80413364
## 46      -0.02545075      0.20501110      0.06366298     0.65465430
## 47       0.54790615      1.44946373     -0.59282318     0.60806071
## 48      -0.99487522     -0.27046566      0.23107198     0.58525594
## 49      -2.42690063     -1.41400510     -0.48967276     0.78667510
## 50       0.15328619      0.33710120     -0.47537773     0.52586102
## 51      -0.06366298      0.28368767      0.73567430     0.52586102
## 52       0.29695946      0.70271480      0.27046566     0.49685779
## 53       0.37779383      1.48684468      0.50406856     0.45411481
## 54      -1.71527720     -1.17854682      0.07641832     0.71088200
```

```
## 55      -2.80216172     -2.42690063     -0.36416334     0.82184079
## 56      -0.63896971     -0.24416040     -0.80413364     0.75245638
## 57       0.57772207      0.36416334     -1.83849262     0.54790615
## 58      -0.35060018      0.91459156      0.21802303     0.58525594
## 59      -2.23555842     -0.89542793     -0.15328619     0.83980946
## 60      -0.17908874      0.31028376      0.78667510     0.62344075
## 61      -0.41912210      0.71909690      0.75245638     0.47537773
## 62      -0.37779383     -0.19203379      0.35060018     0.63896971
## 63       0.12758531      1.28735798      0.65465430     0.49685779
## 64      -0.57772207     -2.23555842     -0.35060018     0.76945312
## 65      -1.52642702     -0.29695946      0.12758531     0.68651916
## 66      -0.71909690     -0.33710120     -0.70271480     0.67050162
## 67      -0.76945312     -0.28368767     -0.27046566     0.56275157
## 68       0.14042416      1.34797950     -0.11476746     0.45411481
## 69      -0.25729077     -0.44707302      0.15328619     0.71088200
## 70       0.73567430      0.14042416     -1.99828954     0.73567430
## 71      -0.89542793     -2.10223158     -0.65465430     0.95396468
## 72       0.82184079      1.61367018      0.10196844     0.85805346
## 73      -1.01596791     -0.93409710      0.00000000     0.89542793
## 74      -0.44707302     -2.80216172     -0.68651916     1.01596791
## 75      -0.40526982     -1.66232963     -1.41400510     0.93409710
## 76      -0.28368767     -0.62344075     -1.66232963     0.97421613
## 77      -2.10223158     -1.38024023      0.16617364     0.99487522
## 78      -0.67050162     -1.48684468     -1.01596791     0.91459156
## 79      -0.27046566     -0.46117919      0.14042416     0.07641832
## 80       0.68651916      0.63896971     -1.38024023     0.08918610
## 81      -0.01272434     -0.36416334     -0.71909690     0.16617364
## 82       0.03818128      0.03818128      0.57772207     0.11476746
## 83      -0.19203379     -0.40526982     -0.73567430     0.12758531
## 84      -1.44946373      0.29695946      0.51856960     0.15328619
## 85      -1.28735798     -1.20442230     -0.29695946     0.14042416
## 86       0.83980946     -0.83980946     -2.80216172     0.19203379
## 87       0.71909690     -0.54790615     -2.42690063     0.17908874
## 88      -0.47537773     -1.71527720     -0.53318051     0.20501110
## 89       0.27046566     -0.47537773     -1.31706374     0.10196844
## 90      -0.50406856     -1.83849262     -0.57772207    -0.68651916
## 91      -0.31028376     -0.67050162     -0.10196844    -0.76945312
## 92      -1.10528634     -1.01596791     -0.07641832    -0.71909690
## 93      -0.68651916     -1.52642702     -1.03752256    -0.54790615
## 94       0.62344075      0.10196844     -0.93409710    -0.85805346
## 95       0.23107198      1.08214564     -0.41912210    -0.82184079
## 96      -0.12758531      0.54790615      0.29695946    -0.83980946
## 97      -0.07641832      0.27046566      0.70271480    -0.80413364
## 98      -0.11476746      0.56275157      0.31028376    -0.73567430
## 99      -0.36416334     -0.17908874      0.36416334     0.87658763
## 100     -0.20501110     -0.41912210     -0.75245638    -0.75245638
## 101     -1.34797950     -1.25874673     -0.32366339    -0.70271480
## 102     -1.12903457     -1.03752256     -0.08918610    -0.87658763
## 103     -1.05957037     -0.97421613     -0.05091800    -0.56275157
## 104      0.63896971      0.11476746     -0.91459156    -0.78667510
## 105     -1.03752256     -0.95396468     -0.01272434    -0.53318051
## 106      0.24416040      1.10528634     -0.40526982    -0.51856960
## 107      0.53318051      0.23107198      0.46117919     0.37779383
## 108      0.76945312     -0.65465430     -0.02545075     0.36416334
## 109      0.80413364     -0.78667510     -1.08214564     0.40526982
```

```
## 110      0.35060018      0.00000000     -0.50406856     0.41912210
## 111     -0.54790615     -0.15328619      0.56275157     0.43305527
## 112      0.08918610      0.60806071     -1.12903457     0.39149488
## 113     -1.08214564     -0.99487522     -0.06366298    -0.62344075
## 114     -0.48967276     -1.77352271     -0.56275157    -0.57772207
## 115     -0.29695946     -0.63896971     -1.77352271    -0.59282318
## 116     -1.31706374     -1.23113036     -0.31028376    -0.60806071
## 117      0.41912210     -0.57772207     -1.48684468    -0.63896971
## 118      0.48967276     -0.03818128     -1.23113036    -0.67050162
## 119     -0.03818128      0.19203379      0.03818128    -0.65465430
## 120     -0.53318051     -1.99828954     -0.62344075    -1.56855670
## 121     -0.32366339     -0.70271480     -0.24416040    -1.83849262
## 122     -1.23113036     -1.12903457     -0.19203379    -1.66232963
## 123     -0.70271480     -1.56855670     -1.05957037    -1.31706374
## 124      0.59282318      0.07641832     -0.99487522    -2.42690063
## 125      0.20501110      1.03752256     -0.44707302    -2.10223158
## 126     -0.15328619      0.51856960      0.24416040    -2.23555842
## 127     -0.08918610      0.25729077      0.67050162    -1.99828954
## 128     -0.14042416      0.53318051      0.25729077    -1.71527720
## 129     -0.39149488     -0.20501110      0.28368767    -0.91459156
## 130     -0.21802303     -0.43305527     -0.78667510    -1.77352271
## 131     -1.41400510     -1.31706374     -0.39149488    -1.61367018
## 132     -1.25874673     -1.15343724     -0.20501110    -2.80216172
## 133     -1.17854682     -1.08214564     -0.16617364    -1.34797950
## 134      0.60806071      0.08918610     -0.97421613    -1.91230127
## 135     -1.15343724     -1.05957037     -0.12758531    -1.28735798
## 136      0.21802303      1.05957037     -0.43305527    -1.25874673
## 137      0.51856960      0.21802303      0.39149488    -1.20442230
## 138      0.75245638     -0.68651916     -0.14042416    -1.23113036
## 139      0.78667510     -0.80413364     -1.10528634    -1.15343724
## 140      0.33710120     -0.01272434     -0.54790615    -1.12903457
## 141     -0.56275157     -0.16617364      0.54790615    -1.10528634
## 142      0.07641832      0.59282318     -1.15343724    -1.17854682
## 143     -1.20442230     -1.10528634     -0.17908874    -1.44946373
## 144     -0.51856960     -1.91230127     -0.60806071    -1.38024023
## 145     -1.38024023     -1.28735798     -0.37779383    -1.41400510
## 146      0.40526982     -0.59282318     -1.61367018    -1.48684468
## 147      0.47537773     -0.05091800     -1.25874673    -1.52642702
## 148     -0.85805346     -0.35060018      1.01596791     1.61367018
## 149      1.56855670      1.31706374      1.03752256     1.16590014
## 150      1.38024023      1.15343724      2.23555842     1.16590014
## 151      1.71527720      1.71527720      1.56855670     1.11708171
## 152      1.77352271      2.42690063      1.77352271     1.04848275
## 153     -0.62344075     -0.21802303      1.31706374     1.43150944
## 154     -0.95396468     -0.87658763      1.08214564     1.66232963
## 155      0.93409710      0.82184079      0.85805346     1.52642702
## 156      1.83849262      1.38024023     -0.85805346     1.20442230
## 157      1.10528634      1.91230127      1.52642702     1.25874673
## 158     -0.82184079     -0.10196844      1.17854682     1.71527720
## 159      1.25874673      1.25874673      2.80216172     1.28735798
## 160      1.03752256      1.77352271      2.42690063     1.08214564
## 161      1.08214564      0.87658763      1.71527720     1.31706374
## 162      1.48684468      2.10223158      1.99828954     1.11708171
## 163      0.95396468     -0.85805346      1.10528634     1.56855670
## 164     -0.16617364      0.75245638      1.38024023     1.38024023
```

```
## 165      0.87658763      0.68651916      0.91459156     1.34797950
## 166      0.85805346      0.76945312      1.15343724     1.23113036
## 167      1.52642702      2.23555842      1.20442230     1.04848275
## 168      1.20442230      0.40526982      1.44946373     1.43150944
## 169      2.23555842      1.01596791     -1.52642702     1.48684468
## 170      0.67050162     -0.76945312      0.95396468     2.10223158
## 171      2.42690063      2.80216172      1.34797950     1.77352271
## 172      0.19203379     -0.11476746      1.28735798     1.83849262
## 173      1.01596791     -0.91459156      0.93409710     2.80216172
## 174      1.05957037     -0.60806071     -0.28368767     1.99828954
## 175      1.15343724      0.17908874     -0.82184079     2.23555842
## 176     -0.78667510     -0.31028376      1.48684468     2.42690063
## 177      0.91459156     -0.51856960      0.82184079     1.91230127
## 178      1.17854682      0.39149488      1.41400510     0.21802303
## 179      1.99828954      1.66232963     -0.25729077     0.23107198
## 180      1.41400510      0.67050162      0.89542793     0.31028376
## 181      1.44946373      0.97421613      1.91230127     0.25729077
## 182      1.23113036      0.46117919      0.87658763     0.27046566
## 183      0.00000000      1.17854682      1.83849262     0.29695946
## 184      0.06366298     -0.25729077      1.12903457     0.28368767
## 185      2.80216172      0.02545075     -2.10223158     0.33710120
## 186      2.10223158      0.32366339     -1.91230127     0.32366339
## 187      0.99487522     -0.73567430      0.99487522     0.35060018
## 188      1.66232963      0.37779383      0.08918610     0.24416040
## 189      0.97421613     -0.75245638      0.97421613    -0.93409710
## 190      1.12903457      0.16617364      1.23113036    -0.99487522
## 191      0.17908874     -0.12758531      1.25874673    -0.95396468
## 192      0.89542793     -0.53318051      0.80413364    -0.89542793
## 193      1.91230127      0.99487522      0.83980946    -1.08214564
## 194      1.61367018      1.99828954      1.05957037    -1.03752256
## 195      1.28735798      1.52642702      1.61367018    -1.05957037
## 196      1.34797950      1.12903457      2.10223158    -1.01596791
## 197      1.31706374      1.56855670      1.66232963    -0.97421613
##     Contrast_cooc.W.ADC Dissimilarity_cooc.W.ADC Inv_diff_cooc.W.ADC
## 1            0.62344075               0.28368767          0.27046566
## 2            0.02545075              -0.05091800         -0.35060018
## 3            1.25874673               0.44707302         -0.23107198
## 4            0.32366339               0.23107198         -0.33710120
## 5            0.46117919               0.33710120         -0.65465430
## 6            1.61367018               1.01596791         -0.99487522
## 7            1.23113036               0.73567430         -0.97421613
## 8            0.10196844              -0.11476746          0.06366298
## 9            0.51856960               0.32366339         -0.71909690
## 10           1.48684468               0.68651916         -0.51856960
## 11           0.20501110               0.15328619         -0.53318051
## 12           0.60806071               0.39149488         -0.67050162
## 13          -0.89542793              -1.56855670          0.60806071
## 14          -0.15328619              -0.19203379         -0.19203379
## 15          -0.67050162              -0.75245638          0.43305527
## 16           0.28368767               0.05091800         -0.28368767
## 17           0.00000000              -0.06366298         -0.39149488
## 18           0.54790615               0.37779383         -0.75245638
## 19           0.80413364               0.35060018         -0.07641832
## 20           0.59282318               0.36416334         -0.40526982
## 21           0.29695946               0.06366298         -0.20501110
```

```
## 22          -0.63896971              -0.65465430          0.00000000
## 23          -1.66232963              -1.71527720          0.59282318
## 24           0.23107198               0.10196844         -0.31028376
## 25          -1.20442230              -1.12903457          0.14042416
## 26           0.78667510               0.47537773         -0.82184079
## 27           0.27046566               0.19203379         -0.32366339
## 28          -0.12758531              -0.17908874         -0.10196844
## 29           0.14042416               0.12758531         -0.41912210
## 30          -1.77352271              -1.77352271          0.63896971
## 31          -0.78667510              -0.71909690          0.20501110
## 32           0.53318051               0.31028376         -0.29695946
## 33           0.76945312               0.43305527         -0.63896971
## 34          -0.32366339              -0.35060018         -0.17908874
## 35           0.16617364               0.24416040         -0.68651916
## 36           0.65465430               0.41912210         -0.50406856
## 37           1.41400510               0.75245638         -0.87658763
## 38           0.95396468               0.50406856         -0.27046566
## 39           0.48967276               0.29695946         -0.44707302
## 40          -1.15343724              -1.28735798          0.39149488
## 41          -0.24416040              -0.32366339         -0.16617364
## 42          -0.75245638              -0.70271480          0.22454273
## 43           0.63896971               0.40526982         -0.43305527
## 44          -0.80413364              -0.73567430          0.15328619
## 45          -1.17854682              -1.17854682          0.40526982
## 46           0.36416334               0.08918610          0.24416040
## 47           1.99828954               1.15343724         -0.80413364
## 48          -0.65465430              -0.63896971          0.22454273
## 49          -1.38024023              -1.31706374          0.53318051
## 50          -0.25729077              -0.37779383          0.19203379
## 51          -0.37779383              -0.57772207          0.29695946
## 52           0.11476746               0.02545075          0.02545075
## 53           0.87658763               0.53318051         -0.25729077
## 54          -1.61367018              -1.61367018          0.56275157
## 55          -1.71527720              -1.66232963          0.57772207
## 56           0.67050162               0.48967276         -0.37779383
## 57          -0.10196844              -0.10196844          0.01272434
## 58           0.97421613               0.46117919          0.12758531
## 59          -0.76945312              -0.83980946          0.48967276
## 60           0.44707302               0.03818128          0.33710120
## 61           0.91459156               0.57772207         -0.36416334
## 62          -0.07641832              -0.29695946          0.32366339
## 63           0.50406856               0.16617364          0.10196844
## 64          -2.42690063              -2.80216172          0.82184079
## 65          -1.08214564              -1.15343724          0.46117919
## 66          -1.12903457              -1.23113036          0.50406856
## 67          -0.43305527              -0.39149488          0.05091800
## 68           1.44946373               0.76945312         -0.59282318
## 69           0.05091800              -0.20501110          0.37779383
## 70           0.93409710               0.62344075         -0.48967276
## 71          -1.28735798              -1.25874673          0.44707302
## 72           1.17854682               0.56275157         -0.14042416
## 73          -0.47537773              -0.40526982          0.16617364
## 74          -2.80216172              -2.42690063          0.83980946
## 75          -1.23113036              -1.20442230          0.47537773
## 76          -0.03818128               0.01272434          0.08918610
```

```
## 77          -1.34797950              -1.34797950          0.54790615
## 78          -0.97421613              -1.01596791          0.41912210
## 79           0.03818128              -0.24416040          0.11476746
## 80           0.08918610              -0.01272434         -0.47537773
## 81          -0.41912210              -0.62344075          0.17908874
## 82           0.47537773               0.21802303         -0.54790615
## 83          -0.91459156              -0.93409710          0.28368767
## 84          -0.11476746              -0.41912210          0.31028376
## 85          -1.41400510              -1.38024023          0.36416334
## 86          -0.44707302              -0.99487522         -0.46117919
## 87          -0.46117919              -1.10528634          0.62344075
## 88          -1.83849262              -1.83849262         -0.93409710
## 89          -1.10528634              -1.03752256         -0.57772207
## 90          -1.99828954              -1.99828954          0.65465430
## 91          -0.83980946              -0.87658763         -0.24416040
## 92          -0.53318051              -0.47537773         -0.76945312
## 93          -0.99487522              -1.05957037         -0.12758531
## 94          -0.17908874              -0.23107198         -2.10223158
## 95           1.05957037               0.63896971         -1.08214564
## 96          -0.70271480              -0.78667510          0.03818128
## 97          -0.39149488              -0.59282318         -0.60806071
## 98          -0.68651916              -0.76945312          0.07641832
## 99          -0.06366298              -0.28368767          0.35060018
## 100         -0.93409710              -0.95396468         -0.21802303
## 101         -1.48684468              -1.44946373         -0.08918610
## 102         -0.54790615              -0.48967276         -0.83980946
## 103         -0.50406856              -0.44707302         -0.70271480
## 104         -0.16617364              -0.21802303         -1.99828954
## 105         -0.48967276              -0.43305527         -0.62344075
## 106          1.08214564               0.65465430         -0.85805346
## 107          0.39149488               0.20501110         -0.02545075
## 108         -0.82184079              -0.85805346         -0.03818128
## 109         -0.28368767              -0.12758531         -0.06366298
## 110         -0.21802303              -0.33710120          0.25729077
## 111         -0.33710120              -0.67050162         -0.15328619
## 112          0.43305527               0.27046566         -0.11476746
## 113         -0.51856960              -0.46117919         -0.73567430
## 114         -1.91230127              -1.91230127         -1.25874673
## 115         -0.05091800               0.00000000         -0.78667510
## 116         -1.44946373              -1.41400510         -0.05091800
## 117         -0.01272434              -0.07641832         -0.91459156
## 118          0.19203379               0.14042416         -0.95396468
## 119          0.35060018               0.07641832         -0.56275157
## 120         -2.23555842              -2.23555842         -0.01272434
## 121         -0.87658763              -0.91459156         -1.38024023
## 122         -0.60806071              -0.54790615         -1.56855670
## 123         -1.01596791              -1.08214564         -1.28735798
## 124         -0.20501110              -0.27046566         -2.80216172
## 125          1.01596791               0.59282318         -1.83849262
## 126         -0.73567430              -0.82184079         -1.05957037
## 127         -0.40526982              -0.60806071         -1.41400510
## 128         -0.71909690              -0.80413364         -1.03752256
## 129         -0.08918610              -0.31028376         -0.89542793
## 130         -0.95396468              -0.97421613         -1.34797950
## 131         -1.56855670              -1.52642702         -1.20442230
```

```
## 132         -0.62344075              -0.56275157         -1.61367018
## 133         -0.57772207              -0.51856960         -1.48684468
## 134         -0.19203379              -0.25729077         -2.42690063
## 135         -0.56275157              -0.50406856         -1.44946373
## 136          1.03752256               0.60806071         -1.66232963
## 137          0.37779383               0.17908874         -1.10528634
## 138         -0.85805346              -0.89542793         -1.12903457
## 139         -0.29695946              -0.14042416         -1.17854682
## 140         -0.23107198              -0.36416334         -1.01596791
## 141         -0.35060018              -0.68651916         -1.31706374
## 142          0.41912210               0.25729077         -1.23113036
## 143         -0.59282318              -0.53318051         -1.52642702
## 144         -2.10223158              -2.10223158         -1.91230127
## 145         -1.52642702              -1.48684468         -1.15343724
## 146         -0.02545075              -0.08918610         -1.71527720
## 147          0.17908874               0.11476746         -1.77352271
## 148         -0.14042416               0.71909690          1.77352271
## 149          0.89542793               1.28735798          1.23113036
## 150          0.85805346               1.12903457          1.28735798
## 151          1.38024023               1.56855670          0.99487522
## 152          1.77352271               1.91230127          0.89542793
## 153         -0.31028376               0.54790615          1.91230127
## 154         -0.36416334               0.51856960          1.99828954
## 155          1.71527720               1.83849262          0.85805346
## 156          1.12903457               1.44946373          0.97421613
## 157          2.10223158               1.77352271          1.15343724
## 158          0.40526982               0.99487522          1.66232963
## 159          1.52642702               1.61367018          1.38024023
## 160          1.83849262               2.10223158          0.87658763
## 161          1.15343724               1.31706374          1.34797950
## 162          1.66232963               1.66232963          1.10528634
## 163         -1.25874673              -0.16617364          2.42690063
## 164          0.21802303               0.83980946          1.56855670
## 165          0.12758531               0.80413364          1.71527720
## 166          0.75245638               1.25874673          1.03752256
## 167          2.80216172               2.80216172          0.71909690
## 168          1.31706374               1.41400510          1.44946373
## 169          1.91230127               2.23555842          0.76945312
## 170          0.06366298               0.78667510          1.52642702
## 171          2.42690063               1.99828954          0.93409710
## 172          0.70271480               1.23113036          1.17854682
## 173         -1.31706374              -0.15328619          2.80216172
## 174          0.07641832               0.82184079          1.61367018
## 175          1.20442230               1.52642702          1.08214564
## 176          0.01272434               0.70271480          1.83849262
## 177          0.25729077               0.91459156          1.48684468
## 178          1.28735798               1.34797950          1.12903457
## 179          1.34797950               1.48684468          0.78667510
## 180          0.82184079               1.08214564          1.20442230
## 181          1.56855670               1.71527720          0.75245638
## 182          0.31028376               0.95396468          1.25874673
## 183          1.10528634               1.20442230          1.31706374
## 184         -0.27046566               0.67050162          1.41400510
## 185          0.73567430               0.93409710          0.80413364
## 186          0.71909690               0.85805346          2.10223158
```

```
## 187         -1.03752256              -0.02545075          0.67050162
## 188          0.15328619               0.89542793          0.73567430
## 189         -1.05957037              -0.03818128          2.23555842
## 190          0.33710120               0.97421613          0.91459156
## 191          0.68651916               1.17854682          0.68651916
## 192          0.24416040               0.87658763          0.95396468
## 193          0.99487522               1.38024023         -2.23555842
## 194          2.23555842               2.42690063          0.51856960
## 195          0.56275157               1.03752256          1.01596791
## 196          0.83980946               1.10528634          0.70271480
## 197          0.57772207               1.05957037          1.05957037
##     Inv_diff_norm_cooc.W.ADC IDM_cooc.W.ADC IDM_norm_cooc.W.ADC
## 1                -0.67050162     0.27046566         -0.87658763
## 2                -0.05091800    -0.54790615         -0.06366298
## 3                -0.36416334    -0.28368767         -0.51856960
## 4                 0.29695946    -0.39149488          0.19203379
## 5                -0.16617364    -0.59282318         -0.16617364
## 6                -0.68651916    -0.91459156         -0.65465430
## 7                -0.89542793    -0.89542793         -0.71909690
## 8                -0.07641832    -0.02545075         -0.21802303
## 9                -0.80413364    -0.71909690         -0.67050162
## 10               -0.33710120    -0.47537773         -0.43305527
## 11               -0.12758531    -0.60806071         -0.11476746
## 12               -0.41912210    -0.65465430         -0.29695946
## 13                0.60806071     0.63896971          0.33710120
## 14                0.27046566    -0.27046566          0.17908874
## 15                0.51856960     0.35060018          0.31028376
## 16               -0.11476746    -0.40526982         -0.17908874
## 17               -0.15328619    -0.62344075         -0.12758531
## 18               -0.31028376    -0.73567430         -0.23107198
## 19               -0.40526982    -0.08918610         -0.46117919
## 20               -0.01272434    -0.35060018         -0.07641832
## 21                0.10196844    -0.24416040          0.00000000
## 22               -0.87658763    -0.10196844         -0.75245638
## 23               -0.02545075     0.54790615         -0.19203379
## 24                0.02545075    -0.44707302         -0.03818128
## 25               -0.60806071    -0.03818128         -0.37779383
## 26               -0.46117919    -0.78667510         -0.31028376
## 27               -0.70271480    -0.46117919         -0.57772207
## 28               -0.63896971    -0.14042416         -0.50406856
## 29               -0.75245638    -0.53318051         -0.60806071
## 30                0.28368767     0.57772207          0.07641832
## 31               -0.91459156     0.03181537         -0.76945312
## 32                0.24416040    -0.41912210          0.06366298
## 33                0.15328619    -0.57772207          0.03818128
## 34               -0.65465430    -0.17908874         -0.41912210
## 35               -1.03752256    -0.70271480         -0.83980946
## 36               -0.25729077    -0.51856960         -0.24416040
## 37               -0.29695946    -0.82184079         -0.28368767
## 38               -1.25874673    -0.23107198         -1.10528634
## 39                0.00000000    -0.56275157         -0.08918610
## 40                0.43305527     0.29695946          0.27046566
## 41                0.33710120    -0.20501110          0.21802303
## 42               -0.83980946     0.05091800         -0.78667510
## 43                0.20501110    -0.36416334          0.12758531
```

```
## 44                -0.95396468    -0.01272434         -0.80413364
## 45                -0.47537773     0.37779383         -0.14042416
## 46                 0.25729077     0.25729077          0.35060018
## 47                -0.57772207    -0.48967276         -0.35060018
## 48                -0.08918610     0.12758531          0.29695946
## 49                -1.12903457     0.53318051         -0.82184079
## 50                 0.46117919     0.15328619          0.51856960
## 51                 0.59282318     0.24416040          0.62344075
## 52                 0.53318051     0.06366298          0.59282318
## 53                 0.39149488    -0.12758531          0.44707302
## 54                -0.28368767     0.59282318         -0.02545075
## 55                -0.99487522     0.56275157         -0.63896971
## 56                -1.05957037    -0.25729077         -0.70271480
## 57                 0.21802303     0.03181537          0.40526982
## 58                 0.05091800     0.28368767          0.14042416
## 59                -0.73567430     0.50406856         -0.44707302
## 60                 0.62344075     0.32366339          0.60806071
## 61                -0.06366298    -0.19203379          0.25729077
## 62                 0.41912210     0.31028376          0.46117919
## 63                 0.54790615     0.14042416          0.53318051
## 64                 0.63896971     0.93409710          0.63896971
## 65                -0.14042416     0.44707302          0.20501110
## 66                 0.19203379     0.48967276          0.37779383
## 67                -0.03818128     0.08918610          0.32366339
## 68                -0.23107198    -0.32366339         -0.01272434
## 69                 0.37779383     0.39149488          0.41912210
## 70                -0.37779383    -0.31028376         -0.10196844
## 71                 0.06366298     0.43305527          0.39149488
## 72                 0.47537773    -0.05091800          0.56275157
## 73                -0.43305527     0.17908874          0.01272434
## 74                 0.65465430     0.95396468          0.65465430
## 75                 0.32366339     0.47537773          0.47537773
## 76                -0.54790615    -0.11476746         -0.15328619
## 77                -0.27046566     0.51856960          0.02545075
## 78                 0.16617364     0.40526982          0.43305527
## 79                 0.07641832     0.01272434         -0.05091800
## 80                 0.08918610    -0.21802303          0.05091800
## 81                 0.12758531     0.07641832          0.11476746
## 82                 0.36416334    -0.29695946          0.24416040
## 83                 0.11476746     0.10196844          0.15328619
## 84                -0.24416040     0.21802303         -0.27046566
## 85                -0.32366339     0.23107198         -0.20501110
## 86                 0.40526982     0.68651916          0.16617364
## 87                 0.35060018     0.67050162          0.08918610
## 88                 0.56275157     0.80413364          0.36416334
## 89                -0.82184079     0.11476746         -0.53318051
## 90                 0.23107198     0.60806071         -0.32366339
## 91                -0.19203379    -0.67050162         -0.47537773
## 92                -1.28735798    -0.99487522         -1.08214564
## 93                -0.53318051    -0.50406856         -0.56275157
## 94                -0.21802303    -0.97421613         -0.54790615
## 95                -0.76945312    -1.17854682         -0.91459156
## 96                 0.14042416    -0.16617364         -0.40526982
## 97                 0.03818128    -0.85805346         -0.39149488
## 98                 0.17908874    -0.15328619         -0.33710120
```

```
## 99                 0.44707302     0.36416334          0.57772207
## 100               -0.35060018    -0.63896971         -0.59282318
## 101               -0.78667510    -0.37779383         -0.89542793
## 102               -1.31706374    -1.01596791         -1.15343724
## 103               -1.17854682    -0.87658763         -0.97421613
## 104               -0.20501110    -0.95396468         -0.48967276
## 105               -1.10528634    -0.80413364         -0.93409710
## 106               -0.44707302    -0.83980946         -0.36416334
## 107                0.01272434     0.00000000          0.23107198
## 108                0.48967276     0.33710120          0.50406856
## 109               -0.10196844    -0.07641832          0.28368767
## 110                0.50406856     0.19203379          0.48967276
## 111                0.57772207     0.46117919          0.54790615
## 112               -0.17908874    -0.06366298          0.10196844
## 113               -1.20442230    -0.93409710         -1.05957037
## 114                0.31028376     0.65465430         -0.25729077
## 115               -1.44946373    -1.15343724         -1.12903457
## 116               -0.71909690    -0.33710120         -0.85805346
## 117               -0.51856960    -1.08214564         -0.68651916
## 118               -0.50406856    -1.05957037         -0.62344075
## 119               -0.48967276    -0.76945312         -0.73567430
## 120               -0.93409710    -0.75245638         -1.28735798
## 121               -1.38024023    -1.52642702         -1.44946373
## 122               -2.42690063    -1.99828954         -2.42690063
## 123               -1.71527720    -1.44946373         -1.56855670
## 124               -1.48684468    -1.91230127         -1.52642702
## 125               -1.83849262    -2.80216172         -1.91230127
## 126               -1.01596791    -1.34797950         -1.41400510
## 127               -1.08214564    -1.66232963         -1.38024023
## 128               -0.97421613    -1.31706374         -1.31706374
## 129               -0.62344075    -1.10528634         -0.95396468
## 130               -1.52642702    -1.48684468         -1.61367018
## 131               -1.91230127    -1.41400510         -1.83849262
## 132               -2.80216172    -2.10223158         -2.80216172
## 133               -2.10223158    -1.71527720         -2.10223158
## 134               -1.41400510    -1.83849262         -1.48684468
## 135               -1.99828954    -1.56855670         -1.99828954
## 136               -1.56855670    -1.61367018         -1.34797950
## 137               -1.15343724    -1.23113036         -1.20442230
## 138               -0.59282318    -1.12903457         -1.01596791
## 139               -1.23113036    -1.28735798         -1.17854682
## 140               -0.56275157    -1.20442230         -1.03752256
## 141               -0.39149488    -1.03752256         -0.99487522
## 142               -1.34797950    -1.25874673         -1.23113036
## 143               -2.23555842    -1.77352271         -2.23555842
## 144               -0.85805346    -0.68651916         -1.25874673
## 145               -1.77352271    -1.38024023         -1.77352271
## 146               -1.66232963    -2.42690063         -1.71527720
## 147               -1.61367018    -2.23555842         -1.66232963
## 148                0.68651916     1.71527720          0.70271480
## 149                1.71527720     1.15343724          1.77352271
## 150                2.10223158     1.25874673          2.23555842
## 151                1.83849262     1.01596791          1.99828954
## 152                1.56855670     0.87658763          1.61367018
## 153                0.87658763     1.83849262          1.01596791
```

```
## 154              0.71909690     1.77352271          0.73567430
## 155              0.70271480     0.76945312          0.71909690
## 156              1.34797950     0.99487522          1.48684468
## 157              1.08214564     1.28735798          1.17854682
## 158              0.76945312     1.61367018          0.82184079
## 159              2.23555842     1.34797950          2.10223158
## 160              1.01596791     0.82184079          1.31706374
## 161              1.66232963     1.31706374          1.66232963
## 162              1.91230127     1.12903457          1.83849262
## 163              2.42690063     2.42690063          2.42690063
## 164              0.99487522     1.48684468          1.25874673
## 165              1.31706374     1.56855670          1.41400510
## 166              1.03752256     1.05957037          1.34797950
## 167              0.93409710     0.71909690          1.03752256
## 168              1.52642702     1.38024023          1.52642702
## 169              0.83980946     0.73567430          0.97421613
## 170              1.10528634     1.44946373          1.44946373
## 171              1.77352271     0.91459156          1.91230127
## 172              0.82184079     1.17854682          1.05957037
## 173              2.80216172     2.80216172          2.80216172
## 174              1.41400510     1.52642702          1.71527720
## 175              0.78667510     0.89542793          0.95396468
## 176              0.89542793     1.66232963          1.08214564
## 177              1.25874673     1.41400510          1.56855670
## 178              1.12903457     0.97421613          0.99487522
## 179              1.15343724     0.78667510          1.10528634
## 180              1.20442230     1.03752256          1.15343724
## 181              1.48684468     0.75245638          1.28735798
## 182              1.17854682     1.08214564          1.20442230
## 183              0.91459156     1.20442230          0.91459156
## 184              0.85805346     1.23113036          0.93409710
## 185              1.61367018     2.10223158          1.23113036
## 186              1.44946373     1.99828954          1.12903457
## 187              1.99828954     2.23555842          1.38024023
## 188              0.73567430     1.10528634          0.78667510
## 189              1.38024023     1.91230127          0.89542793
## 190              0.97421613     0.62344075          0.80413364
## 191              0.67050162     0.16617364          0.67050162
## 192              0.80413364     0.70271480          0.75245638
## 193              0.95396468     0.20501110          0.76945312
## 194              0.75245638    -0.43305527          0.68651916
## 195              1.23113036     0.83980946          0.83980946
## 196              1.05957037     0.41912210          0.85805346
## 197              1.28735798     0.85805346          0.87658763
##     Inv_var_cooc.W.ADC Correlation_cooc.W.ADC Autocorrelation_cooc.W.ADC
## 1           0.24416040            -0.85805346                -0.82184079
## 2          -0.56275157            -0.57772207                 0.60806071
## 3          -0.23107198             0.48967276                -0.80413364
## 4          -0.47537773             0.46117919                 0.65465430
## 5          -0.73567430            -0.60806071                 0.11476746
## 6          -0.89542793             0.59282318                 1.23113036
## 7          -0.95396468            -1.01596791                 0.89542793
## 8           0.08918610            -0.31028376                 0.63896971
## 9          -0.63896971            -1.61367018                 0.50406856
## 10         -0.37779383            -0.03818128                -0.56275157
```

```
## 11         -0.62344075            -0.40526982                 0.71909690
## 12         -0.65465430            -0.37779383                -0.37779383
## 13          0.60806071             0.33710120                -1.41400510
## 14         -0.27046566             0.36416334                 1.01596791
## 15          0.36416334             0.85805346                 0.01272434
## 16         -0.33710120            -0.83980946                 0.41912210
## 17         -0.57772207            -1.23113036                 0.54790615
## 18         -0.76945312            -0.93409710                -0.16617364
## 19         -0.06366298            -0.47537773                -0.87658763
## 20         -0.59282318             0.53318051                 0.15328619
## 21         -0.25729077             0.17908874                 0.40526982
## 22         -0.14042416             0.51856960                -1.52642702
## 23          0.51856960            -0.76945312                -1.99828954
## 24         -0.43305527             0.40526982                 0.39149488
## 25          0.01272434             0.43305527                -0.75245638
## 26         -0.78667510            -0.95396468                -0.25729077
## 27         -0.44707302             0.73567430                -0.33710120
## 28         -0.16617364             0.28368767                -0.85805346
## 29         -0.48967276             0.35060018                -0.59282318
## 30          0.54790615            -0.87658763                -1.61367018
## 31         -0.03818128            -0.01272434                -1.71527720
## 32         -0.46117919            -0.39149488                 0.19203379
## 33         -0.70271480             0.54790615                 0.37779383
## 34         -0.20501110             0.78667510                -0.76945312
## 35         -0.68651916            -0.44707302                -0.54790615
## 36         -0.51856960             0.25729077                 0.62344075
## 37         -0.83980946             0.05091800                 0.27046566
## 38         -0.31028376            -0.35060018                -0.39149488
## 39         -0.50406856            -0.11476746                -0.10196844
## 40          0.23107198            -0.97421613                -0.67050162
## 41         -0.28368767             0.83980946                 0.08918610
## 42          0.05091800            -0.89542793                -1.91230127
## 43         -0.60806071             0.65465430                 0.23107198
## 44         -0.07641832            -0.05091800                -1.77352271
## 45          0.46117919             0.07641832                -1.66232963
## 46          0.25729077            -0.15328619                 0.07641832
## 47         -0.41912210            -0.91459156                 1.03752256
## 48          0.15328619             0.27046566                -0.89542793
## 49          0.56275157            -0.73567430                -2.42690063
## 50          0.19203379             0.68651916                 0.28368767
## 51          0.20501110             0.70271480                 0.05091800
## 52          0.06366298             0.63896971                 0.48967276
## 53         -0.21802303             0.76945312                 0.73567430
## 54          0.57772207             0.01272434                -1.83849262
## 55          0.59282318            -1.17854682                -2.80216172
## 56         -0.17908874            -1.44946373                -0.60806071
## 57          0.02545075             0.57772207                 1.05957037
## 58          0.27046566             0.10196844                -0.15328619
## 59          0.53318051            -0.70271480                -2.23555842
## 60          0.32366339            -0.16617364                -0.05091800
## 61         -0.35060018            -0.53318051                -0.35060018
## 62          0.31028376            -0.29695946                -0.31028376
## 63          0.16617364             0.87658763                 0.31028376
## 64          0.99487522            -0.06366298                -0.57772207
## 65          0.44707302             0.62344075                -1.48684468
```

```
## 66          0.48967276             0.60806071                -0.62344075
## 67          0.03818128            -0.02545075                -0.73567430
## 68         -0.39149488             0.24416040                 0.29695946
## 69          0.35060018            -1.05957037                -0.17908874
## 70         -0.12758531            -1.08214564                 1.25874673
## 71          0.47537773            -1.66232963                -0.83980946
## 72         -0.02545075             0.67050162                 1.41400510
## 73          0.14042416            -1.10528634                -0.93409710
## 74          1.01596791            -0.12758531                -0.43305527
## 75          0.43305527            -1.48684468                -0.36416334
## 76         -0.05091800            -1.20442230                -0.27046566
## 77          0.50406856            -0.80413364                -2.10223158
## 78          0.40526982            -1.71527720                -0.68651916
## 79          0.00000000            -1.12903457                -0.19203379
## 80         -0.24416040             0.50406856                 1.12903457
## 81          0.07641832            -0.48967276                 0.10196844
## 82         -0.32366339            -0.63896971                 0.14042416
## 83          0.10196844             0.15328619                -0.11476746
## 84          0.21802303             0.44707302                -1.17854682
## 85          0.29695946            -0.24416040                -1.20442230
## 86          0.68651916            -1.03752256                 1.38024023
## 87          0.65465430            -0.78667510                 1.15343724
## 88          0.80413364            -0.10196844                -0.47537773
## 89          0.11476746             0.29695946                 0.59282318
## 90          0.63896971            -0.23107198                -0.50406856
## 91         -0.67050162            -0.43305527                -0.21802303
## 92         -0.99487522            -1.38024023                -1.01596791
## 93         -0.36416334            -2.42690063                -0.70271480
## 94         -0.93409710             0.21802303                 0.97421613
## 95         -1.20442230             0.31028376                 0.46117919
## 96         -0.15328619             0.80413364                -0.01272434
## 97         -0.82184079             0.56275157                 0.03818128
## 98         -0.11476746             0.82184079                 0.00000000
## 99          0.37779383            -0.27046566                -0.29695946
## 100        -0.54790615             0.06366298                -0.12758531
## 101        -0.29695946            -0.36416334                -1.25874673
## 102        -1.05957037            -1.41400510                -1.03752256
## 103        -0.91459156            -1.28735798                -0.97421613
## 104        -0.85805346             0.23107198                 0.99487522
## 105        -0.80413364            -1.25874673                -0.95396468
## 106        -0.87658763             0.41912210                 0.47537773
## 107        -0.01272434            -0.19203379                 0.80413364
## 108         0.33710120            -0.20501110                -0.20501110
## 109        -0.10196844            -1.15343724                -0.06366298
## 110         0.17908874             0.32366339                 0.57772207
## 111         0.41912210             0.11476746                -0.40526982
## 112        -0.08918610             0.14042416                 0.21802303
## 113        -0.97421613            -1.31706374                -0.99487522
## 114         0.67050162            -0.21802303                -0.48967276
## 115        -1.12903457            -1.52642702                -0.28368767
## 116        -0.19203379            -0.33710120                -1.23113036
## 117        -1.03752256            -1.34797950                 0.53318051
## 118        -1.08214564            -0.50406856                 0.70271480
## 119        -0.75245638            -0.32366339                 0.06366298
## 120        -0.53318051            -0.59282318                -0.53318051
```

```
## 121        -1.52642702            -0.71909690                -0.24416040
## 122        -1.99828954            -2.10223158                -1.12903457
## 123        -1.44946373            -2.80216172                -0.71909690
## 124        -1.83849262            -0.08918610                 0.93409710
## 125        -2.80216172             0.00000000                 0.43305527
## 126        -1.34797950             0.71909690                -0.03818128
## 127        -1.61367018             0.39149488                 0.02545075
## 128        -1.31706374             0.75245638                -0.02545075
## 129        -1.10528634            -0.62344075                -0.32366339
## 130        -1.48684468            -0.28368767                -0.14042416
## 131        -1.41400510            -0.68651916                -1.31706374
## 132        -2.23555842            -2.23555842                -1.15343724
## 133        -1.77352271            -1.83849262                -1.08214564
## 134        -1.66232963            -0.07641832                 0.95396468
## 135        -1.56855670            -1.77352271                -1.05957037
## 136        -1.71527720             0.08918610                 0.44707302
## 137        -1.23113036            -0.51856960                 0.78667510
## 138        -1.15343724            -0.54790615                -0.23107198
## 139        -1.28735798            -1.56855670                -0.07641832
## 140        -1.17854682             0.02545075                 0.56275157
## 141        -1.01596791            -0.17908874                -0.41912210
## 142        -1.25874673            -0.14042416                 0.20501110
## 143        -1.91230127            -1.91230127                -1.10528634
## 144        -0.40526982            -0.56275157                -0.51856960
## 145        -1.38024023            -0.67050162                -1.28735798
## 146        -2.10223158            -1.99828954                 0.51856960
## 147        -2.42690063            -0.82184079                 0.68651916
## 148         1.71527720             0.93409710                -1.44946373
## 149         1.17854682             1.91230127                 1.48684468
## 150         1.20442230             1.99828954                 1.31706374
## 151         1.03752256             1.77352271                 1.66232963
## 152         0.78667510             2.10223158                 1.77352271
## 153         1.77352271             1.25874673                -0.91459156
## 154         1.83849262             0.12758531                -1.56855670
## 155         0.82184079            -0.41912210                 0.25729077
## 156         0.95396468             1.61367018                 1.91230127
## 157         1.25874673             1.28735798                 0.91459156
## 158         1.66232963             0.95396468                -1.38024023
## 159         1.34797950             1.12903457                 1.10528634
## 160         0.73567430             0.99487522                 0.75245638
## 161         1.31706374             1.05957037                 0.76945312
## 162         1.15343724             2.80216172                 1.56855670
## 163         2.42690063             1.20442230                 0.32366339
## 164         1.48684468             1.71527720                -0.78667510
## 165         1.56855670             1.66232963                 0.24416040
## 166         0.97421613             1.23113036                 0.12758531
## 167         0.70271480             1.38024023                 1.52642702
## 168         1.38024023             0.37779383                 0.87658763
## 169         0.85805346             0.20501110                 2.23555842
## 170         1.52642702            -0.65465430                -0.08918610
## 171         0.91459156             1.83849262                 2.80216172
## 172         1.12903457             0.19203379                -0.44707302
## 173         2.80216172             1.15343724                 0.36416334
## 174         1.44946373            -0.46117919                 0.67050162
## 175         0.89542793             0.03818128                 0.82184079
```

```
## 176         1.61367018             0.89542793                -1.34797950
## 177         1.41400510            -0.75245638                 0.17908874
## 178         0.93409710             0.16617364                 0.85805346
## 179         0.76945312             1.52642702                 1.99828954
## 180         1.05957037             1.01596791                 1.34797950
## 181         0.75245638             0.97421613                 1.44946373
## 182         1.08214564             1.31706374                 1.08214564
## 183         1.23113036             1.48684468                -0.63896971
## 184         1.28735798             1.08214564                -0.65465430
## 185         2.10223158             0.47537773                 2.42690063
## 186         1.99828954             0.91459156                 2.10223158
## 187         2.23555842             1.17854682                 0.35060018
## 188         1.10528634             1.41400510                 1.71527720
## 189         1.91230127             1.10528634                 0.33710120
## 190         0.62344075             1.03752256                 0.83980946
## 191         0.12758531            -0.25729077                -0.46117919
## 192         0.71909690            -0.99487522                 0.16617364
## 193         0.28368767             1.34797950                 1.83849262
## 194        -0.71909690             1.44946373                 1.61367018
## 195         0.83980946             2.23555842                 1.17854682
## 196         0.39149488             1.56855670                 1.28735798
## 197         0.87658763             2.42690063                 1.20442230
##     Tendency_cooc.W.ADC Shade_cooc.W.ADC Prominence_cooc.W.ADC IC1_d.W.ADC
## 1            0.15328619       1.15343724            0.40526982 -1.08214564
## 2           -0.23107198      -1.31706374           -0.10196844 -0.21802303
## 3            1.41400510       2.80216172            2.10223158 -0.40526982
## 4            0.73567430       0.47537773            0.73567430  0.40526982
## 5            0.06366298       0.06366298            0.27046566 -0.39149488
## 6            1.83849262      -1.66232963            1.66232963 -1.23113036
## 7            0.44707302      -1.38024023            0.46117919 -1.05957037
## 8           -0.06366298      -1.71527720            0.20501110 -0.15328619
## 9           -0.32366339      -1.34797950           -0.16617364 -0.97421613
## 10           1.20442230       2.23555842            1.83849262 -0.78667510
## 11          -0.02545075      -1.03752256            0.17908874 -0.01272434
## 12           0.47537773       0.82184079            0.47537773  0.57772207
## 13          -0.37779383       1.05957037            0.44707302  0.97421613
## 14           0.12758531       0.65465430            0.35060018  0.05091800
## 15           0.57772207       1.38024023            0.68651916  0.60806071
## 16          -0.14042416      -1.20442230            0.05091800  0.41912210
## 17          -0.56275157      -0.82184079           -0.43305527  0.11476746
## 18           0.01272434       0.40526982            0.19203379  1.52642702
## 19           0.65465430       1.23113036            0.80413364  0.53318051
## 20           0.89542793      -1.28735798            1.05957037  0.76945312
## 21           0.48967276       0.85805346            0.57772207  0.73567430
## 22          -0.08918610       0.73567430           -0.15328619 -1.34797950
## 23          -1.44946373       0.03818128           -1.10528634  0.99487522
## 24           0.62344075       0.43305527            0.48967276  0.63896971
## 25          -0.39149488      -0.97421613           -0.60806071  0.20501110
## 26           0.24416040       0.05091800            0.39149488  1.56855670
## 27           0.85805346      -0.65465430            0.59282318 -0.68651916
## 28           0.05091800       0.75245638           -0.02545075 -0.35060018
## 29           0.41912210      -0.11476746            0.07641832 -0.57772207
## 30          -1.61367018      -0.14042416           -1.38024023  1.31706374
## 31          -0.48967276       0.39149488           -0.48967276 -1.17854682
## 32           0.35060018       1.48684468            0.97421613  0.87658763
```

```
## 33          0.93409710       0.14042416            1.20442230  0.67050162
## 34          0.50406856      -1.17854682            0.08918610 -1.15343724
## 35         -0.07641832      -1.12903457           -0.14042416 -0.28368767
## 36          0.83980946       0.25729077            0.78667510  0.27046566
## 37          1.23113036      -0.89542793            1.44946373  0.36416334
## 38          0.78667510       0.53318051            0.60806071 -1.56855670
## 39          0.43305527       1.44946373            0.89542793  1.05957037
## 40         -1.34797950      -0.08918610           -0.75245638  0.91459156
## 41          0.80413364      -1.61367018            0.95396468  0.56275157
## 42         -0.82184079       0.12758531           -0.73567430  0.51856960
## 43          0.95396468      -1.10528634            1.17854682  0.65465430
## 44         -0.50406856       0.37779383           -0.50406856 -1.20442230
## 45         -0.71909690       0.24416040           -0.67050162 -0.89542793
## 46          0.20501110       0.97421613            0.54790615 -0.32366339
## 47          1.44946373      -0.35060018            1.56855670 -1.25874673
## 48         -0.27046566       0.08918610           -0.31028376  0.89542793
## 49         -1.41400510      -0.16617364           -1.52642702 -0.99487522
## 50          0.33710120       0.51856960            0.10196844  1.03752256
## 51          0.28368767       0.33710120            0.01272434  1.15343724
## 52          0.70271480       0.41912210            0.70271480  1.01596791
## 53          1.48684468       0.19203379            1.52642702  1.08214564
## 54         -1.17854682      -0.12758531           -1.15343724  0.59282318
## 55         -2.42690063      -0.48967276           -2.80216172 -0.51856960
## 56         -0.24416040      -0.46117919           -0.21802303 -1.41400510
## 57          0.36416334      -1.48684468            0.37779383  0.24416040
## 58          0.91459156       1.61367018            1.15343724  0.62344075
## 59         -0.89542793       0.29695946           -0.68651916 -1.31706374
## 60          0.31028376       1.52642702            1.03752256  2.42690063
## 61          0.71909690      -0.80413364            0.82184079  2.10223158
## 62         -0.19203379       0.68651916           -0.07003923  0.95396468
## 63          1.28735798       1.03752256            1.38024023 -0.11476746
## 64         -2.23555842      -0.50406856           -1.48684468  1.66232963
## 65         -0.29695946       0.48967276           -0.29695946  0.15328619
## 66         -0.33710120       0.36416334           -0.41912210  0.33710120
## 67         -0.28368767      -0.19203379           -0.40526982  1.48684468
## 68          1.34797950       0.20501110            1.48684468  1.12903457
## 69         -0.44707302       0.46117919           -0.24416040 -0.12758531
## 70          0.14042416      -0.67050162            0.28368767 -1.48684468
## 71         -2.10223158      -0.75245638           -2.23555842  1.83849262
## 72          1.61367018       1.71527720            1.77352271  1.61367018
## 73         -0.93409710      -0.20501110           -0.76945312  0.47537773
## 74         -2.80216172      -0.51856960           -2.42690063  1.99828954
## 75         -1.66232963      -0.76945312           -2.10223158  1.77352271
## 76         -0.62344075      -0.99487522           -0.63896971 -0.75245638
## 77         -1.38024023      -0.17908874           -1.41400510 -0.43305527
## 78         -1.48684468      -0.70271480           -1.83849262  2.23555842
## 79         -0.46117919       0.44707302           -0.25729077 -0.37779383
## 80          0.63896971      -1.25874673            0.41912210  0.35060018
## 81         -0.36416334      -0.87658763           -0.27046566  1.91230127
## 82          0.03818128       1.41400510            0.85805346  1.17854682
## 83         -0.40526982       0.02545075           -0.32366339  0.54790615
## 84          0.29695946       1.17854682            0.56275157 -0.71909690
## 85         -1.20442230      -0.39149488           -1.23113036  0.78667510
## 86         -0.83980946      -1.44946373           -0.36416334  0.80413364
## 87         -0.54790615      -1.52642702           -0.17908874  0.68651916
```

```
## 88          -1.71527720      -0.57772207           -1.56855670  1.44946373
## 89          -0.47537773      -1.15343724           -0.57772207 -0.17908874
## 90          -1.83849262      -0.60806071           -1.66232963  0.70271480
## 91          -0.67050162      -0.03818128           -0.53318051  1.34797950
## 92          -1.01596791      -0.25729077           -0.83980946  0.01272434
## 93          -1.52642702      -0.71909690           -1.91230127  1.25874673
## 94           0.10196844       0.62344075            0.32366339 -0.33710120
## 95           1.08214564      -1.83849262            1.31706374 -0.23107198
## 96           0.54790615       1.31706374            0.65465430  0.31028376
## 97           0.27046566       0.32366339            0.00000000  0.37779383
## 98           0.56275157       1.34797950            0.67050162  0.32366339
## 99          -0.17908874       0.70271480           -0.07003923  1.20442230
## 100         -0.41912210       0.01272434           -0.33710120  0.28368767
## 101         -1.25874673      -0.41912210           -1.28735798  0.43305527
## 102         -1.03752256      -0.27046566           -0.85805346 -0.05091800
## 103         -0.97421613      -0.23107198           -0.80413364  0.10196844
## 104          0.11476746       0.63896971            0.33710120 -0.29695946
## 105         -0.95396468      -0.21802303           -0.78667510  0.12758531
## 106          1.10528634      -1.77352271            1.34797950  0.02545075
## 107          0.23107198       1.10528634            0.51856960  0.50406856
## 108         -0.65465430      -0.02545075           -0.51856960  2.80216172
## 109         -0.78667510      -0.91459156           -0.70271480  1.28735798
## 110          0.00000000       0.11476746           -0.11476746  1.38024023
## 111         -0.15328619       1.01596791            0.25729077  1.71527720
## 112          0.60806071       0.28368767            0.23107198 -0.19203379
## 113         -0.99487522      -0.24416040           -0.82184079  0.07641832
## 114         -1.77352271      -0.59282318           -1.61367018  0.75245638
## 115         -0.63896971      -1.01596791           -0.65465430 -1.10528634
## 116         -1.23113036      -0.40526982           -1.25874673  0.44707302
## 117         -0.57772207      -0.83980946           -0.44707302 -0.14042416
## 118         -0.03818128      -1.05957037            0.16617364 -0.24416040
## 119          0.19203379       0.95396468            0.53318051 -0.62344075
## 120         -1.99828954      -0.63896971           -1.77352271  0.00000000
## 121         -0.70271480      -0.06366298           -0.56275157  0.23107198
## 122         -1.12903457      -0.32366339           -0.93409710 -0.65465430
## 123         -1.56855670      -0.73567430           -1.99828954  0.17908874
## 124          0.07641832       0.59282318            0.30361487 -0.87658763
## 125          1.03752256      -1.99828954            1.25874673 -0.80413364
## 126          0.51856960       1.25874673            0.63118620 -0.46117919
## 127          0.25729077       0.31028376           -0.01272434 -0.36416334
## 128          0.53318051       1.28735798            0.63118620 -0.41912210
## 129         -0.20501110       0.67050162           -0.08918610  0.16617364
## 130         -0.43305527       0.00000000           -0.35060018 -0.48967276
## 131         -1.31706374      -0.44707302           -1.34797950 -0.27046566
## 132         -1.15343724      -0.33710120           -0.95396468 -0.67050162
## 133         -1.08214564      -0.29695946           -0.89542793 -0.59282318
## 134          0.08918610       0.60806071            0.30361487 -0.85805346
## 135         -1.05957037      -0.28368767           -0.87658763 -0.54790615
## 136          1.05957037      -1.91230127            1.28735798 -0.63896971
## 137          0.21802303       1.08214564            0.50406856 -0.16617364
## 138         -0.68651916      -0.05091800           -0.54790615  0.71909690
## 139         -0.80413364      -0.93409710           -0.71909690  0.21802303
## 140         -0.01272434       0.10196844           -0.12758531  0.29695946
## 141         -0.16617364       0.99487522            0.24416040  0.39149488
## 142          0.59282318       0.27046566            0.21802303 -0.76945312
```

```
## 143         -1.10528634      -0.31028376           -0.91459156 -0.60806071
## 144         -1.91230127      -0.62344075           -1.71527720  0.06366298
## 145         -1.28735798      -0.43305527           -1.31706374 -0.20501110
## 146         -0.59282318      -0.85805346           -0.46117919 -0.73567430
## 147         -0.05091800      -1.08214564            0.15328619 -0.83980946
## 148         -0.35060018       0.23107198           -0.99487522 -2.10223158
## 149          1.31706374       0.93409710            0.83980946 -0.07641832
## 150          1.15343724       0.78667510            0.76945312 -0.02545075
## 151          1.71527720       0.83980946            1.12903457 -0.08918610
## 152          2.42690063       0.56275157            2.42690063 -0.06366298
## 153         -0.21802303       0.35060018           -0.47537773 -0.53318051
## 154         -0.87658763      -0.07641832           -1.44946373 -1.83849262
## 155          0.82184079      -0.01272434            0.36416334 -2.42690063
## 156          1.38024023      -2.23555842            0.93409710 -1.03752256
## 157          1.91230127       2.10223158            1.71527720 -0.50406856
## 158         -0.10196844       0.71909690           -0.28368767 -2.23555842
## 159          1.25874673       1.99828954            1.61367018  1.41400510
## 160          1.77352271      -0.78667510            1.23113036  1.10528634
## 161          0.87658763       1.20442230            0.71909690 -0.10196844
## 162          2.10223158       1.56855670            1.99828954 -1.38024023
## 163         -0.85805346      -0.10196844           -0.97421613  0.48967276
## 164          0.75245638       0.91459156            0.06366298 -1.12903457
## 165          0.68651916       0.80413364           -0.05091800 -0.93409710
## 166          0.76945312       0.17908874           -0.03818128  0.25729077
## 167          2.23555842       0.57772207            2.23555842 -0.03818128
## 168          0.40526982       0.89542793            0.14042416 -1.44946373
## 169          1.01596791      -0.47537773            0.87658763 -2.80216172
## 170         -0.76945312      -0.56275157           -1.17854682  0.83980946
## 171          2.80216172       2.42690063            2.80216172  0.46117919
## 172         -0.11476746       0.16617364           -0.37779383 -0.70271480
## 173         -0.91459156      -0.15328619           -1.20442230  0.93409710
## 174         -0.60806071      -0.68651916           -1.12903457  0.82184079
## 175          0.17908874      -1.23113036           -0.23107198 -1.99828954
## 176         -0.31028376       0.21802303           -0.62344075 -1.77352271
## 177         -0.51856960      -0.53318051           -1.05957037  1.23113036
## 178          0.39149488       0.87658763            0.12758531 -1.71527720
## 179          1.66232963      -1.56855670            0.99487522 -0.91459156
## 180          0.67050162      -0.95396468            0.11476746  0.85805346
## 181          0.97421613       1.91230127            1.41400510  0.03818128
## 182          0.46117919       0.54790615            0.03818128 -0.56275157
## 183          1.17854682       1.66232963            1.01596791 -1.91230127
## 184         -0.25729077       0.07641832           -0.59282318 -0.31028376
## 185          0.02545075      -2.10223158            0.02545075 -0.25729077
## 186          0.32366339      -2.42690063            0.43305527 -0.47537773
## 187         -0.73567430      -0.36416334           -1.01596791  0.19203379
## 188          0.37779383      -1.41400510           -0.20501110 -1.52642702
## 189         -0.75245638      -0.37779383           -1.03752256 -0.44707302
## 190          0.16617364       0.50406856           -0.19203379  0.14042416
## 191         -0.12758531       0.15328619           -0.39149488 -1.28735798
## 192         -0.53318051      -0.54790615           -1.08214564  0.08918610
## 193          0.99487522       1.12903457            0.91459156 -1.66232963
## 194          1.99828954      -2.80216172            1.91230127 -1.61367018
## 195          1.52642702       1.77352271            1.09364279 -1.01596791
## 196          1.12903457       0.76945312            0.75245638 -0.82184079
## 197          1.56855670       1.83849262            1.09364279 -0.95396468
```

```
##     IC2_d.W.ADC Coarseness_vdif.W.ADC Contrast_vdif.W.ADC Busyness_vdif.W.ADC
## 1    0.48967276            0.35060018          1.83849262         -0.41912210
## 2    0.19203379            0.06366298          0.23107198         -0.82184079
## 3    0.28368767           -0.19203379          0.73567430         -0.05091800
## 4   -0.11476746           -0.31028376         -0.25729077         -0.39149488
## 5    0.25729077           -0.03818128          0.46117919         -0.63896971
## 6    0.60806071           -0.07641832          1.23113036         -0.83980946
## 7    0.51856960            0.08918610          1.08214564         -0.85805346
## 8    0.16617364           -0.06366298          0.27046566         -0.76945312
## 9    0.41912210            0.39149488          1.20442230         -0.78667510
## 10   0.47537773           -0.05091800          1.17854682         -0.46117919
## 11   0.11476746           -0.11476746          0.03818128         -0.71909690
## 12  -0.35060018           -0.29695946          0.21802303          0.01908716
## 13  -1.08214564           -0.37779383         -1.23113036          0.93409710
## 14   0.08918610           -0.14042416         -0.35060018         -0.65465430
## 15  -0.50406856           -0.50406856         -0.83980946          0.78667510
## 16  -0.20501110           -0.24416040         -0.27046566         -0.60806071
## 17   0.03818128            0.05091800          0.10196844         -0.70271480
## 18  -1.15343724           -0.41912210         -0.32366339          0.28368767
## 19  -0.33710120           -0.35060018          0.48967276          0.71909690
## 20  -0.53318051           -0.48967276         -0.23107198          0.27046566
## 21  -0.54790615           -0.39149488         -0.53318051         -0.15328619
## 22   0.54790615            1.17854682          1.41400510         -0.59282318
## 23  -1.12903457           -0.21802303         -1.38024023          0.80413364
## 24  -0.40526982           -0.33710120         -0.43305527         -0.23107198
## 25  -0.08918610            0.00000000         -0.37779383         -0.29031717
## 26  -1.31706374           -0.45411481         -0.01272434          0.56275157
## 27   0.39149488            0.03818128          0.78667510         -0.48967276
## 28   0.23107198            0.02545075          0.43305527         -0.20501110
## 29   0.35060018            0.07641832          0.71909690         -0.53318051
## 30  -1.41400510           -0.23107198         -1.56855670          0.63896971
## 31   0.44707302            1.31706374          1.48684468         -0.36416334
## 32  -0.78667510           -0.36416334         -0.60806071         -0.27046566
## 33  -0.46117919           -0.47537773         -0.41912210          0.03818128
## 34   0.56275157            0.44707302          0.60806071         -0.75245638
## 35   0.24416040           -0.01272434          0.24416040         -0.51856960
## 36   0.00000000           -0.28368767          0.20501110         -0.40526982
## 37  -0.07641832           -0.40526982          0.50406856         -0.08918610
## 38   0.59282318            0.37779383          1.61367018         -0.67050162
## 39  -0.85805346           -0.43305527         -0.65465430          0.19203379
## 40  -0.97421613           -0.15328619         -0.78667510         -0.21802303
## 41  -0.29695946           -0.51856960         -0.80413364          0.40526982
## 42  -0.51856960           -0.10196844          0.07641832          0.73567430
## 43  -0.32366339           -0.45411481         -0.28368767          0.06366298
## 44   0.43305527            1.28735798          1.44946373         -0.44707302
## 45   0.46117919            1.61367018          1.31706374          0.05091800
## 46   0.36416334            0.63896971          0.63896971         -0.14042416
## 47   0.65465430            0.71909690          1.66232963         -0.25729077
## 48  -0.36416334            0.51856960         -0.36416334          0.68651916
## 49   0.50406856            1.71527720          1.01596791          0.11476746
## 50  -0.39149488            0.32366339         -0.59282318          0.37779383
## 51  -0.47537773            0.31028376         -0.62344075          0.53318051
## 52  -0.31028376            0.29695946         -0.68651916          0.31028376
## 53  -0.19203379            0.27046566         -0.10196844          0.62344075
## 54  -0.15328619            0.67050162         -0.63896971          0.76945312
```

```
## 55   0.29695946            1.56855670          0.87658763          0.44707302
## 56   0.62344075            1.12903457          1.91230127         -0.17908874
## 57   0.15328619            0.53318051         -0.12758531         -0.12758531
## 58  -0.05091800            0.36416334          0.76945312          0.59282318
## 59   0.57772207            1.77352271          1.56855670          0.01908716
## 60  -1.66232963            0.21802303         -1.48684468          1.25874673
## 61  -1.20442230            0.25729077          0.28368767          1.31706374
## 62  -0.48967276            0.46117919         -0.48967276          0.24416040
## 63   0.37779383            0.48967276         -0.02545075         -0.02545075
## 64  -1.17854682            0.33710120         -2.23555842          0.75245638
## 65   0.14042416            0.70271480         -0.20501110          0.41912210
## 66   0.06366298            0.60806071         -0.33710120          0.16617364
## 67  -0.76945312            0.41912210         -0.57772207          0.54790615
## 68  -0.21802303            0.28368767          0.59282318          0.67050162
## 69   0.27046566            0.73567430          0.41912210         -0.11476746
## 70   0.63896971            1.08214564          2.10223158         -0.29031717
## 71  -1.34797950            0.68651916         -0.97421613          0.47537773
## 72  -0.63896971            0.50406856         -0.56275157          0.95396468
## 73  -0.01272434            0.75245638          0.02545075          0.35060018
## 74  -1.48684468            0.54790615         -1.83849262          0.91459156
## 75  -1.25874673            0.65465430         -1.01596791          0.32366339
## 76   0.53318051            1.05957037          0.91459156         -0.06366298
## 77   0.31028376            1.15343724          0.14042416          0.39149488
## 78  -1.52642702            0.62344075         -0.75245638          0.46117919
## 79   0.20501110            0.14042416          0.40526982         -0.56275157
## 80  -0.03818128           -0.12758531         -0.21802303         -0.35060018
## 81  -1.99828954           -0.32366339         -1.61367018          1.77352271
## 82  -0.87658763           -0.25729077         -0.70271480         -0.16617364
## 83  -0.43305527           -0.08918610         -0.99487522         -0.24416040
## 84   0.40526982            0.24416040          0.65465430         -0.19203379
## 85  -0.82184079            0.01272434         -0.82184079          0.15328619
## 86  -0.83980946           -0.17908874         -0.73567430         -0.33710120
## 87  -0.70271480           -0.16617364         -0.76945312         -0.32366339
## 88  -1.38024023           -0.27046566         -1.91230127          0.48967276
## 89   0.17908874            0.16617364          0.01272434         -0.31028376
## 90  -1.61367018           -0.85805346         -2.10223158         -0.07641832
## 91  -2.10223158           -0.89542793         -1.66232963          0.50406856
## 92  -0.23107198           -0.63896971         -0.07641832         -0.87658763
## 93  -1.71527720           -0.62344075         -0.85805346         -0.47537773
## 94   0.01272434           -0.78667510         -0.40526982         -1.12903457
## 95   0.07641832           -0.80413364          0.36416334         -0.95396468
## 96  -0.62344075           -0.91459156         -0.93409710          0.08918610
## 97  -0.71909690           -0.83980946         -0.67050162         -0.43305527
## 98  -0.59282318           -0.87658763         -0.91459156          0.14042416
## 99  -0.44707302            0.57772207         -0.47537773          0.33710120
## 100 -0.56275157           -0.75245638         -1.08214564         -0.91459156
## 101 -0.93409710           -0.70271480         -0.89542793         -0.50406856
## 102 -0.25729077           -0.68651916         -0.08918610         -0.89542793
## 103 -0.16617364           -0.56275157         -0.05091800         -0.73567430
## 104  0.02545075           -0.73567430         -0.39149488         -1.08214564
## 105 -0.12758531           -0.54790615         -0.03818128         -0.57772207
## 106  0.12758531           -0.53318051          0.37779383         -0.62344075
## 107 -0.02545075            0.43305527          0.11476746          0.21802303
## 108 -1.77352271            0.17908874         -1.52642702          1.08214564
## 109 -0.73567430            0.47537773         -0.24416040          0.12758531
```

```
## 110 -0.75245638            0.23107198         -0.95396468          0.25729077
## 111 -1.10528634            0.19203379         -1.20442230          0.87658763
## 112  0.33710120            0.59282318          0.67050162         -0.10196844
## 113 -0.17908874           -0.59282318         -0.06366298         -0.80413364
## 114 -1.56855670           -0.76945312         -1.99828954         -0.01272434
## 115  0.32366339           -0.20501110          0.89542793         -1.05957037
## 116 -0.89542793           -0.67050162         -0.87658763         -0.37779383
## 117 -0.06366298           -0.57772207          0.08918610         -1.01596791
## 118  0.05091800           -0.65465430          0.00000000         -1.03752256
## 119  0.21802303           -0.60806071          0.57772207         -0.97421613
## 120 -1.91230127           -2.10223158         -2.80216172         -1.34797950
## 121 -2.80216172           -2.42690063         -1.77352271         -0.93409710
## 122 -0.67050162           -1.44946373         -0.17908874         -1.77352271
## 123 -2.23555842           -1.41400510         -1.03752256         -1.48684468
## 124 -0.28368767           -1.83849262         -0.51856960         -2.80216172
## 125 -0.14042416           -1.91230127          0.29695946         -1.99828954
## 126 -0.99487522           -2.80216172         -1.15343724         -1.25874673
## 127 -1.01596791           -1.99828954         -0.71909690         -1.44946373
## 128 -0.95396468           -2.23555842         -1.12903457         -1.20442230
## 129 -0.80413364           -0.99487522         -0.54790615         -1.10528634
## 130 -0.91459156           -1.71527720         -1.25874673         -1.91230127
## 131 -1.28735798           -1.61367018         -1.10528634         -1.52642702
## 132 -0.68651916           -1.56855670         -0.19203379         -1.83849262
## 133 -0.60806071           -1.31706374         -0.15328619         -1.66232963
## 134 -0.27046566           -1.66232963         -0.50406856         -2.42690063
## 135 -0.57772207           -1.28735798         -0.14042416         -1.56855670
## 136 -0.10196844           -1.25874673          0.31028376         -1.61367018
## 137 -0.37779383           -1.12903457          0.06366298         -1.17854682
## 138 -2.42690063           -1.23113036         -1.71527720          0.00000000
## 139 -1.03752256           -1.10528634         -0.29695946         -1.23113036
## 140 -1.05957037           -1.17854682         -1.17854682         -1.15343724
## 141 -1.44946373           -1.20442230         -1.34797950         -0.68651916
## 142  0.10196844           -0.97421613          0.54790615         -1.38024023
## 143 -0.65465430           -1.38024023         -0.16617364         -1.71527720
## 144 -1.83849262           -1.77352271         -2.42690063         -1.31706374
## 145 -1.23113036           -1.52642702         -1.05957037         -1.41400510
## 146 -0.41912210           -1.34797950          0.05091800         -2.10223158
## 147 -0.24416040           -1.48684468         -0.11476746         -2.23555842
## 148  1.99828954            2.42690063          1.99828954          0.99487522
## 149  1.12903457            0.93409710          0.62344075          1.20442230
## 150  1.08214564            0.91459156          0.56275157          1.52642702
## 151  1.15343724            0.89542793          0.47537773          1.12903457
## 152  1.23113036            0.85805346          0.95396468          1.66232963
## 153  1.25874673            1.41400510          0.53318051          1.91230127
## 154  1.71527720            2.23555842          1.71527720          1.34797950
## 155  2.42690063            1.99828954          2.42690063          0.57772207
## 156  1.52642702            1.20442230          0.93409710          0.65465430
## 157  1.28735798            0.97421613          1.52642702          1.61367018
## 158  2.23555842            2.80216172          2.23555842          0.89542793
## 159  0.71909690            0.80413364         -0.31028376          2.23555842
## 160  0.83980946            0.83980946          1.12903457          2.42690063
## 161  1.05957037            1.01596791          0.75245638          1.10528634
## 162  1.83849262            1.03752256          0.99487522          0.85805346
## 163  0.85805346            0.95396468         -1.44946373          1.83849262
## 164  1.48684468            1.48684468          0.85805346          1.28735798
```

```
## 165  1.41400510            1.25874673          0.82184079          1.05957037
## 166  0.93409710            0.99487522          0.68651916          1.56855670
## 167  1.20442230            0.87658763          1.34797950          1.71527720
## 168  1.66232963            1.52642702          1.28735798          0.70271480
## 169  2.80216172            1.91230127          2.80216172          0.36416334
## 170  0.80413364            1.44946373          0.16617364          1.41400510
## 171  0.99487522            1.10528634          0.70271480          2.10223158
## 172  1.34797950            1.66232963          1.05957037          1.17854682
## 173  0.76945312            1.23113036         -1.28735798          1.99828954
## 174  0.82184079            1.38024023          0.12758531          1.15343724
## 175  2.10223158            1.83849262          1.77352271          0.83980946
## 176  1.77352271            2.10223158          1.10528634          1.23113036
## 177  0.75245638            1.34797950          0.35060018          1.38024023
## 178  1.61367018            0.76945312          1.25874673         -0.03818128
## 179  1.31706374            0.20501110          0.83980946          0.17908874
## 180  0.68651916           -0.02545075         -0.44707302          2.80216172
## 181  0.87658763            0.11476746          0.44707302          0.60806071
## 182  1.10528634            0.40526982          0.15328619          0.43305527
## 183  1.91230127            0.82184079          1.38024023          0.51856960
## 184  0.91459156            0.56275157          0.32366339          1.03752256
## 185  0.89542793            0.12758531          0.39149488          0.20501110
## 186  0.97421613            0.15328619          0.33710120          0.23107198
## 187  0.78667510            0.10196844         -1.31706374          1.44946373
## 188  1.56855670            0.78667510          1.03752256          0.29695946
## 189  0.73567430           -1.03752256         -1.41400510          0.82184079
## 190  0.67050162           -1.08214564         -0.46117919          1.48684468
## 191  1.17854682           -0.82184079          0.97421613         -0.54790615
## 192  0.70271480           -0.71909690          0.25729077          0.07641832
## 193  1.38024023           -0.93409710          0.80413364         -1.28735798
## 194  1.44946373           -0.95396468          1.15343724         -0.99487522
## 195  1.01596791           -1.15343724          0.17908874          0.97421613
## 196  0.95396468           -1.01596791          0.51856960          0.10196844
## 197  1.03752256           -1.05957037          0.19203379          1.01596791
##     Complexity_vdif.W.ADC Strength_vdif.W.ADC SRE_align.W.ADC LRE_align.W.ADC
## 1             -0.54790615          1.34797950     -0.40526982     -0.16617364
## 2             -0.20501110          0.71909690     -0.02545075     -0.60806071
## 3              0.68651916          1.28735798     -0.17908874     -0.33710120
## 4              0.51856960          0.05091800     -0.29695946     -0.29695946
## 5              0.16617364          0.65465430     -0.03818128     -0.48967276
## 6              1.17854682          1.23113036      0.10196844     -0.87658763
## 7              0.19203379          1.03752256      0.07641832     -0.83980946
## 8             -0.16617364          0.50406856     -0.35060018     -0.27046566
## 9             -0.65465430          0.91459156      0.11476746     -0.93409710
## 10             0.87658763          1.61367018     -0.19203379     -0.39149488
## 11             0.15328619          0.59282318      0.02545075     -0.67050162
## 12             0.43305527         -0.40526982     -0.07641832     -0.56275157
## 13            -0.06366298         -0.05091800     -0.63896971      0.54790615
## 14             0.07641832          0.46117919     -0.12758531     -0.50406856
## 15             0.37779383         -1.08214564     -0.57772207      0.43305527
## 16             0.31028376          0.21802303     -0.16617364     -0.46117919
## 17            -0.41912210          0.28368767      0.03818128     -0.65465430
## 18             0.63896971         -1.23113036     -0.08918610     -0.53318051
## 19             0.53318051         -0.14042416     -0.44707302     -0.02545075
## 20             0.93409710         -1.01596791     -0.50406856      0.03818128
## 21             0.60806071         -0.47537773     -0.33710120     -0.25729077
```

```
## 22          -1.66232963          1.99828954     -0.25729077     -0.36416334
## 23          -1.44946373         -0.51856960     -0.60806071      0.50406856
## 24           0.48967276         -0.41912210     -0.28368767     -0.31028376
## 25          -1.23113036         -0.39149488     -0.41912210     -0.12758531
## 26           0.75245638         -1.44946373     -0.06366298     -0.57772207
## 27          -0.12758531          0.73567430     -0.11476746     -0.51856960
## 28          -0.48967276          0.48967276     -0.43305527     -0.11476746
## 29          -0.33710120          0.63896971      0.00000000     -0.62344075
## 30          -1.48684468         -0.80413364     -0.62344075      0.51856960
## 31          -1.91230127          1.48684468     -0.39149488     -0.24416040
## 32           0.99487522          0.08918610     -0.37779383     -0.20501110
## 33           1.38024023         -0.50406856     -0.36416334     -0.19203379
## 34          -0.60806071          1.10528634     -0.21802303     -0.35060018
## 35          -0.21802303          0.25729077      0.06366298     -0.78667510
## 36           0.54790615          0.06366298     -0.20501110     -0.40526982
## 37           1.31706374         -0.16617364     -0.15328619     -0.37779383
## 38          -0.29695946          1.25874673      0.01272434     -0.54790615
## 39           1.01596791         -0.68651916     -0.24416040     -0.32366339
## 40          -0.63896971         -0.37779383     -0.54790615      0.14042416
## 41           0.62344075         -1.28735798     -0.51856960     -0.01272434
## 42          -0.89542793         -0.54790615     -0.46117919     -0.06366298
## 43           1.20442230         -0.53318051     -0.53318051      0.05091800
## 44          -1.99828954          1.44946373     -0.47537773     -0.28368767
## 45          -2.23555842          1.15343724      0.47537773     -0.10196844
## 46           0.21802303          0.97421613      0.41912210      0.11476746
## 47           1.28735798          1.77352271      0.60806071     -0.44707302
## 48          -0.51856960         -0.56275157      0.36416334      0.19203379
## 49          -2.42690063          0.93409710      0.29695946      0.24416040
## 50           0.23107198         -0.82184079      0.25729077      0.32366339
## 51           0.01272434         -0.93409710      0.19203379      0.41912210
## 52           0.65465430         -0.62344075      0.32366339      0.21802303
## 53           1.44946373         -0.85805346      0.33710120      0.23107198
## 54          -1.61367018         -0.46117919      0.15328619      0.48967276
## 55          -2.80216172          0.47537773      0.27046566      0.27046566
## 56          -0.62344075          1.38024023      0.62344075     -0.63896971
## 57          -0.03818128          0.23107198      0.44707302      0.07641832
## 58           0.83980946         -0.01272434      0.20501110      0.36416334
## 59          -2.10223158          1.41400510      0.50406856     -0.15328619
## 60           1.41400510         -1.05957037      0.16617364      0.47537773
## 61           0.95396468         -1.52642702      0.43305527      0.15328619
## 62           0.10196844         -0.10196844      0.28368767      0.31028376
## 63           0.73567430          0.62344075      0.40526982      0.08918610
## 64          -1.03752256         -1.41400510     -0.23107198      0.63896971
## 65          -1.01596791          0.14042416      0.23107198      0.33710120
## 66          -0.87658763         -0.15328619      0.21802303      0.35060018
## 67          -0.17908874         -0.97421613      0.39149488      0.12758531
## 68           1.34797950         -0.83980946      0.48967276     -0.03818128
## 69          -0.46117919          0.68651916      0.37779383      0.17908874
## 70          -0.50406856          1.56855670      0.63896971     -0.75245638
## 71          -1.25874673         -1.25874673      0.54790615      0.29695946
## 72           1.99828954         -1.48684468      0.57772207      0.25729077
## 73          -0.68651916         -0.17908874      0.59282318      0.20501110
## 74          -1.52642702         -1.91230127      0.08918610      0.65465430
## 75          -1.05957037         -1.20442230      0.46117919      0.44707302
## 76          -0.91459156          0.85805346      0.65465430     -0.43305527
```

```
## 77          -1.77352271          0.39149488      0.56275157      0.28368767
## 78          -0.95396468         -1.31706374      0.53318051      0.37779383
## 79          -0.47537773          0.67050162     -0.01272434     -0.21802303
## 80           0.59282318         -0.06366298      0.05091800     -0.23107198
## 81          -0.27046566         -2.80216172     -0.31028376      0.10196844
## 82           0.67050162         -0.03818128     -0.10196844     -0.08918610
## 83          -0.56275157         -0.32366339     -0.14042416     -0.05091800
## 84          -0.35060018          1.08214564     -0.27046566      0.01272434
## 85          -1.28735798         -0.57772207     -0.32366339      0.06366298
## 86           0.71909690         -0.67050162     -0.59282318      0.57772207
## 87          -0.05091800         -0.43305527     -0.56275157      0.56275157
## 88          -1.08214564         -1.56855670     -0.65465430      0.62344075
## 89           0.85805346          0.07641832     -0.05091800     -0.07641832
## 90          -1.12903457         -1.66232963     -1.05957037      0.59282318
## 91          -0.10196844         -2.10223158     -0.97421613     -0.41912210
## 92          -0.75245638         -0.23107198     -0.83980946     -0.99487522
## 93          -0.97421613         -1.34797950     -0.70271480     -0.71909690
## 94           0.05091800          0.43305527     -0.85805346     -1.08214564
## 95           1.08214564          0.32366339     -0.82184079     -0.97421613
## 96           0.35060018         -1.12903457     -1.01596791     -0.17908874
## 97           0.00000000         -0.95396468     -0.93409710     -0.73567430
## 98           0.36416334         -1.10528634     -0.99487522     -0.14042416
## 99           0.11476746         -0.08918610      0.51856960      0.39149488
## 100         -0.57772207         -0.33710120     -0.89542793     -0.80413364
## 101         -1.34797950         -0.60806071     -0.95396468     -0.68651916
## 102         -0.76945312         -0.24416040     -0.91459156     -1.03752256
## 103         -0.71909690         -0.20501110     -0.75245638     -0.89542793
## 104          0.06366298          0.44707302     -0.80413364     -1.05957037
## 105         -0.70271480         -0.19203379     -0.67050162     -0.82184079
## 106          1.10528634          0.33710120     -0.48967276     -0.47537773
## 107          0.25729077          0.16617364      0.24416040      0.16617364
## 108          0.82184079         -1.99828954      0.14042416      0.46117919
## 109          1.15343724         -0.87658763      0.35060018      0.00000000
## 110          0.41912210         -0.76945312      0.17908874      0.40526982
## 111          0.46117919         -0.70271480      0.12758531      0.53318051
## 112         -0.14042416          0.54790615      0.31028376      0.02545075
## 113         -0.73567430         -0.21802303     -0.76945312     -0.95396468
## 114         -1.10528634         -1.61367018     -1.03752256      0.60806071
## 115         -0.93409710          0.83980946     -0.68651916     -1.23113036
## 116         -1.31706374         -0.59282318     -0.87658763     -0.59282318
## 117         -0.43305527          0.27046566     -0.71909690     -1.10528634
## 118          0.14042416          0.57772207     -0.73567430     -1.12903457
## 119          0.20501110          0.95396468     -0.78667510     -0.91459156
## 120         -1.17854682         -1.77352271     -2.80216172     -0.76945312
## 121         -0.11476746         -2.42690063     -1.99828954     -1.38024023
## 122         -0.83980946         -0.29695946     -1.56855670     -1.91230127
## 123         -0.99487522         -1.38024023     -1.31706374     -1.52642702
## 124          0.02545075          0.40526982     -1.61367018     -2.23555842
## 125          1.03752256          0.29695946     -1.52642702     -1.83849262
## 126          0.32366339         -1.17854682     -2.23555842     -1.34797950
## 127         -0.01272434         -0.99487522     -1.83849262     -1.56855670
## 128          0.33710120         -1.15343724     -2.10223158     -1.31706374
## 129          0.08918610         -0.12758531     -1.08214564     -1.17854682
## 130         -0.59282318         -0.35060018     -1.71527720     -1.61367018
## 131         -1.41400510         -0.65465430     -1.91230127     -1.48684468
```

```
## 132          -0.85805346         -0.31028376     -1.77352271     -1.99828954
## 133          -0.80413364         -0.27046566     -1.41400510     -1.71527720
## 134           0.03818128          0.41912210     -1.48684468     -2.10223158
## 135          -0.78667510         -0.25729077     -1.28735798     -1.66232963
## 136           1.05957037          0.31028376     -1.25874673     -1.41400510
## 137           0.24416040          0.15328619     -1.15343724     -1.20442230
## 138           0.80413364         -2.23555842     -1.20442230     -1.01596791
## 139           1.12903457         -0.91459156     -1.10528634     -1.28735798
## 140           0.40526982         -0.78667510     -1.17854682     -1.15343724
## 141           0.44707302         -0.73567430     -1.23113036     -0.85805346
## 142          -0.15328619          0.53318051     -1.12903457     -1.25874673
## 143          -0.82184079         -0.28368767     -1.44946373     -1.77352271
## 144          -1.15343724         -1.71527720     -2.42690063     -0.70271480
## 145          -1.38024023         -0.63896971     -1.66232963     -1.44946373
## 146          -0.44707302          0.24416040     -1.34797950     -2.42690063
## 147           0.12758531          0.56275157     -1.38024023     -2.80216172
## 148          -1.71527720          1.91230127      1.31706374      1.25874673
## 149           0.97421613          0.20501110      1.23113036      1.44946373
## 150           0.78667510          0.12758531      1.12903457      1.66232963
## 151           1.52642702          0.36416334      1.34797950      1.20442230
## 152           2.42690063          0.17908874      1.38024023      1.23113036
## 153          -0.67050162          0.51856960      1.08214564      1.83849262
## 154          -1.83849262          1.31706374      1.25874673      1.31706374
## 155          -0.02545075          2.23555842      2.23555842      0.76945312
## 156           0.70271480          1.05957037      1.56855670      1.03752256
## 157           1.71527720          0.89542793      1.15343724      1.56855670
## 158          -1.56855670          2.42690063      1.71527720      0.87658763
## 159           2.23555842          0.03818128      1.10528634      1.77352271
## 160           1.83849262         -0.48967276      1.52642702      1.12903457
## 161           0.91459156          0.80413364      1.28735798      1.41400510
## 162           1.66232963          1.52642702      1.48684468      1.05957037
## 163          -0.31028376         -0.36416334      0.93409710      2.42690063
## 164          -0.28368767          1.01596791      1.20442230      1.48684468
## 165          -0.19203379          0.78667510      1.17854682      1.52642702
## 166           0.50406856          0.10196844      1.44946373      1.10528634
## 167           2.10223158          0.19203379      1.66232963      0.97421613
## 168           0.29695946          1.71527720      1.41400510      1.15343724
## 169           0.27046566          2.80216172      2.42690063      0.71909690
## 170          -0.39149488         -0.02545075      1.83849262      1.38024023
## 171           2.80216172         -0.44707302      1.99828954      1.28735798
## 172          -0.07641832          0.76945312      2.10223158      1.17854682
## 173          -0.53318051         -0.89542793      1.05957037      2.80216172
## 174          -0.32366339          0.00000000      1.61367018      1.71527720
## 175          -0.23107198          1.83849262      2.80216172      0.78667510
## 176          -1.20442230          1.17854682      1.91230127      1.34797950
## 177          -0.24416040         -0.07641832      1.77352271      1.61367018
## 178           0.28368767          1.66232963      1.01596791      0.83980946
## 179           1.48684468          0.82184079      1.03752256      0.82184079
## 180           0.47537773         -1.83849262      0.89542793      1.08214564
## 181           1.56855670          0.87658763      0.97421613      0.91459156
## 182           0.17908874          0.70271480      0.95396468      0.95396468
## 183           0.39149488          2.10223158      0.91459156      0.99487522
## 184          -0.40526982          0.37779383      0.87658763      1.01596791
## 185           1.61367018          0.35060018      0.83980946      1.99828954
## 186           0.57772207          0.60806071      0.85805346      1.91230127
```

```
## 187           -0.36416334         -0.71909690      0.82184079      2.23555842
## 188            1.77352271          0.99487522      0.99487522      0.93409710
## 189           -0.37779383         -0.75245638      0.67050162      2.10223158
## 190            0.56275157         -1.03752256      0.71909690      0.80413364
## 191           -0.08918610          0.75245638      0.76945312      0.68651916
## 192           -0.25729077         -0.11476746      0.80413364      0.75245638
## 193            0.89542793          1.20442230      0.75245638      0.67050162
## 194            1.91230127          1.12903457      0.78667510      0.70271480
## 195            1.23113036          0.01272434      0.68651916      0.85805346
## 196            0.76945312          0.11476746      0.73567430      0.73567430
## 197            1.25874673          0.02545075      0.70271480      0.89542793
##     GLNU_align.W.ADC RLNU_align.W.ADC RP_align.W.ADC LGRE_align.W.ADC
## 1        -1.44946373      -1.52642702    -0.39149488       0.01272434
## 2        -0.85805346      -0.75245638     0.01272434      -0.34384286
## 3        -0.43305527      -0.29695946    -0.16617364      -0.32366339
## 4         0.10196844       0.33710120    -0.25729077      -0.07641832
## 5        -0.87658763      -0.57772207    -0.02545075      -0.39149488
## 6        -1.20442230      -0.51856960     0.10196844      -0.42607834
## 7        -1.28735798      -1.23113036     0.08918610      -0.25729077
## 8        -0.56275157      -0.56275157    -0.29695946      -0.40526982
## 9        -1.52642702      -1.38024023     0.11476746      -0.02545075
## 10       -1.08214564      -0.70271480    -0.14042416      -0.34384286
## 11       -0.50406856      -0.39149488     0.05091800      -0.17908874
## 12       -0.05091800       0.16617364    -0.05091800      -0.15328619
## 13        0.76945312       0.43305527    -0.67050162      -0.46117919
## 14       -0.35060018      -0.11476746    -0.08918610      -0.48967276
## 15        1.25874673       1.31706374    -0.56275157      -0.51856960
## 16       -0.12758531      -0.03818128    -0.10196844      -0.06366298
## 17       -0.78667510      -0.76945312     0.06366298      -0.37779383
## 18        0.48967276       0.67050162    -0.07641832       0.08918610
## 19        0.16617364       0.24416040    -0.47537773      -0.42607834
## 20        0.70271480       0.95396468    -0.50406856       0.57772207
## 21        0.32366339       0.54790615    -0.28368767      -0.44707302
## 22       -2.42690063      -1.83849262    -0.19203379       0.24416040
## 23        0.25729077      -0.17908874    -0.62344075      -0.08918610
## 24        0.24416040       0.39149488    -0.24416040      -0.27046566
## 25       -0.53318051      -0.54790615    -0.40526982      -0.23107198
## 26        0.63896971       0.80413364    -0.01272434       0.27046566
## 27       -1.10528634      -0.71909690    -0.06366298      -0.14042416
## 28       -0.83980946      -0.73567430    -0.43305527      -0.10196844
## 29       -1.15343724      -1.03752256     0.02545075      -0.29695946
## 30        0.28368767      -0.05091800    -0.63896971      -0.36416334
## 31       -2.10223158      -2.23555842    -0.32366339       0.28368767
## 32        0.43305527       0.44707302    -0.33710120      -0.50406856
## 33        0.71909690       1.12903457    -0.37779383       0.21802303
## 34       -1.38024023      -1.25874673    -0.17908874       0.06366298
## 35       -0.89542793      -0.63896971     0.07641832      -0.28368767
## 36       -0.11476746       0.21802303    -0.12758531      -0.31028376
## 37        0.21802303       0.53318051    -0.11476746       0.75245638
## 38       -1.66232963      -1.34797950     0.00000000       0.00000000
## 39        0.73567430       0.76945312    -0.23107198      -0.01272434
## 40        0.05091800      -0.28368767    -0.54790615      -0.47537773
## 41        1.10528634       1.44946373    -0.48967276       0.05091800
## 42       -0.48967276      -0.53318051    -0.46117919       0.02545075
## 43        0.65465430       0.91459156    -0.51856960       0.56275157
```

```
## 44       -2.23555842      -2.42690063    -0.41912210       0.25729077
## 45       -1.77352271      -1.91230127     0.50406856       0.87658763
## 46       -0.91459156      -0.67050162     0.43305527       0.51856960
## 47       -1.41400510      -1.15343724     0.60806071       0.82184079
## 48       -0.08918610       0.02545075     0.35060018       0.54790615
## 49       -1.83849262      -1.99828954     0.29695946       0.89542793
## 50        0.33710120       0.56275157     0.24416040       0.40526982
## 51        0.41912210       0.60806071     0.19203379       0.35060018
## 52        0.57772207       0.82184079     0.31028376       0.53318051
## 53        0.78667510       1.48684468     0.32366339       0.91459156
## 54       -0.47537773      -0.62344075     0.15328619       0.63896971
## 55       -1.71527720      -2.10223158     0.28368767       0.95396468
## 56       -1.91230127      -1.77352271     0.62344075       0.83980946
## 57       -0.41912210      -0.10196844     0.44707302       0.47537773
## 58        0.11476746       0.31028376     0.20501110       0.37779383
## 59       -2.80216172      -2.80216172     0.53318051       0.97421613
## 60        1.77352271       1.61367018     0.16617364       0.62344075
## 61        0.75245638       1.01596791     0.40526982       1.48684468
## 62        0.14042416       0.06366298     0.25729077       0.44707302
## 63       -0.07641832       0.27046566     0.41912210       0.41912210
## 64        0.80413364       0.37779383    -0.53318051       0.36416334
## 65       -0.57772207      -0.65465430     0.23107198       0.67050162
## 66       -0.44707302      -0.50406856     0.21802303       0.50406856
## 67        0.17908874       0.19203379     0.39149488       0.46117919
## 68        0.36416334       0.89542793     0.48967276       0.99487522
## 69       -1.01596791      -1.10528634     0.36416334       0.59282318
## 70       -1.99828954      -1.71527720     0.63896971       0.80413364
## 71       -0.03818128      -0.32366339     0.54790615       0.73567430
## 72        1.52642702       2.10223158     0.57772207       0.78667510
## 73       -0.60806071      -0.82184079     0.59282318       0.76945312
## 74        0.82184079       0.40526982    -0.31028376       0.65465430
## 75        0.03818128      -0.31028376     0.46117919       0.71909690
## 76       -1.56855670      -1.44946373     0.65465430       0.85805346
## 77       -1.25874673      -1.41400510     0.56275157       0.93409710
## 78        0.08918610      -0.19203379     0.51856960       0.70271480
## 79       -1.03752256      -1.12903457    -0.03818128      -0.05091800
## 80       -0.02545075       0.23107198     0.03818128      -0.19203379
## 81        2.10223158       1.91230127    -0.35060018      -0.12758531
## 82        0.46117919       0.41912210    -0.20501110      -0.24416040
## 83        0.02545075      -0.06366298    -0.21802303      -0.11476746
## 84       -1.12903457      -1.08214564    -0.27046566       0.03818128
## 85       -0.16617364      -0.43305527    -0.36416334      -0.03818128
## 86        0.39149488       0.10196844    -0.59282318      -0.20501110
## 87        0.44707302       0.20501110    -0.57772207      -0.16617364
## 88        0.97421613       0.51856960    -0.75245638      -0.21802303
## 89       -0.97421613      -1.05957037    -0.15328619       0.07641832
## 90        0.93409710       0.48967276    -1.10528634      -0.78667510
## 91        1.38024023       1.08214564    -0.97421613      -0.82184079
## 92       -0.67050162      -0.89542793    -0.82184079      -0.71909690
## 93        0.07641832      -0.20501110    -0.71909690      -0.57772207
## 94       -0.37779383      -0.14042416    -0.85805346      -0.87658763
## 95       -0.21802303       0.14042416    -0.83980946      -0.53318051
## 96        1.20442230       1.25874673    -1.01596791      -0.89542793
## 97        0.40526982       0.59282318    -0.93409710      -0.80413364
## 98        1.23113036       1.28735798    -0.99487522      -0.83980946
```

```
## 99        0.15328619       0.07641832     0.47537773       0.68651916
## 100       0.00000000      -0.07641832    -0.91459156      -0.76945312
## 101      -0.20501110      -0.46117919    -0.95396468      -0.73567430
## 102      -0.68651916      -0.91459156    -0.89542793      -0.85805346
## 103      -0.63896971      -0.85805346    -0.73567430      -0.60806071
## 104      -0.36416334      -0.12758531    -0.80413364      -0.75245638
## 105      -0.62344075      -0.83980946    -0.65465430      -0.54790615
## 106      -0.17908874       0.15328619    -0.44707302       0.16617364
## 107      -0.28368767       0.00000000     0.27046566       0.48967276
## 108       1.41400510       1.10528634     0.14042416       0.29695946
## 109      -0.14042416      -0.25729077     0.37779383       0.39149488
## 110       0.56275157       0.65465430     0.17908874       0.31028376
## 111       0.85805346       0.87658763     0.12758531       0.33710120
## 112      -0.95396468      -0.59282318     0.33710120       0.32366339
## 113      -0.65465430      -0.87658763    -0.76945312      -0.63896971
## 114       0.95396468       0.50406856    -1.03752256      -0.70271480
## 115      -1.61367018      -1.48684468    -0.60806071      -0.59282318
## 116      -0.19203379      -0.44707302    -0.87658763      -0.67050162
## 117      -0.80413364      -0.78667510    -0.68651916      -0.65465430
## 118      -0.51856960      -0.40526982    -0.70271480      -0.62344075
## 119      -0.93409710      -0.68651916    -0.78667510      -0.68651916
## 120       0.89542793       0.46117919    -2.80216172      -1.83849262
## 121       1.31706374       1.03752256    -1.99828954      -1.99828954
## 122      -0.75245638      -0.99487522    -1.52642702      -1.61367018
## 123       0.06366298      -0.21802303    -1.38024023      -1.34797950
## 124      -0.40526982      -0.16617364    -1.61367018      -2.42690063
## 125      -0.27046566       0.11476746    -1.56855670      -1.28735798
## 126       1.15343724       1.20442230    -2.23555842      -2.80216172
## 127       0.37779383       0.57772207    -1.83849262      -1.91230127
## 128       1.17854682       1.23113036    -2.10223158      -2.10223158
## 129       0.12758531       0.05091800    -1.05957037      -0.95396468
## 130      -0.01272434      -0.08918610    -1.77352271      -1.77352271
## 131      -0.25729077      -0.48967276    -1.91230127      -1.66232963
## 132      -0.76945312      -1.01596791    -1.71527720      -2.23555842
## 133      -0.71909690      -0.95396468    -1.41400510      -1.38024023
## 134      -0.39149488      -0.15328619    -1.48684468      -1.71527720
## 135      -0.70271480      -0.93409710    -1.28735798      -1.31706374
## 136      -0.23107198       0.12758531    -1.25874673      -1.25874673
## 137      -0.29695946      -0.01272434    -1.15343724      -1.05957037
## 138       1.34797950       1.05957037    -1.20442230      -1.23113036
## 139      -0.15328619      -0.27046566    -1.08214564      -1.10528634
## 140       0.54790615       0.63896971    -1.17854682      -1.17854682
## 141       0.83980946       0.85805346    -1.23113036      -1.12903457
## 142      -0.99487522      -0.60806071    -1.12903457      -1.15343724
## 143      -0.73567430      -0.97421613    -1.44946373      -1.44946373
## 144       0.91459156       0.47537773    -2.42690063      -1.56855670
## 145      -0.24416040      -0.47537773    -1.66232963      -1.52642702
## 146      -0.82184079      -0.80413364    -1.31706374      -1.48684468
## 147      -0.54790615      -0.41912210    -1.34797950      -1.41400510
## 148      -1.23113036      -1.56855670     1.31706374       1.83849262
## 149       0.87658763       1.34797950     1.23113036       1.08214564
## 150       1.05957037       1.41400510     1.12903457       1.01596791
## 151       1.28735798       1.52642702     1.34797950       1.23113036
## 152       1.48684468       1.99828954     1.38024023       1.91230127
## 153       0.19203379       0.01272434     1.08214564       1.31706374
```

```
## 154      -1.17854682      -1.61367018     1.28735798       2.10223158
## 155      -1.31706374      -1.31706374     2.23555842       1.71527720
## 156       0.23107198       0.35060018     1.56855670       1.17854682
## 157       0.62344075       0.83980946     1.15343724       1.05957037
## 158      -1.48684468      -1.66232963     1.77352271       2.23555842
## 159       2.42690063       2.23555842     1.10528634       1.28735798
## 160       1.44946373       1.66232963     1.48684468       2.80216172
## 161       0.67050162       0.62344075     1.25874673       1.12903457
## 162       0.35060018       0.78667510     1.52642702       1.10528634
## 163       1.56855670       0.93409710     0.87658763       1.03752256
## 164       0.01272434      -0.02545075     1.20442230       1.38024023
## 165       0.20501110       0.03818128     1.17854682       1.20442230
## 166       0.68651916       0.71909690     1.44946373       1.15343724
## 167       0.99487522       1.56855670     1.66232963       2.42690063
## 168      -0.32366339      -0.36416334     1.41400510       1.25874673
## 169      -1.34797950      -1.28735798     2.42690063       1.66232963
## 170       0.47537773       0.17908874     1.83849262       1.52642702
## 171       2.23555842       2.80216172     1.99828954       1.61367018
## 172      -0.06366298      -0.23107198     2.10223158       1.56855670
## 173       1.61367018       0.97421613     0.93409710       1.34797950
## 174       0.53318051       0.25729077     1.61367018       1.44946373
## 175      -1.05957037      -1.20442230     2.80216172       1.77352271
## 176      -0.59282318      -1.17854682     1.91230127       1.99828954
## 177       0.60806071       0.29695946     1.71527720       1.41400510
## 178      -0.33710120      -0.37779383     1.03752256       0.20501110
## 179       0.50406856       0.75245638     1.05957037       0.14042416
## 180       2.80216172       2.42690063     0.91459156       0.17908874
## 181       1.12903457       0.99487522     0.99487522       0.10196844
## 182       0.51856960       0.36416334     0.97421613       0.19203379
## 183      -0.46117919      -0.35060018     0.95396468       0.43305527
## 184       0.31028376       0.08918610     0.89542793       0.23107198
## 185       1.01596791       0.68651916     0.83980946       0.12758531
## 186       1.08214564       0.73567430     0.85805346       0.15328619
## 187       1.71527720       1.17854682     0.80413364       0.11476746
## 188      -0.31028376      -0.33710120     1.01596791       0.60806071
## 189       1.66232963       1.15343724     0.67050162      -0.97421613
## 190       1.99828954       1.71527720     0.71909690      -1.01596791
## 191      -0.10196844      -0.24416040     0.78667510      -0.93409710
## 192       0.59282318       0.28368767     0.82184079      -0.91459156
## 193       0.27046566       0.32366339     0.75245638      -1.08214564
## 194       0.29695946       0.70271480     0.76945312      -0.56275157
## 195       1.83849262       1.77352271     0.68651916      -1.20442230
## 196       1.03752256       1.38024023     0.73567430      -0.99487522
## 197       1.91230127       1.83849262     0.70271480      -1.03752256
##     HGRE_align.W.ADC LGSRE_align.W.ADC HGSRE_align.W.ADC LGHRE_align.W.ADC
## 1        -0.73567430        0.01272434       -0.73567430        0.00000000
## 2         0.46117919       -0.33710120        0.46117919       -0.35060018
## 3        -0.76945312       -0.32366339       -0.76945312       -0.32366339
## 4         0.75245638       -0.08918610        0.75245638       -0.01272434
## 5         0.14042416       -0.39149488        0.14042416       -0.39149488
## 6         1.23113036       -0.42607834        1.28735798       -0.43305527
## 7         0.85805346       -0.25729077        0.85805346       -0.25729077
## 8         0.48967276       -0.40526982        0.47537773       -0.41912210
## 9         0.53318051       -0.01272434        0.54790615       -0.03818128
## 10       -0.20501110       -0.35060018       -0.16617364       -0.33710120
```

```
## 11        0.73567430       -0.17908874        0.73567430       -0.12758531
## 12       -0.28368767       -0.16617364       -0.28368767       -0.15328619
## 13       -1.41400510       -0.46826666       -1.41400510       -0.46117919
## 14        1.05957037       -0.48967276        1.05957037       -0.48967276
## 15        0.05091800       -0.51856960        0.05091800       -0.51856960
## 16        0.47537773       -0.06366298        0.48967276       -0.10196844
## 17        0.44707302       -0.36416334        0.44707302       -0.37779383
## 18       -0.10196844        0.08918610       -0.10196844        0.08918610
## 19       -0.80413364       -0.42607834       -0.80413364       -0.40526982
## 20        0.27046566        0.33710120        0.27046566        0.91459156
## 21        0.67050162       -0.44707302        0.67050162       -0.44707302
## 22       -1.48684468        0.24416040       -1.48684468        0.21802303
## 23       -1.99828954       -0.07641832       -1.99828954       -0.07641832
## 24        0.50406856       -0.27046566        0.50406856       -0.27046566
## 25       -0.82184079       -0.23107198       -0.82184079       -0.23107198
## 26       -0.21802303        0.27046566       -0.21802303        0.32366339
## 27       -0.36416334       -0.14042416       -0.36416334       -0.16617364
## 28       -0.83980946       -0.10196844       -0.83980946       -0.08918610
## 29       -0.47537773       -0.29695946       -0.47537773       -0.29695946
## 30       -1.66232963       -0.37779383       -1.66232963       -0.36416334
## 31       -1.71527720        0.28368767       -1.71527720        0.24416040
## 32        0.35060018       -0.50406856        0.35060018       -0.50406856
## 33        0.62344075        0.20501110        0.65465430        0.47537773
## 34       -0.78667510        0.06366298       -0.78667510        0.05091800
## 35       -0.62344075       -0.28368767       -0.62344075       -0.28368767
## 36        0.76945312       -0.31028376        0.76945312       -0.31028376
## 37        0.33710120        0.70271480        0.36416334        0.89542793
## 38       -0.43305527        0.00000000       -0.43305527       -0.02545075
## 39       -0.05091800       -0.02545075       -0.05091800        0.01272434
## 40       -0.57772207       -0.46826666       -0.48967276       -0.47537773
## 41        0.12758531        0.05091800        0.12758531        0.15328619
## 42       -1.61367018        0.02545075       -1.61367018        0.02545075
## 43        0.39149488        0.32366339        0.39149488        0.93409710
## 44       -1.77352271        0.25729077       -1.77352271        0.23107198
## 45       -1.83849262        0.89542793       -1.83849262        0.82184079
## 46        0.16617364        0.54790615        0.16617364        0.51856960
## 47        1.08214564        0.82184079        1.08214564        0.80413364
## 48       -0.91459156        0.57772207       -0.91459156        0.53318051
## 49       -2.42690063        0.91459156       -2.42690063        0.83980946
## 50        0.37779383        0.43305527        0.37779383        0.39837290
## 51        0.08918610        0.37779383        0.08918610        0.31028376
## 52        0.60806071        0.56275157        0.53318051        0.54790615
## 53        0.82184079        0.87658763        0.82184079        1.01596791
## 54       -1.91230127        0.63896971       -1.91230127        0.57772207
## 55       -2.80216172        0.95396468       -2.80216172        0.87658763
## 56       -0.65465430        0.83980946       -0.65465430        0.76945312
## 57        0.83980946        0.50406856        0.83980946        0.46117919
## 58        0.10196844        0.40526982        0.11476746        0.37779383
## 59       -2.10223158        0.97421613       -2.10223158        0.95396468
## 60       -0.03818128        0.62344075       -0.03818128        0.65465430
## 61       -0.29695946        1.41400510       -0.29695946        1.77352271
## 62       -0.12758531        0.47537773       -0.12758531        0.41912210
## 63        0.51856960        0.46117919        0.51856960        0.39837290
## 64       -0.60806071        0.39149488       -0.60806071        0.35060018
## 65       -1.52642702        0.67050162       -1.52642702        0.63896971
```

```
## 66       -0.63896971        0.53318051       -0.63896971        0.48967276
## 67       -0.67050162        0.48967276       -0.67050162        0.44707302
## 68        0.40526982        0.99487522        0.40526982        1.20442230
## 69       -0.01272434        0.59282318       -0.01272434        0.56275157
## 70        1.10528634        0.80413364        1.12903457        0.73567430
## 71       -0.85805346        0.75245638       -0.85805346        0.70271480
## 72        1.44946373        0.78667510        1.44946373        0.75245638
## 73       -0.97421613        0.76945312       -0.97421613        0.71909690
## 74       -0.48967276        0.65465430       -0.50406856        0.60806071
## 75       -0.39149488        0.73567430       -0.39149488        0.67848863
## 76       -0.31028376        0.85805346       -0.31028376        0.78667510
## 77       -2.23555842        0.93409710       -2.23555842        0.85805346
## 78       -0.68651916        0.71909690       -0.68651916        0.67848863
## 79       -0.02545075       -0.05091800       -0.02545075       -0.06366298
## 80        0.93409710       -0.19203379        0.93409710       -0.19203379
## 81        0.11476746       -0.12758531        0.10196844       -0.11476746
## 82        0.21802303       -0.24416040        0.21802303       -0.24416040
## 83       -0.16617364       -0.11476746       -0.17908874       -0.14042416
## 84       -0.93409710        0.03818128       -0.93409710        0.03818128
## 85       -1.25874673       -0.03818128       -1.25874673       -0.05091800
## 86        1.20442230       -0.20501110        1.20442230       -0.20501110
## 87        0.91459156       -0.15328619        0.89542793       -0.17908874
## 88       -0.50406856       -0.21802303       -0.53318051       -0.21802303
## 89       -0.87658763        0.07641832       -0.87658763        0.06366298
## 90       -0.53318051       -0.78667510       -0.56275157       -0.78667510
## 91       -0.24416040       -0.82184079       -0.24416040       -0.82184079
## 92       -1.05957037       -0.71909690       -1.05957037       -0.71909690
## 93       -0.70271480       -0.56275157       -0.70271480       -0.57772207
## 94        1.01596791       -0.87658763        1.01596791       -0.87658763
## 95        0.57772207       -0.53318051        0.59282318       -0.54790615
## 96        0.02545075       -0.89542793        0.02545075       -0.89542793
## 97        0.07641832       -0.80413364        0.07641832       -0.80413364
## 98        0.03818128       -0.83980946        0.03818128       -0.83980946
## 99       -0.11476746        0.68651916       -0.11476746        0.62344075
## 100      -0.17908874       -0.76945312       -0.19203379       -0.76945312
## 101      -1.31706374       -0.73567430       -1.31706374       -0.73567430
## 102      -1.08214564       -0.85805346       -1.08214564       -0.85805346
## 103      -1.01596791       -0.59282318       -1.01596791       -0.60806071
## 104       1.03752256       -0.75245638        1.03752256       -0.75245638
## 105      -0.99487522       -0.54790615       -0.99487522       -0.56275157
## 106       0.59282318        0.10196844        0.60806071        0.28368767
## 107      -0.44707302        0.51856960       -0.44707302        0.50406856
## 108      -0.23107198        0.29695946       -0.23107198        0.25729077
## 109      -0.07641832        0.41912210       -0.07641832        0.36416334
## 110       0.65465430        0.31028376        0.63896971        0.27046566
## 111      -0.33710120        0.36416334       -0.33710120        0.33710120
## 112       0.25729077        0.35060018        0.25729077        0.29695946
## 113      -1.03752256       -0.63896971       -1.03752256       -0.63896971
## 114      -0.51856960       -0.70271480       -0.54790615       -0.70271480
## 115      -0.32366339       -0.57772207       -0.32366339       -0.59282318
## 116      -1.28735798       -0.67050162       -1.28735798       -0.67050162
## 117       0.43305527       -0.65465430        0.43305527       -0.65465430
## 118       0.71909690       -0.62344075        0.71909690       -0.62344075
## 119       0.15328619       -0.68651916        0.15328619       -0.68651916
## 120      -0.56275157       -1.83849262       -0.59282318       -1.83849262
```

```
## 121      -0.27046566       -1.99828954       -0.27046566       -1.99828954
## 122      -1.17854682       -1.61367018       -1.17854682       -1.61367018
## 123      -0.71909690       -1.34797950       -0.71909690       -1.34797950
## 124       0.97421613       -2.42690063        0.97421613       -2.42690063
## 125       0.54790615       -1.28735798        0.56275157       -1.28735798
## 126       0.00000000       -2.80216172        0.00000000       -2.80216172
## 127       0.06366298       -1.91230127        0.06366298       -1.91230127
## 128       0.01272434       -2.10223158        0.01272434       -2.10223158
## 129      -0.14042416       -0.95396468       -0.14042416       -0.95396468
## 130      -0.19203379       -1.77352271       -0.20501110       -1.77352271
## 131      -1.38024023       -1.66232963       -1.38024023       -1.66232963
## 132      -1.20442230       -2.23555842       -1.20442230       -2.23555842
## 133      -1.12903457       -1.38024023       -1.12903457       -1.38024023
## 134       0.99487522       -1.71527720        0.99487522       -1.71527720
## 135      -1.10528634       -1.31706374       -1.10528634       -1.31706374
## 136       0.56275157       -1.25874673        0.57772207       -1.17854682
## 137      -0.46117919       -1.05957037       -0.46117919       -1.05957037
## 138      -0.25729077       -1.23113036       -0.25729077       -1.25874673
## 139      -0.08918610       -1.10528634       -0.08918610       -1.10528634
## 140       0.63896971       -1.17854682        0.62344075       -1.20442230
## 141      -0.35060018       -1.12903457       -0.35060018       -1.12903457
## 142       0.24416040       -1.15343724        0.24416040       -1.15343724
## 143      -1.15343724       -1.44946373       -1.15343724       -1.44946373
## 144      -0.54790615       -1.56855670       -0.57772207       -1.56855670
## 145      -1.34797950       -1.52642702       -1.34797950       -1.52642702
## 146       0.41912210       -1.48684468        0.41912210       -1.48684468
## 147       0.70271480       -1.41400510        0.70271480       -1.41400510
## 148      -1.44946373        1.91230127       -1.44946373        1.83849262
## 149       1.52642702        1.08214564        1.52642702        1.07078979
## 150       1.34797950        1.01596791        1.34797950        0.97421613
## 151       1.71527720        1.23113036        1.66232963        1.23113036
## 152       1.77352271        1.83849262        1.77352271        2.23555842
## 153      -0.89542793        1.31706374       -0.89542793        1.28735798
## 154      -1.56855670        2.10223158       -1.56855670        1.99828954
## 155       0.23107198        1.71527720        0.23107198        1.66232963
## 156       1.83849262        1.17854682        1.83849262        1.15343724
## 157       1.38024023        1.05957037        1.41400510        1.03752256
## 158      -0.95396468        2.23555842       -0.95396468        2.10223158
## 159       1.12903457        1.28735798        1.10528634        1.38024023
## 160       0.80413364        2.80216172        0.80413364        2.80216172
## 161       0.95396468        1.12903457        0.95396468        1.10528634
## 162       1.61367018        1.10528634        1.61367018        1.07078979
## 163       0.29695946        1.03752256        0.29695946        0.99487522
## 164      -0.75245638        1.38024023       -0.75245638        1.34797950
## 165       0.28368767        1.20442230        0.28368767        1.17854682
## 166       0.20501110        1.15343724        0.20501110        1.12903457
## 167       1.56855670        2.42690063        1.56855670        2.42690063
## 168       1.17854682        1.25874673        1.17854682        1.25874673
## 169       2.23555842        1.66232963        2.23555842        1.56855670
## 170      -0.06366298        1.52642702       -0.06366298        1.48684468
## 171       2.80216172        1.61367018        2.80216172        1.61367018
## 172      -0.40526982        1.56855670       -0.40526982        1.52642702
## 173       0.36416334        1.34797950        0.33710120        1.31706374
## 174       0.68651916        1.48684468        0.68651916        1.43150944
## 175       0.78667510        1.77352271        0.78667510        1.71527720
```

```
## 176      -1.23113036        1.99828954       -1.23113036        1.91230127
## 177       0.19203379        1.44946373        0.19203379        1.43150944
## 178       1.15343724        0.21802303        1.15343724        0.19203379
## 179       1.99828954        0.15328619        1.99828954        0.12758531
## 180       1.41400510        0.17908874        1.38024023        0.17908874
## 181       1.48684468        0.11476746        1.48684468        0.07641832
## 182       0.89542793        0.19203379        0.91459156        0.16617364
## 183      -0.37779383        0.44707302       -0.37779383        0.43305527
## 184      -0.59282318        0.23107198       -0.51856960        0.20501110
## 185       2.42690063        0.14042416        2.42690063        0.11476746
## 186       1.91230127        0.16617364        1.91230127        0.14042416
## 187       0.32366339        0.12758531        0.32366339        0.10196844
## 188      -0.15328619        0.60806071       -0.15328619        0.59282318
## 189       0.31028376       -0.97421613        0.31028376       -0.97421613
## 190       0.87658763       -1.01596791        0.87658763       -1.01596791
## 191      -0.41912210       -0.93409710       -0.41912210       -0.93409710
## 192       0.17908874       -0.91459156        0.17908874       -0.91459156
## 193       2.10223158       -1.08214564        2.10223158       -1.08214564
## 194       1.66232963       -0.60806071        1.71527720       -0.53318051
## 195       1.25874673       -1.20442230        1.23113036       -1.23113036
## 196       1.31706374       -0.99487522        1.31706374       -0.99487522
## 197       1.28735798       -1.03752256        1.25874673       -1.03752256
##     HGLRE_align.W.ADC GLNU_norm_align.W.ADC RLNU_norm_align.W.ADC
## 1         -0.73567430            0.08918610           -0.37779383
## 2          0.44707302           -0.07641832            0.05091800
## 3         -0.76945312           -0.19203379           -0.08918610
## 4          0.76945312           -0.43305527           -0.23107198
## 5          0.14042416           -0.29695946            0.03818128
## 6          1.20442230           -0.53318051            0.21802303
## 7          0.83980946           -0.24416040            0.16617364
## 8          0.51856960           -0.08918610           -0.29695946
## 9          0.53318051            0.01272434            0.26387249
## 10        -0.27046566           -0.33710120           -0.11476746
## 11         0.71909690           -0.17908874            0.10196844
## 12        -0.29695946           -0.38463533           -0.01272434
## 13        -1.41400510            0.10196844           -0.87658763
## 14         1.01596791           -0.22454273           -0.06366298
## 15         0.05091800           -0.14042416           -0.60806071
## 16         0.46117919           -0.12758531           -0.10196844
## 17         0.39149488           -0.02545075            0.11476746
## 18        -0.10196844           -0.31028376           -0.03818128
## 19        -0.80413364           -0.28368767           -0.46117919
## 20         0.27046566           -0.45411481           -0.48967276
## 21         0.63896971           -0.32366339           -0.27046566
## 22        -1.48684468            0.11476746           -0.17908874
## 23        -1.99828954            0.20501110           -0.82184079
## 24         0.48967276           -0.41912210           -0.20501110
## 25        -0.82184079           -0.03818128           -0.40526982
## 26        -0.25729077           -0.38463533            0.00000000
## 27        -0.36416334           -0.36416334           -0.02545075
## 28        -0.83980946           -0.11476746           -0.41912210
## 29        -0.57772207           -0.27046566            0.06366298
## 30        -1.66232963            0.19203379           -0.83980946
## 31        -1.71527720            0.36416334           -0.33710120
## 32         0.31028376           -0.20501110           -0.32366339
```

```
## 33         0.62344075           -0.48967276           -0.31028376
## 34        -0.78667510           -0.16617364           -0.15328619
## 35        -0.63896971           -0.22454273            0.14042416
## 36         0.78667510           -0.45411481           -0.12758531
## 37         0.29695946           -0.50406856           -0.07641832
## 38        -0.43305527           -0.06366298            0.08918610
## 39        -0.05091800           -0.25729077           -0.16617364
## 40        -0.59282318            0.07641832           -0.53318051
## 41         0.11476746           -0.40526982           -0.51856960
## 42        -1.61367018            0.02545075           -0.47537773
## 43         0.32366339           -0.47537773           -0.50406856
## 44        -1.77352271            0.25729077           -0.36416334
## 45        -1.83849262            0.95396468            0.54790615
## 46         0.16617364            0.44707302            0.44707302
## 47         1.08214564            0.27046566            0.60806071
## 48        -0.91459156            0.48967276            0.35060018
## 49        -2.42690063            0.87658763            0.28368767
## 50         0.35060018            0.35060018            0.23107198
## 51         0.10196844            0.39149488            0.15328619
## 52         0.60806071            0.29695946            0.32366339
## 53         0.82184079            0.16617364            0.33710120
## 54        -1.91230127            0.65465430            0.01272434
## 55        -2.80216172            0.99487522            0.26387249
## 56        -0.65465430            0.63896971            0.62344075
## 57         0.85805346            0.40526982            0.48967276
## 58         0.06366298            0.32366339            0.17908874
## 59        -2.10223158            0.89542793            0.59282318
## 60        -0.01272434            0.51856960            0.07641832
## 61        -0.28368767            0.31028376            0.46117919
## 62        -0.14042416            0.50406856            0.24416040
## 63         0.50406856            0.23107198            0.41912210
## 64        -0.53318051            0.80413364           -0.80413364
## 65        -1.52642702            0.57772207            0.20501110
## 66        -0.62344075            0.56275157            0.19203379
## 67        -0.71909690            0.46117919            0.39149488
## 68         0.33710120            0.17908874            0.56275157
## 69        -0.02545075            0.59282318            0.37779383
## 70         1.10528634            0.60806071            0.63896971
## 71        -0.85805346            0.82184079            0.50406856
## 72         1.44946373            0.43305527            0.51856960
## 73        -0.97421613            0.73567430            0.57772207
## 74        -0.44707302            0.91459156           -0.70271480
## 75        -0.37779383            0.78667510            0.31028376
## 76        -0.33710120            0.71909690            0.65465430
## 77        -2.23555842            0.85805346            0.53318051
## 78        -0.67050162            0.75245638            0.43305527
## 79        -0.03818128            0.05091800           -0.14042416
## 80         1.03752256           -0.15328619           -0.05091800
## 81         0.12758531           -0.01272434           -0.43305527
## 82         0.21802303            0.00000000           -0.25729077
## 83        -0.16617364            0.06366298           -0.28368767
## 84        -0.93409710            0.03818128           -0.39149488
## 85        -1.25874673            0.12758531           -0.44707302
## 86         1.31706374           -0.35060018           -0.76945312
## 87         1.05957037            0.14042416           -0.73567430
```

```
## 88        -0.46117919            0.28368767            -0.97421613
## 89        -0.87658763           -0.10196844            -0.21802303
## 90        -0.48967276           -0.60806071            -1.25874673
## 91        -0.21802303           -0.76945312            -0.95396468
## 92        -1.05957037           -0.71909690            -0.71909690
## 93        -0.68651916           -0.54790615            -0.63896971
## 94         0.97421613           -0.93409710            -0.75245638
## 95         0.57772207           -0.95396468            -0.68651916
## 96         0.02545075           -0.89542793            -1.01596791
## 97         0.08918610           -0.91459156            -0.91459156
## 98         0.03818128           -0.85805346            -0.99487522
## 99        -0.12758531            0.62344075             0.40526982
## 100       -0.17908874           -0.73567430            -0.85805346
## 101       -1.31706374           -0.68651916            -0.93409710
## 102       -1.08214564           -0.82184079            -0.78667510
## 103       -1.01596791           -0.63896971            -0.59282318
## 104        0.99487522           -0.87658763            -0.67050162
## 105       -0.99487522           -0.59282318            -0.54790615
## 106        0.59282318           -0.56275157            -0.24416040
## 107       -0.54790615            0.37779383             0.29695946
## 108       -0.20501110            0.21802303             0.02545075
## 109       -0.07641832            0.15328619             0.47537773
## 110        0.67050162            0.33710120             0.12758531
## 111       -0.31028376            0.53318051            -0.19203379
## 112        0.25729077            0.41912210             0.36416334
## 113       -1.03752256           -0.65465430            -0.62344075
## 114       -0.47537773           -0.57772207            -1.17854682
## 115       -0.35060018           -0.67050162            -0.35060018
## 116       -1.28735798           -0.62344075            -0.89542793
## 117        0.37779383           -0.70271480            -0.56275157
## 118        0.70271480           -0.78667510            -0.57772207
## 119        0.15328619           -0.80413364            -0.65465430
## 120       -0.51856960           -1.38024023            -2.80216172
## 121       -0.24416040           -1.71527720            -1.99828954
## 122       -1.17854682           -1.61367018            -1.56855670
## 123       -0.70271480           -1.25874673            -1.44946373
## 124        0.93409710           -2.42690063            -1.61367018
## 125        0.54790615           -2.80216172            -1.52642702
## 126        0.00000000           -2.10223158            -2.23555842
## 127        0.07641832           -2.23555842            -1.83849262
## 128        0.01272434           -1.91230127            -2.10223158
## 129       -0.15328619           -1.08214564            -1.05957037
## 130       -0.19203379           -1.66232963            -1.71527720
## 131       -1.38024023           -1.52642702            -1.91230127
## 132       -1.20442230           -1.83849262            -1.66232963
## 133       -1.12903457           -1.44946373            -1.38024023
## 134        0.95396468           -1.99828954            -1.48684468
## 135       -1.10528634           -1.34797950            -1.28735798
## 136        0.56275157           -1.28735798            -1.23113036
## 137       -0.56275157           -1.15343724            -1.10528634
## 138       -0.23107198           -1.20442230            -1.15343724
## 139       -0.08918610           -1.23113036            -1.03752256
## 140        0.65465430           -1.17854682            -1.12903457
## 141       -0.32366339           -1.10528634            -1.20442230
## 142        0.24416040           -1.12903457            -1.08214564
```

```
## 143       -1.15343724           -1.48684468           -1.41400510
## 144       -0.50406856           -1.31706374           -2.42690063
## 145       -1.34797950           -1.41400510           -1.77352271
## 146        0.36416334           -1.56855670           -1.31706374
## 147        0.68651916           -1.77352271           -1.34797950
## 148       -1.44946373            2.10223158            1.31706374
## 149        1.56855670            1.17854682            1.23113036
## 150        1.38024023            1.20442230            1.12903457
## 151        1.71527720            1.10528634            1.38024023
## 152        1.77352271            1.01596791            1.41400510
## 153       -0.89542793            1.56855670            1.08214564
## 154       -1.56855670            2.80216172            1.28735798
## 155        0.23107198            1.52642702            2.23555842
## 156        1.83849262            1.23113036            1.66232963
## 157        1.28735798            1.15343724            1.15343724
## 158       -0.95396468            2.23555842            2.10223158
## 159        1.17854682            1.34797950            1.10528634
## 160        0.80413364            1.12903457            1.61367018
## 161        0.91459156            1.31706374            1.25874673
## 162        1.61367018            1.05957037            1.52642702
## 163        0.40526982            1.83849262            0.76945312
## 164       -0.75245638            1.41400510            1.20442230
## 165        0.28368767            1.38024023            1.17854682
## 166        0.17908874            1.28735798            1.48684468
## 167        1.52642702            1.03752256            1.91230127
## 168        1.15343724            1.44946373            1.44946373
## 169        2.23555842            1.48684468            2.42690063
## 170       -0.06366298            1.91230127            1.71527720
## 171        2.80216172            1.25874673            1.77352271
## 172       -0.40526982            1.66232963            1.99828954
## 173        0.47537773            2.42690063            0.85805346
## 174        0.73567430            1.77352271            1.34797950
## 175        0.75245638            1.61367018            2.80216172
## 176       -1.23113036            1.99828954            1.83849262
## 177        0.20501110            1.71527720            1.56855670
## 178        1.12903457            0.76945312            1.03752256
## 179        1.99828954            0.47537773            1.05957037
## 180        1.41400510            0.67050162            0.93409710
## 181        1.48684468            0.68651916            0.99487522
## 182        0.89542793            0.83980946            0.97421613
## 183       -0.39149488            0.70271480            0.95396468
## 184       -0.60806071            0.93409710            0.91459156
## 185        2.42690063            0.24416040            0.78667510
## 186        2.10223158            0.97421613            0.82184079
## 187        0.43305527            1.08214564            0.71909690
## 188       -0.11476746            0.54790615            1.01596791
## 189        0.41912210           -0.51856960            0.67050162
## 190        0.87658763           -0.83980946            0.73567430
## 191       -0.41912210           -0.75245638            0.83980946
## 192        0.19203379           -0.05091800            0.89542793
## 193        1.91230127           -1.03752256            0.80413364
## 194        1.66232963           -1.05957037            0.87658763
## 195        1.23113036           -0.99487522            0.68651916
## 196        1.34797950           -1.01596791            0.75245638
## 197        1.25874673           -0.97421613            0.70271480
```

```
##     GLVAR_align.W.ADC RLVAR_align.W.ADC Entropy_align.W.ADC  SZSE.W.ADC
## 1          0.43305527       -0.14042416          0.23107198  0.37779383
## 2         -0.21802303       -0.44707302         -0.32366339 -0.47537773
## 3          1.10528634       -0.21802303         -0.16617364  0.41912210
## 4          0.71909690       -0.20501110          0.44707302  0.12758531
## 5          0.36416334       -0.32366339          0.27046566 -0.07641832
## 6          1.77352271       -0.56275157          0.60806071  0.29695946
## 7          0.59282318       -0.54790615          0.00000000 -0.36416334
## 8         -0.02545075       -0.17908874         -0.23107198 -0.53318051
## 9         -0.25729077       -0.57772207          0.28368767  0.51856960
## 10         1.56855670       -0.31028376          0.41912210 -0.19203379
## 11         0.01272434       -0.48967276          0.06366298  0.06366298
## 12         0.50406856       -0.36416334          0.36416334  0.27046566
## 13        -0.33710120        0.27046566         -0.56275157 -0.91459156
## 14         0.10196844       -0.41912210          0.14042416  0.23107198
## 15         0.33710120        0.15328619          0.21802303  0.24416040
## 16        -0.08918610       -0.40526982         -0.03818128 -0.08918610
## 17        -0.43305527       -0.46826666          0.05091800 -0.24416040
## 18         0.14042416       -0.37779383          0.33710120  0.05091800
## 19         0.78667510       -0.03818128          0.32366339 -0.33710120
## 20         0.85805346        0.06366298          0.48967276 -0.23107198
## 21         0.47537773       -0.16617364          0.39149488 -0.17908874
## 22        -0.23107198       -0.35060018         -1.44946373  0.25729077
## 23        -1.44946373        0.20501110         -1.34797950 -0.37779383
## 24         0.48967276       -0.24416040          0.43305527  0.00000000
## 25        -0.70271480       -0.07641832         -0.44707302 -0.59282318
## 26         0.46117919       -0.43305527          0.40526982 -0.02545075
## 27         0.68651916       -0.39149488         -0.17908874  0.03181537
## 28        -0.07641832       -0.10196844         -0.25729077 -0.32366339
## 29         0.24416040       -0.46826666          0.02545075  0.14042416
## 30        -1.71527720        0.19203379         -1.38024023 -1.12903457
## 31        -0.60806071       -0.19203379         -1.83849262 -0.50406856
## 32         0.62344075       -0.15328619          0.35060018 -0.15328619
## 33         0.99487522       -0.12758531          0.57772207 -0.46117919
## 34         0.11476746       -0.29695946         -0.27046566 -0.60806071
## 35        -0.16617364       -0.51856960         -0.10196844  0.16617364
## 36         0.83980946       -0.33710120         -1.08214564 -0.05091800
## 37         1.25874673       -0.23107198          0.59282318  0.11476746
## 38         0.70271480       -0.27046566         -0.36416334 -0.70271480
## 39         0.44707302       -0.25729077         -0.24416040  0.19203379
## 40        -1.17854682        0.03818128         -0.78667510 -0.78667510
## 41         0.63896971       -0.02545075         -0.05091800 -0.31028376
## 42        -0.63896971       -0.06366298         -0.59282318 -0.41912210
## 43         0.87658763        0.07641832          0.54790615  0.43305527
## 44        -0.62344075       -0.28368767         -1.91230127 -0.56275157
## 45        -0.89542793        0.21802303         -2.23555842 -0.01272434
## 46         0.54790615        0.32366339          0.19203379 -0.20501110
## 47         1.66232963        0.14042416         -1.66232963  0.15328619
## 48        -0.41912210        0.36416334         -0.29695946  0.39149488
## 49        -1.38024023        0.39149488         -1.77352271 -0.28368767
## 50         0.16617364        0.51856960         -1.48684468  0.17908874
## 51        -0.03818128        0.57772207         -2.80216172 -0.21802303
## 52         0.56275157        0.41912210         -1.99828954  0.54790615
## 53         1.28735798        0.46117919          0.65465430  0.48967276
## 54        -1.20442230        0.71909690         -0.89542793  0.31028376
```

```
## 55        -2.23555842        0.40526982         -2.42690063 -0.43305527
## 56        -0.10196844        0.12758531         -0.95396468 -0.29695946
## 57         0.17908874        0.31028376          0.31028376  0.47537773
## 58         1.03752256        0.54790615         -0.33710120  0.03181537
## 59        -0.87658763        0.17908874         -2.10223158 -0.03818128
## 60         0.23107198        0.68651916         -1.56855670  0.28368767
## 61         0.76945312        0.37779383          0.46117919  0.53318051
## 62        -0.19203379        0.47537773         -0.12758531  0.50406856
## 63         1.12903457        0.28368767         -1.71527720  0.36416334
## 64        -2.42690063        0.97421613         -1.28735798 -0.89542793
## 65        -0.53318051        0.48967276         -0.41912210 -0.16617364
## 66        -0.56275157        0.50406856         -0.40526982  0.01272434
## 67        -0.37779383        0.33710120         -0.20501110  0.08918610
## 68         1.41400510        0.25729077          0.62344075  0.63896971
## 69        -0.28368767        0.35060018         -0.46117919  0.35060018
## 70         0.39149488        0.11476746         -0.85805346  0.40526982
## 71        -1.66232963        0.59282318         -1.12903457  0.21802303
## 72         1.17854682        0.60806071          0.63896971  0.62344075
## 73        -0.93409710        0.56275157         -0.60806071 -0.11476746
## 74        -2.80216172        1.03752256         -1.31706374 -0.87658763
## 75        -1.61367018        0.76945312         -1.01596791 -0.75245638
## 76        -0.48967276        0.16617364         -0.71909690  0.56275157
## 77        -1.41400510        0.62344075         -1.41400510  0.33710120
## 78        -1.48684468        0.65465430         -0.97421613  0.60806071
## 79        -0.29695946       -0.08918610         -0.50406856 -0.27046566
## 80         0.37779383       -0.05091800          0.37779383  0.44707302
## 81        -0.40526982        0.10196844         -0.08918610 -0.25729077
## 82         0.15328619       -0.01272434          0.15328619  0.10196844
## 83        -0.65465430        0.01272434         -0.43305527 -0.67050162
## 84         0.20501110        0.05091800         -0.31028376 -0.12758531
## 85        -1.23113036        0.08918610         -0.87658763 -0.06366298
## 86        -0.54790615        0.44005334         -0.53318051  0.07641832
## 87        -0.47537773        0.44005334         -0.48967276 -0.71909690
## 88        -1.77352271        0.80413364         -1.10528634 -1.01596791
## 89        -0.76945312        0.02545075          0.56275157 -0.10196844
## 90        -1.91230127       -0.11476746         -1.20442230 -1.23113036
## 91        -0.82184079       -0.71909690         -0.35060018 -0.85805346
## 92        -1.01596791       -0.91459156         -0.68651916 -0.63896971
## 93        -1.52642702       -0.65465430         -1.05957037 -0.39149488
## 94         0.07641832       -0.99487522          0.08918610 -0.57772207
## 95         0.95396468       -0.85805346          0.51856960 -0.68651916
## 96         0.31028376       -0.67050162          0.16617364 -1.03752256
## 97        -0.05091800       -0.76945312          0.29695946 -0.62344075
## 98         0.32366339       -0.63896971          0.17908874 -0.97421613
## 99        -0.17908874        0.67050162         -0.11476746  0.57772207
## 100       -0.67050162       -0.82184079         -0.47537773 -1.08214564
## 101       -1.28735798       -0.75245638         -0.93409710 -0.80413364
## 102       -1.03752256       -0.97421613         -0.70271480 -0.73567430
## 103       -0.97421613       -0.78667510         -0.65465430 -0.44707302
## 104        0.08918610       -0.93409710          0.10196844 -0.48967276
## 105       -0.95396468       -0.68651916         -0.63896971 -0.35060018
## 106        0.97421613       -0.50406856          0.53318051 -0.14042416
## 107        0.27046566        0.29695946          0.25729077  0.59282318
## 108       -0.80413364        0.63896971          0.20501110  0.65465430
## 109       -0.71909690        0.23107198         -0.39149488  0.46117919
```

```
## 110       -0.14042416        0.53318051         -0.57772207  0.20501110
## 111       -0.11476746        0.73567430         -0.19203379  0.32366339
## 112        0.41912210        0.24416040         -1.52642702 -0.40526982
## 113       -0.99487522       -0.83980946         -0.67050162 -0.51856960
## 114       -1.83849262        0.00000000         -1.17854682 -1.20442230
## 115       -0.50406856       -1.03752256         -0.83980946 -0.65465430
## 116       -1.25874673       -0.70271480         -0.91459156 -0.76945312
## 117       -0.44707302       -0.87658763         -0.02545075 -0.82184079
## 118        0.00000000       -0.89542793         -0.01272434 -0.54790615
## 119        0.53318051       -0.80413364          0.11476746 -0.99487522
## 120       -2.10223158       -1.28735798         -1.25874673 -2.80216172
## 121       -0.85805346       -1.52642702         -0.37779383 -1.91230127
## 122       -1.12903457       -2.10223158         -0.80413364 -1.56855670
## 123       -1.56855670       -1.38024023         -1.15343724 -1.28735798
## 124        0.05091800       -2.80216172         -0.07641832 -1.48684468
## 125        0.91459156       -1.83849262          0.47537773 -1.61367018
## 126        0.28368767       -1.41400510          0.01272434 -2.10223158
## 127       -0.06366298       -1.61367018          0.24416040 -1.52642702
## 128        0.29695946       -1.34797950          0.03818128 -1.99828954
## 129       -0.20501110       -1.10528634         -0.21802303 -0.95396468
## 130       -0.68651916       -1.71527720         -0.54790615 -2.23555842
## 131       -1.34797950       -1.56855670         -1.03752256 -1.77352271
## 132       -1.15343724       -2.42690063         -0.82184079 -1.66232963
## 133       -1.08214564       -1.66232963         -0.75245638 -1.34797950
## 134        0.06366298       -2.23555842         -0.06366298 -1.38024023
## 135       -1.05957037       -1.44946373         -0.73567430 -1.25874673
## 136        0.93409710       -1.31706374          0.50406856 -1.17854682
## 137        0.25729077       -1.17854682          0.12758531 -0.93409710
## 138       -0.83980946       -1.12903457          0.07641832 -0.83980946
## 139       -0.73567430       -1.23113036         -0.51856960 -1.05957037
## 140       -0.15328619       -1.15343724         -0.62344075 -1.15343724
## 141       -0.12758531       -1.08214564         -0.28368767 -1.10528634
## 142        0.40526982       -1.20442230         -1.61367018 -1.31706374
## 143       -1.10528634       -1.77352271         -0.76945312 -1.41400510
## 144       -1.99828954       -1.25874673         -1.23113036 -2.42690063
## 145       -1.31706374       -1.48684468         -0.99487522 -1.71527720
## 146       -0.46117919       -1.91230127         -0.15328619 -1.83849262
## 147       -0.01272434       -1.99828954         -0.14042416 -1.44946373
## 148       -0.31028376        1.20442230          0.73567430  0.97421613
## 149        1.23113036        1.48684468          0.78667510  1.34797950
## 150        1.08214564        1.61367018          0.67050162  1.03752256
## 151        1.71527720        1.25874673          0.71909690  1.99828954
## 152        2.42690063        1.34797950          2.80216172  1.77352271
## 153       -0.24416040        1.99828954          0.99487522  1.44946373
## 154       -0.75245638        1.23113036          0.68651916  0.91459156
## 155        1.01596791        0.95396468          0.97421613  0.95396468
## 156        1.31706374        1.10528634          1.77352271  1.71527720
## 157        1.99828954        1.52642702          1.34797950  1.23113036
## 158        0.12758531        1.01596791          0.70271480  1.17854682
## 159        1.38024023        1.91230127          0.76945312  1.41400510
## 160        1.83849262        1.17854682          1.91230127  1.91230127
## 161        0.89542793        1.38024023          1.44946373  1.83849262
## 162        2.10223158        1.08214564          0.75245638  1.56855670
## 163       -0.78667510        2.42690063          0.83980946  0.73567430
## 164        0.60806071        1.41400510          1.25874673  1.05957037
```

```
## 165        0.51856960        1.44946373          1.28735798  1.20442230
## 166        0.75245638        1.12903457          1.41400510  1.28735798
## 167        2.80216172        1.05957037          2.23555842  2.80216172
## 168        0.82184079        1.15343724          1.20442230  1.52642702
## 169        1.61367018        0.93409710          1.03752256  1.61367018
## 170       -0.51856960        1.66232963          0.87658763  1.38024023
## 171        2.23555842        1.71527720          2.42690063  2.42690063
## 172        0.03818128        1.56855670          1.10528634  1.10528634
## 173       -0.91459156        2.80216172          0.82184079  0.75245638
## 174       -0.39149488        2.10223158          0.93409710  0.78667510
## 175        0.65465430        0.99487522          1.05957037  2.10223158
## 176       -0.32366339        1.77352271          0.80413364  1.48684468
## 177       -0.35060018        1.83849262          0.95396468  2.23555842
## 178        0.80413364        0.75245638          1.15343724  0.99487522
## 179        1.52642702        0.78667510          1.83849262  1.66232963
## 180        0.73567430        0.91459156          1.48684468  1.01596791
## 181        1.20442230        0.82184079          1.56855670  1.31706374
## 182        0.35060018        0.83980946          1.23113036  0.83980946
## 183        1.34797950        0.87658763          1.38024023  1.08214564
## 184       -0.27046566        0.89542793          1.01596791  1.15343724
## 185        0.57772207        1.30206724          1.12903457  1.25874673
## 186        0.67050162        1.30206724          1.17854682  0.80413364
## 187       -0.57772207        2.23555842          0.89542793  0.70271480
## 188        0.21802303        0.85805346          2.10223158  1.12903457
## 189       -0.59282318        0.70271480          0.85805346  0.67050162
## 190        0.19203379       -0.62344075          1.31706374  0.76945312
## 191        0.02545075       -1.01596791          1.08214564  0.85805346
## 192       -0.36416334       -0.59282318          0.91459156  0.93409710
## 193        1.15343724       -1.05957037          1.52642702  0.89542793
## 194        1.91230127       -0.95396468          1.99828954  0.82184079
## 195        1.44946373       -0.60806071          1.61367018  0.68651916
## 196        1.05957037       -0.73567430          1.71527720  0.87658763
## 197        1.48684468       -0.53318051          1.66232963  0.71909690
##      LZSE.W.ADC LGLZE.W.ADC HGLZE.W.ADC SZLGE.W.ADC SZHGE.W.ADC LZLGE.W.ADC
## 1   -1.20442230  0.02545075 -0.73567430  0.05091800 -0.73567430 -0.03818128
## 2   -0.41912210 -0.33710120  0.46117919 -0.33710120  0.47537773 -0.39149488
## 3    0.24416040 -0.32366339 -0.76945312 -0.32366339 -0.76945312 -0.31028376
## 4   -0.68651916 -0.24416040  0.75245638 -0.25729077  0.75245638 -0.01272434
## 5   -0.15328619 -0.39149488  0.14042416 -0.39149488  0.14042416 -0.41912210
## 6   -1.01596791 -0.41912210  1.23113036 -0.41912210  1.23113036 -0.46117919
## 7   -0.20501110 -0.25729077  0.85805346 -0.24416040  0.85805346 -0.28368767
## 8    0.02545075 -0.40526982  0.47537773 -0.40526982  0.46117919 -0.44707302
## 9   -1.48684468 -0.01272434  0.53318051  0.02545075  0.53318051 -0.06366298
## 10  -0.24416040 -0.35060018 -0.15328619 -0.35060018 -0.15328619 -0.37779383
## 11  -0.76945312 -0.11476746  0.73567430 -0.11476746  0.73567430 -0.17908874
## 12  -0.91459156 -0.12758531 -0.28368767 -0.12758531 -0.28368767 -0.19203379
## 13   0.56275157 -0.47537773 -1.25874673 -0.48967276 -1.25874673 -0.47537773
## 14  -0.78667510 -0.48967276  1.05957037 -0.47537773  1.05957037 -0.51856960
## 15   0.37779383 -0.51856960  0.05091800 -0.51856960  0.05091800 -0.54790615
## 16  -0.59282318 -0.06366298  0.48967276 -0.02545075  0.48967276 -0.12758531
## 17  -0.21802303 -0.37096997  0.44707302 -0.36416334  0.43305527 -0.40526982
## 18  -0.67050162  0.08918610 -0.10196844  0.08918610 -0.07641832  0.14042416
## 19   0.16617364 -0.43305527 -0.80413364 -0.43305527 -0.80413364 -0.43305527
## 20   0.06366298  0.31028376  0.27046566  0.23107198  0.29695946  1.48684468
## 21  -0.08918610 -0.44707302  0.67050162 -0.44707302  0.68651916 -0.48967276
```

```
## 22  -0.36416334  0.24416040 -1.48684468  0.28368767 -1.48684468  0.17908874
## 23   0.17908874 -0.07641832 -1.99828954 -0.03818128 -2.10223158 -0.10196844
## 24  -0.54790615 -0.27046566  0.50406856 -0.27046566  0.50406856 -0.29695946
## 25   0.35060018 -0.19203379 -0.82184079 -0.19203379 -0.82184079 -0.21802303
## 26  -0.53318051  0.27046566 -0.27046566  0.24416040 -0.16617364  0.53318051
## 27  -0.33710120 -0.15328619 -0.36416334 -0.14042416 -0.36416334 -0.16617364
## 28   0.14042416 -0.08918610 -0.83980946 -0.05091800 -0.83980946 -0.11476746
## 29  -0.71909690 -0.29695946 -0.47537773 -0.29695946 -0.47537773 -0.33710120
## 30   0.60806071 -0.37096997 -1.66232963 -0.37779383 -1.77352271 -0.35060018
## 31  -2.10223158  0.29695946 -1.71527720  0.31028376 -1.66232963  0.21802303
## 32  -0.19203379 -0.50406856  0.35060018 -0.50406856  0.36416334 -0.53318051
## 33   0.51856960  0.07641832  0.65465430  0.06366298  0.59282318  2.42690063
## 34   0.27046566  0.10196844 -0.78667510  0.10196844 -0.78667510  0.01272434
## 35  -0.80413364 -0.28368767 -0.62344075 -0.28368767 -0.51856960 -0.32366339
## 36  -0.32366339 -0.31028376  0.76945312 -0.31028376  0.76945312 -0.36416334
## 37  -0.70271480  0.62344075  0.31028376  0.39149488  0.35060018  1.12903457
## 38   0.39149488  0.01272434 -0.43305527  0.03818128 -0.46117919 -0.05091800
## 39  -0.82184079 -0.05091800 -0.05091800 -0.07641832 -0.05091800  0.00000000
## 40   0.36416334 -0.46117919 -0.57772207 -0.46117919 -0.50406856 -0.50406856
## 41   0.03818128  0.03818128  0.12758531 -0.01272434  0.11476746  0.24416040
## 42   0.28368767  0.00000000 -1.61367018 -0.08918610 -1.61367018  0.03818128
## 43   0.41912210  0.25729077  0.39149488  0.17908874  0.37779383  2.10223158
## 44  -2.23555842  0.28368767 -1.77352271  0.29695946 -1.71527720  0.19203379
## 45  -0.25729077  0.89542793 -1.83849262  0.91459156 -1.83849262  0.76945312
## 46  -0.39149488  0.54790615  0.16617364  0.57772207  0.16617364  0.46117919
## 47  -1.25874673  0.85805346  1.08214564  0.87658763  1.08214564  0.73567430
## 48   0.05091800  0.57772207 -0.91459156  0.59282318 -0.91459156  0.47537773
## 49   0.48967276  0.93409710 -2.42690063  0.95396468 -2.42690063  0.82184079
## 50  -0.27046566  0.43305527  0.37779383  0.44707302  0.39149488  0.35060018
## 51  -0.50406856  0.36416334  0.08918610  0.36416334  0.10196844  0.28368767
## 52  -0.40526982  0.56275157  0.54790615  0.56275157  0.54790615  0.50406856
## 53  -0.07641832  0.87658763  0.82184079  0.82184079  0.82184079  1.20442230
## 54   0.29695946  0.63896971 -1.91230127  0.63896971 -1.91230127  0.51856960
## 55   0.43305527  0.95396468 -2.80216172  0.97421613 -2.80216172  0.83980946
## 56  -1.23113036  0.82184079 -0.65465430  0.83980946 -0.62344075  0.70271480
## 57  -0.12758531  0.50406856  0.83980946  0.51856960  0.83980946  0.39149488
## 58  -0.03818128  0.40526982  0.11476746  0.41912210  0.12758531  0.32366339
## 59  -1.44946373  0.99487522 -2.10223158  0.99487522 -1.99828954  0.87658763
## 60   0.23107198  0.60806071 -0.03818128  0.62344075 -0.03818128  0.63896971
## 61  -0.11476746  1.28735798 -0.29695946  1.03752256 -0.29695946  1.91230127
## 62  -0.31028376  0.46117919 -0.12758531  0.47537773 -0.12758531  0.37779383
## 63   0.15328619  0.44707302  0.51856960  0.46117919  0.51856960  0.36416334
## 64   0.63896971  0.39149488 -0.60806071  0.40526982 -0.63896971  0.31028376
## 65  -0.65465430  0.70271480 -1.52642702  0.69459421 -1.52642702  0.59282318
## 66   0.21802303  0.53318051 -0.63896971  0.54790615 -0.65465430  0.44707302
## 67  -0.01272434  0.48967276 -0.67050162  0.50406856 -0.67050162  0.40526982
## 68  -0.75245638  0.97421613  0.40526982  0.89542793  0.44707302  1.34797950
## 69   0.33710120  0.59282318 -0.01272434  0.60806071 -0.01272434  0.48967276
## 70  -1.99828954  0.80413364  1.10528634  0.80413364  1.10528634  0.68651916
## 71  -0.17908874  0.75245638 -0.85805346  0.76945312 -0.85805346  0.65465430
## 72  -0.29695946  0.78667510  1.44946373  0.75245638  1.44946373  0.75245638
## 73  -0.43305527  0.76945312 -0.97421613  0.78667510 -0.97421613  0.67050162
## 74   0.65465430  0.67050162 -0.48967276  0.67050162 -0.53318051  0.56275157
## 75   0.00000000  0.73567430 -0.39149488  0.73567430 -0.39149488  0.62344075
## 76  -0.02545075  0.83980946 -0.31028376  0.85805346 -0.31028376  0.71909690
```

```
## 77   0.25729077  0.91459156 -2.23555842  0.93409710 -2.23555842  0.78667510
## 78  -0.37779383  0.71909690 -0.68651916  0.71909690 -0.68651916  0.60806071
## 79   0.20501110 -0.03181537 -0.02545075  0.01272434 -0.02545075 -0.08918610
## 80   0.19203379 -0.17908874  0.93409710 -0.17908874  0.93409710 -0.23107198
## 81   0.01272434 -0.14042416  0.10196844 -0.16617364  0.06366298 -0.14042416
## 82  -0.44707302 -0.23107198  0.21802303 -0.23107198  0.21802303 -0.27046566
## 83   0.47537773 -0.10196844 -0.17908874 -0.10196844 -0.23107198 -0.15328619
## 84  -0.35060018  0.06366298 -0.93409710  0.07641832 -0.95396468 -0.02545075
## 85  -0.23107198 -0.03181537 -1.28735798  0.00000000 -1.28735798 -0.07641832
## 86   0.50406856 -0.20501110  1.20442230 -0.20501110  1.20442230 -0.24416040
## 87   0.46117919 -0.16617364  0.91459156 -0.15328619  0.89542793 -0.20501110
## 88   0.62344075 -0.21802303 -0.50406856 -0.21802303 -0.54790615 -0.25729077
## 89   0.44707302  0.11476746 -0.87658763  0.11476746 -0.87658763  0.02545075
## 90   0.57772207 -0.78667510 -0.53318051 -0.76945312 -0.57772207 -0.78667510
## 91  -0.16617364 -0.82184079 -0.23107198 -0.80413364 -0.19203379 -0.82184079
## 92  -1.05957037 -0.70271480 -1.05957037 -0.70271480 -1.05957037 -0.71909690
## 93  -0.85805346 -0.56275157 -0.70271480 -0.54790615 -0.70271480 -0.57772207
## 94  -1.17854682 -0.87658763  1.01596791 -0.85805346  1.01596791 -0.87658763
## 95  -0.73567430 -0.54790615  0.59282318 -0.57772207  0.63896971  0.20501110
## 96   0.31028376 -0.89542793  0.02545075 -0.87658763  0.02545075 -0.89542793
## 97  -1.10528634 -0.80413364  0.07641832 -0.78667510  0.08918610 -0.80413364
## 98   0.32366339 -0.83980946  0.03818128 -0.82184079  0.03818128 -0.83980946
## 99  -0.28368767  0.68651916 -0.11476746  0.69459421 -0.11476746  0.57772207
## 100  0.40526982 -0.76945312 -0.19203379 -0.75245638 -0.24416040 -0.76945312
## 101 -0.60806071 -0.71909690 -1.34797950 -0.71909690 -1.34797950 -0.73567430
## 102 -1.08214564 -0.85805346 -1.08214564 -0.83980946 -1.08214564 -0.85805346
## 103 -0.93409710 -0.59282318 -1.01596791 -0.59282318 -1.01596791 -0.60806071
## 104 -1.15343724 -0.75245638  1.03752256 -0.73567430  1.03752256 -0.75245638
## 105 -0.89542793 -0.53318051 -0.99487522 -0.53318051 -0.99487522 -0.56275157
## 106 -0.47537773  0.05091800  0.60806071 -0.06366298  0.65465430  0.85805346
## 107 -0.05091800  0.51856960 -0.44707302  0.53318051 -0.43305527  0.43305527
## 108  0.12758531  0.32366339 -0.21802303  0.32366339 -0.17908874  0.23107198
## 109 -0.14042416  0.41912210 -0.07641832  0.43305527 -0.08918610  0.33710120
## 110  0.11476746  0.33710120  0.63896971  0.33710120  0.57772207  0.25729077
## 111  0.08918610  0.37779383 -0.33710120  0.37779383 -0.33710120  0.29695946
## 112  0.07641832  0.35060018  0.25729077  0.35060018  0.27046566  0.27046566
## 113 -0.95396468 -0.62344075 -1.03752256 -0.62344075 -1.03752256 -0.63896971
## 114  0.59282318 -0.68651916 -0.51856960 -0.68651916 -0.56275157 -0.70271480
## 115 -0.63896971 -0.57772207 -0.32366339 -0.56275157 -0.32366339 -0.59282318
## 116 -0.56275157 -0.65465430 -1.31706374 -0.65465430 -1.31706374 -0.67050162
## 117 -0.48967276 -0.63896971  0.43305527 -0.63896971  0.41912210 -0.65465430
## 118 -1.03752256 -0.60806071  0.71909690 -0.60806071  0.71909690 -0.62344075
## 119 -0.87658763 -0.67050162  0.15328619 -0.67050162  0.15328619 -0.68651916
## 120  0.53318051 -1.83849262 -0.56275157 -1.83849262 -0.60806071 -1.83849262
## 121 -0.99487522 -1.99828954 -0.25729077 -1.99828954 -0.21802303 -1.99828954
## 122 -1.77352271 -1.61367018 -1.17854682 -1.61367018 -1.17854682 -1.61367018
## 123 -1.52642702 -1.34797950 -0.71909690 -1.31706374 -0.71909690 -1.34797950
## 124 -2.80216172 -2.42690063  0.97421613 -2.42690063  0.97421613 -2.42690063
## 125 -1.41400510 -1.31706374  0.56275157 -1.34797950  0.60806071 -1.28735798
## 126 -0.10196844 -2.80216172  0.00000000 -2.80216172  0.00000000 -2.80216172
## 127 -1.91230127 -1.91230127  0.06366298 -1.91230127  0.07641832 -1.91230127
## 128 -0.06366298 -2.10223158  0.01272434 -2.10223158  0.01272434 -2.10223158
## 129 -1.12903457 -0.95396468 -0.14042416 -0.95396468 -0.14042416 -0.97421613
## 130  0.10196844 -1.77352271 -0.20501110 -1.77352271 -0.25729077 -1.77352271
## 131 -1.38024023 -1.66232963 -1.41400510 -1.66232963 -1.41400510 -1.66232963
```

```
## 132 -1.83849262 -2.23555842 -1.20442230 -2.23555842 -1.20442230 -2.23555842
## 133 -1.61367018 -1.38024023 -1.12903457 -1.38024023 -1.12903457 -1.38024023
## 134 -2.42690063 -1.71527720  0.99487522 -1.71527720  0.99487522 -1.71527720
## 135 -1.56855670 -1.28735798 -1.10528634 -1.28735798 -1.10528634 -1.31706374
## 136 -1.28735798 -1.25874673  0.57772207 -1.25874673  0.62344075 -0.93409710
## 137 -0.83980946 -1.05957037 -0.46117919 -1.05957037 -0.44707302 -1.08214564
## 138 -0.46117919 -1.23113036 -0.24416040 -1.23113036 -0.20501110 -1.25874673
## 139 -0.97421613 -1.10528634 -0.08918610 -1.10528634 -0.10196844 -1.12903457
## 140 -0.51856960 -1.17854682  0.62344075 -1.17854682  0.56275157 -1.20442230
## 141 -0.57772207 -1.12903457 -0.35060018 -1.12903457 -0.35060018 -1.15343724
## 142 -0.62344075 -1.15343724  0.24416040 -1.15343724  0.25729077 -1.17854682
## 143 -1.66232963 -1.44946373 -1.15343724 -1.44946373 -1.15343724 -1.44946373
## 144  0.54790615 -1.56855670 -0.54790615 -1.56855670 -0.59282318 -1.56855670
## 145 -1.34797950 -1.52642702 -1.38024023 -1.52642702 -1.38024023 -1.52642702
## 146 -1.31706374 -1.48684468  0.41912210 -1.48684468  0.40526982 -1.48684468
## 147 -1.71527720 -1.41400510  0.70271480 -1.41400510  0.70271480 -1.41400510
## 148  1.91230127  1.99828954 -1.44946373  2.10223158 -1.44946373  1.71527720
## 149  0.99487522  1.08214564  1.52642702  1.10528634  1.52642702  0.95396468
## 150  0.83980946  1.01596791  1.34797950  1.01596791  1.38024023  0.89542793
## 151  0.89542793  1.23113036  1.66232963  1.25874673  1.66232963  1.10528634
## 152  1.12903457  1.83849262  1.77352271  1.71527720  1.77352271  1.99828954
## 153  1.48684468  1.34797950 -0.89542793  1.34797950 -0.89542793  1.15343724
## 154  1.66232963  2.10223158 -1.56855670  2.23555842 -1.56855670  1.77352271
## 155  0.70271480  1.71527720  0.23107198  1.77352271  0.28368767  1.52642702
## 156  1.08214564  1.17854682  1.83849262  1.20442230  1.83849262  1.01596791
## 157  1.15343724  1.05957037  1.41400510  1.08214564  1.41400510  0.93409710
## 158  0.68651916  2.42690063 -0.95396468  2.42690063 -0.93409710  1.83849262
## 159  1.41400510  1.31706374  1.12903457  1.31706374  1.12903457  1.31706374
## 160  1.10528634  2.80216172  0.80413364  2.80216172  0.80413364  2.80216172
## 161  0.95396468  1.12903457  0.95396468  1.15343724  0.95396468  0.99487522
## 162  1.28735798  1.10528634  1.61367018  1.12903457  1.61367018  0.97421613
## 163  2.42690063  1.03752256  0.29695946  1.05957037  0.24416040  0.91459156
## 164  0.82184079  1.41400510 -0.75245638  1.41400510 -0.75245638  1.23113036
## 165  1.38024023  1.20442230  0.28368767  1.23113036  0.23107198  1.05957037
## 166  1.20442230  1.15343724  0.20501110  1.17854682  0.20501110  1.03752256
## 167  0.78667510  2.23555842  1.56855670  1.91230127  1.56855670  2.23555842
## 168  1.61367018  1.25874673  1.17854682  1.28735798  1.17854682  1.08214564
## 169  0.67050162  1.66232963  2.23555842  1.66232963  2.23555842  1.44946373
## 170  1.03752256  1.52642702 -0.06366298  1.56855670 -0.06366298  1.38024023
## 171  0.97421613  1.61367018  2.80216172  1.52642702  2.80216172  1.61367018
## 172  0.87658763  1.56855670 -0.40526982  1.61367018 -0.40526982  1.41400510
## 173  2.80216172  1.38024023  0.36416334  1.38024023  0.33710120  1.17854682
## 174  1.23113036  1.48684468  0.68651916  1.48684468  0.67050162  1.28735798
## 175  1.17854682  1.77352271  0.78667510  1.83849262  0.78667510  1.56855670
## 176  1.44946373  1.91230127 -1.23113036  1.99828954 -1.23113036  1.66232963
## 177  0.91459156  1.44946373  0.19203379  1.44946373  0.19203379  1.25874673
## 178  1.34797950  0.22454273  1.15343724  0.27046566  1.15343724  0.15328619
## 179  1.31706374  0.16617364  1.99828954  0.16617364  1.99828954  0.08918610
## 180  1.25874673  0.19203379  1.38024023  0.19203379  1.31706374  0.12758531
## 181  0.85805346  0.12758531  1.48684468  0.12758531  1.48684468  0.05091800
## 182  1.83849262  0.20501110  0.89542793  0.21802303  0.87658763  0.11476746
## 183  0.93409710  0.47537773 -0.37779383  0.48967276 -0.37779383  0.41912210
## 184  1.01596791  0.22454273 -0.59282318  0.25729077 -0.48967276  0.16617364
## 185  1.99828954  0.15328619  2.42690063  0.15328619  2.42690063  0.07641832
## 186  1.77352271  0.17908874  1.91230127  0.20501110  1.91230127  0.10196844
```

```
## 187  2.23555842  0.14042416  0.33710120  0.14042416  0.32366339  0.06366298
## 188  1.71527720  0.65465430 -0.16617364  0.65465430 -0.27046566  0.54790615
## 189  2.10223158 -0.97421613  0.32366339 -0.97421613  0.31028376 -0.99487522
## 190  1.05957037 -1.01596791  0.87658763 -1.01596791  0.91459156 -1.03752256
## 191  0.75245638 -0.93409710 -0.41912210 -0.93409710 -0.41912210 -0.95396468
## 192  0.76945312 -0.91459156  0.17908874 -0.89542793  0.17908874 -0.91459156
## 193  0.71909690 -1.08214564  2.10223158 -1.08214564  2.10223158 -1.10528634
## 194  0.80413364 -0.73567430  1.71527720 -0.91459156  1.71527720  0.80413364
## 195  1.52642702 -1.20442230  1.25874673 -1.20442230  1.25874673 -1.23113036
## 196  0.73567430 -0.99487522  1.31706374 -0.99487522  1.34797950 -1.01596791
## 197  1.56855670 -1.03752256  1.28735798 -1.03752256  1.28735798 -1.05957037
##     LZHGE.W.ADC GLNU_area.W.ADC  ZSNU.W.ADC   ZSP.W.ADC GLNU_norm.W.ADC
## 1   -0.78667510     -1.44946373 -1.38024023  0.48967276      0.03818128
## 2    0.44707302     -0.83980946 -0.75245638 -0.32366339     -0.11476746
## 3   -0.73567430     -0.46117919 -0.28368767  0.29695946      0.29695946
## 4    0.67050162      0.11476746  0.37779383  0.25729077     -0.43305527
## 5    0.16617364     -0.93409710 -0.57772207 -0.06366298      0.33037484
## 6    1.20442230     -1.17854682 -0.51856960  0.44707302     -0.51856960
## 7    0.85805346     -1.34797950 -1.23113036 -0.03818128     -0.28368767
## 8    0.59282318     -0.57772207 -0.53318051 -0.17908874     -0.14042416
## 9    0.35060018     -1.52642702 -1.34797950  0.62344075     -0.46117919
## 10  -0.27046566     -1.10528634 -0.71909690 -0.08918610     -0.39149488
## 11   0.57772207     -0.50406856 -0.35060018  0.24416040     -0.21802303
## 12  -0.43305527     -0.05091800  0.19203379  0.43305527     -0.36416334
## 13  -1.20442230      0.75245638  0.40526982 -0.91459156      0.01272434
## 14   0.95396468     -0.32366339 -0.06366298  0.39149488     -0.23107198
## 15   0.10196844      1.25874673  1.31706374 -0.67050162     -0.20501110
## 16   0.41912210     -0.12758531 -0.03818128 -0.21802303     -0.16617364
## 17   0.40526982     -0.78667510 -0.99487522 -0.10196844     -0.07641832
## 18  -0.15328619      0.51856960  0.68651916  0.19203379     -0.33710120
## 19  -0.82184079      0.12758531  0.24416040  0.40526982     -0.31028376
## 20   0.24416040      0.71909690  0.97421613  0.56275157     -0.44707302
## 21   0.60806071      0.32366339  0.54790615 -0.11476746     -0.35060018
## 22  -1.48684468     -2.42690063 -1.83849262  0.14042416      0.06366298
## 23  -1.83849262      0.25729077 -0.16617364 -0.43305527      0.16617364
## 24   0.43305527      0.24416040  0.41912210  0.10196844     -0.41912210
## 25  -0.80413364     -0.54790615 -0.56275157 -0.62344075     -0.29695946
## 26  -0.25729077      0.65465430  0.80413364  0.07641832     -0.37779383
## 27  -0.48967276     -1.08214564 -0.70271480 -0.24416040      0.05091800
## 28  -0.83980946     -0.85805346 -0.73567430 -0.33710120     -0.15328619
## 29  -0.59282318     -1.15343724 -0.97421613  0.31028376     -0.02545075
## 30  -1.56855670      0.27046566 -0.21802303 -1.23113036      0.11476746
## 31  -1.91230127     -2.10223158 -1.99828954 -0.14042416      0.28368767
## 32   0.31028376      0.39149488  0.51856960 -0.07641832     -0.27046566
## 33   0.68651916      0.68651916  1.12903457 -0.65465430     -0.48967276
## 34  -0.75245638     -1.38024023 -1.25874673 -0.53318051     -0.19203379
## 35  -0.63896971     -0.87658763 -0.63896971 -0.70271480     -0.24416040
## 36   0.70271480     -0.11476746  0.23107198 -0.63896971      0.25729077
## 37   0.28368767      0.21802303  0.53318051  0.27046566     -0.50406856
## 38  -0.39149488     -1.66232963 -1.44946373 -0.68651916     -0.12758531
## 39  -0.14042416      0.73567430  0.78667510 -0.39149488     -0.25729077
## 40  -0.54790615      0.03818128 -0.31028376 -0.71909690      0.02545075
## 41   0.11476746      1.05957037  1.44946373 -0.20501110      0.10196844
## 42  -1.66232963     -0.48967276 -0.54790615 -0.48967276     -0.05091800
## 43   0.36416334      0.63896971  0.95396468 -0.46117919     -0.47537773
```

```
## 44  -1.99828954     -2.23555842 -2.10223158 -0.16617364      0.20501110
## 45  -1.77352271     -1.77352271 -1.91230127  0.12758531      0.93409710
## 46   0.15328619     -0.89542793 -0.65465430 -0.05091800      0.36416334
## 47   1.03752256     -1.41400510 -1.08214564  0.03818128      0.63896971
## 48  -0.91459156     -0.10196844  0.01272434  0.36416334      0.40526982
## 49  -2.42690063     -1.83849262 -2.23555842 -0.41912210      0.87658763
## 50   0.33710120      0.36416334  0.56275157  0.28368767      0.83980946
## 51   0.03818128      0.44707302  0.62344075 -0.36416334      0.50406856
## 52   0.51856960      0.57772207  0.82184079  0.59282318      0.54790615
## 53   0.82184079      0.78667510  1.48684468  0.51856960      0.15328619
## 54  -1.71527720     -0.47537773 -0.68651916  0.06366298      0.60806071
## 55  -2.80216172     -1.71527720 -2.42690063 -0.44707302      0.99487522
## 56  -0.71909690     -1.99828954 -1.77352271 -0.27046566      0.59282318
## 57   0.83980946     -0.41912210 -0.05091800  0.53318051      0.33037484
## 58   0.00000000      0.10196844  0.28368767  0.46117919      0.76945312
## 59  -2.10223158     -2.80216172 -2.80216172  0.37779383      0.89542793
## 60  -0.05091800      1.77352271  1.61367018  0.08918610      0.43305527
## 61  -0.31028376      0.76945312  1.17854682  0.57772207      0.23107198
## 62  -0.23107198      0.15328619  0.06366298 -0.12758531      0.41912210
## 63   0.53318051     -0.08918610  0.27046566  0.21802303      0.82184079
## 64  -0.29695946      0.80413364  0.36416334 -1.05957037      0.73567430
## 65  -1.52642702     -0.56275157 -0.62344075 -0.56275157      0.48967276
## 66  -0.60806071     -0.43305527 -0.50406856  0.01272434      0.47537773
## 67  -0.65465430      0.17908874  0.21802303  0.47537773      0.37779383
## 68   0.29695946      0.40526982  0.91459156  0.65465430      0.13400197
## 69  -0.01272434     -1.01596791 -1.10528634  0.05091800      0.53318051
## 70   1.01596791     -1.91230127 -1.71527720  0.11476746      0.56275157
## 71  -0.87658763     -0.02545075 -0.32366339  0.33710120      0.78667510
## 72   1.38024023      1.52642702  2.10223158  0.60806071      0.35060018
## 73  -0.95396468     -0.60806071 -0.76945312  0.63896971      0.68651916
## 74  -0.28368767      0.82184079  0.39149488 -0.97421613      0.91459156
## 75  -0.47537773      0.05091800 -0.29695946 -0.50406856      0.75245638
## 76  -0.40526982     -1.56855670 -1.48684468  0.32366339      0.67050162
## 77  -2.23555842     -1.25874673 -1.41400510  0.20501110      0.85805346
## 78  -0.67050162      0.08918610 -0.17908874 -0.59282318      0.71909690
## 79  -0.02545075     -1.03752256 -1.12903457 -0.31028376     -0.01272434
## 80   1.05957037      0.01272434  0.17908874 -0.02545075     -0.17908874
## 81   0.12758531      2.10223158  1.91230127 -0.15328619     -0.06366298
## 82   0.21802303      0.46117919  0.50406856  0.15328619     -0.32366339
## 83  -0.06366298      0.00000000 -0.12758531 -0.73567430      0.00000000
## 84  -0.93409710     -1.12903457 -1.05957037 -0.54790615     -0.03818128
## 85  -1.28735798     -0.16617364 -0.39149488  0.02545075      0.07641832
## 86   1.44946373      0.33710120  0.08918610 -0.80413364     -0.40526982
## 87   1.12903457      0.35060018  0.11476746 -0.75245638      0.08918610
## 88  -0.32366339      0.91459156  0.48967276 -1.17854682      0.19203379
## 89  -0.85805346     -0.99487522 -1.15343724  0.54790615     -0.10196844
## 90  -0.35060018      0.87658763  0.46117919 -1.71527720     -0.60806071
## 91  -0.17908874      1.38024023  1.08214564 -0.78667510     -0.76945312
## 92  -1.03752256     -0.67050162 -0.83980946 -0.40526982     -0.71909690
## 93  -0.68651916      0.07641832 -0.19203379 -1.15343724     -0.54790615
## 94   0.91459156     -0.35060018 -0.08918610 -0.35060018     -0.93409710
## 95   0.48967276     -0.24416040  0.15328619 -1.08214564     -0.95396468
## 96   0.07641832      1.20442230  1.25874673 -0.89542793     -0.89542793
## 97   0.02545075      0.43305527  0.60806071 -0.37779383     -0.91459156
## 98   0.08918610      1.23113036  1.28735798 -0.87658763     -0.85805346
```

```
## 99  -0.21802303      0.16617364  0.07641832 -0.01272434      0.57772207
## 100 -0.07641832     -0.01272434 -0.14042416 -1.03752256     -0.73567430
## 101 -1.34797950     -0.19203379 -0.41912210 -0.60806071     -0.68651916
## 102 -1.05957037     -0.68651916 -0.85805346 -0.47537773     -0.82184079
## 103 -0.99487522     -0.63896971 -0.80413364 -0.23107198     -0.63896971
## 104  0.93409710     -0.33710120 -0.07641832 -0.25729077     -0.87658763
## 105 -0.97421613     -0.62344075 -0.78667510 -0.19203379     -0.59282318
## 106  0.50406856     -0.23107198  0.16617364  0.00000000     -0.56275157
## 107 -0.56275157     -0.28368767 -0.01272434  0.41912210      0.31028376
## 108 -0.16617364      1.41400510  1.10528634  0.17908874      0.46117919
## 109 -0.11476746     -0.14042416 -0.25729077  0.50406856      0.17908874
## 110  0.63896971      0.54790615  0.65465430  0.16617364      0.27046566
## 111 -0.44707302      0.95396468  0.87658763  0.23107198      0.44707302
## 112  0.27046566     -0.95396468 -0.59282318  0.35060018      0.24416040
## 113 -1.01596791     -0.65465430 -0.82184079 -0.29695946     -0.65465430
## 114 -0.33710120      0.89542793  0.47537773 -1.61367018     -0.57772207
## 115 -0.41912210     -1.61367018 -1.52642702 -0.76945312     -0.67050162
## 116 -1.31706374     -0.17908874 -0.40526982 -0.51856960     -0.62344075
## 117  0.39149488     -0.80413364 -1.01596791 -0.57772207     -0.70271480
## 118  0.56275157     -0.51856960 -0.36416334 -0.28368767     -0.78667510
## 119  0.14042416     -0.91459156 -0.67050162 -0.82184079     -0.80413364
## 120 -0.37779383      0.83980946  0.43305527 -2.80216172     -1.38024023
## 121 -0.20501110      1.31706374  1.03752256 -1.77352271     -1.71527720
## 122 -1.15343724     -0.75245638 -0.93409710 -1.44946373     -1.61367018
## 123 -0.70271480      0.06366298 -0.20501110 -2.23555842     -1.25874673
## 124  0.87658763     -0.39149488 -0.11476746 -1.38024023     -2.42690063
## 125  0.46117919     -0.27046566  0.12758531 -2.10223158     -2.80216172
## 126  0.05091800      1.15343724  1.20442230 -1.91230127     -2.10223158
## 127  0.01272434      0.41912210  0.59282318 -1.41400510     -2.23555842
## 128  0.06366298      1.17854682  1.23113036 -1.83849262     -1.91230127
## 129 -0.24416040      0.14042416  0.05091800 -1.12903457     -1.08214564
## 130 -0.08918610     -0.03818128 -0.15328619 -1.99828954     -1.66232963
## 131 -1.41400510     -0.21802303 -0.44707302 -1.66232963     -1.52642702
## 132 -1.17854682     -0.76945312 -0.95396468 -1.48684468     -1.83849262
## 133 -1.10528634     -0.71909690 -0.89542793 -1.25874673     -1.44946373
## 134  0.89542793     -0.37779383 -0.10196844 -1.28735798     -1.99828954
## 135 -1.08214564     -0.70271480 -0.87658763 -1.20442230     -1.34797950
## 136  0.47537773     -0.25729077  0.14042416 -1.10528634     -1.28735798
## 137 -0.57772207     -0.29695946 -0.02545075 -0.85805346     -1.15343724
## 138 -0.19203379      1.34797950  1.05957037 -0.99487522     -1.10528634
## 139 -0.12758531     -0.15328619 -0.27046566 -0.83980946     -1.23113036
## 140  0.62344075      0.53318051  0.63896971 -1.01596791     -1.17854682
## 141 -0.46117919      0.93409710  0.85805346 -0.95396468     -1.12903457
## 142  0.25729077     -0.97421613 -0.60806071 -0.93409710     -1.20442230
## 143 -1.12903457     -0.73567430 -0.91459156 -1.34797950     -1.48684468
## 144 -0.36416334      0.85805346  0.44707302 -2.42690063     -1.31706374
## 145 -1.38024023     -0.20501110 -0.43305527 -1.52642702     -1.41400510
## 146  0.37779383     -0.82184079 -1.03752256 -1.56855670     -1.56855670
## 147  0.54790615     -0.53318051 -0.37779383 -1.31706374     -1.77352271
## 148 -1.44946373     -1.23113036 -1.56855670  0.97421613      2.10223158
## 149  1.56855670      1.01596791  1.34797950  1.48684468      1.91230127
## 150  1.28735798      1.10528634  1.41400510  1.03752256      1.28735798
## 151  1.66232963      1.28735798  1.52642702  2.10223158      1.34797950
## 152  1.77352271      1.48684468  1.99828954  1.77352271      1.03752256
## 153 -0.89542793      0.19203379  0.00000000  1.28735798      1.44946373
```

```
## 154 -1.61367018     -1.20442230 -1.61367018  0.95396468      2.80216172
## 155  0.17908874     -1.31706374 -1.31706374  1.10528634      1.41400510
## 156  1.83849262      0.23107198  0.35060018  1.83849262      1.10528634
## 157  1.23113036      0.62344075  0.83980946  1.66232963      1.71527720
## 158 -1.23113036     -1.48684468 -1.66232963  1.61367018      2.23555842
## 159  1.10528634      2.42690063  2.23555842  1.31706374      1.20442230
## 160  0.76945312      1.44946373  1.71527720  1.99828954      1.08214564
## 161  0.97421613      0.67050162  0.57772207  1.15343724      1.17854682
## 162  1.71527720      0.37779383  0.76945312  1.44946373      1.83849262
## 163  0.78667510      1.56855670  0.89542793  0.73567430      1.61367018
## 164 -0.76945312      0.02545075  0.02545075  0.89542793      1.25874673
## 165  0.32366339      0.20501110  0.03818128  1.20442230      1.23113036
## 166  0.23107198      0.70271480  0.75245638  1.71527720      1.15343724
## 167  1.52642702      1.03752256  1.56855670  2.80216172      1.01596791
## 168  1.17854682     -0.36416334 -0.46117919  1.25874673      1.31706374
## 169  1.99828954     -1.28735798 -1.28735798  1.34797950      1.38024023
## 170 -0.10196844      0.47537773  0.20501110  1.56855670      1.77352271
## 171  2.42690063      2.23555842  2.80216172  2.23555842      1.12903457
## 172 -0.51856960     -0.06366298 -0.23107198  2.42690063      1.52642702
## 173  0.80413364      1.61367018  0.93409710  0.75245638      2.42690063
## 174  0.65465430      0.56275157  0.25729077  0.93409710      1.66232963
## 175  0.71909690     -1.05957037 -1.20442230  1.52642702      1.48684468
## 176 -1.25874673     -0.59282318 -1.17854682  1.41400510      1.99828954
## 177  0.20501110      0.60806071  0.31028376  0.87658763      1.56855670
## 178  1.15343724     -0.40526982 -0.47537773  1.08214564      0.70271480
## 179  2.10223158      0.50406856  0.73567430  1.17854682      0.39149488
## 180  1.41400510      2.80216172  2.42690063  1.12903457      0.62344075
## 181  1.48684468      1.12903457  1.15343724  1.38024023      0.21802303
## 182  1.08214564      0.48967276  0.32366339  0.85805346      0.80413364
## 183 -0.50406856     -0.44707302 -0.33710120  0.91459156      0.65465430
## 184 -0.62344075      0.31028376  0.10196844  1.23113036      0.95396468
## 185  2.80216172      0.97421613  0.67050162  0.80413364      0.13400197
## 186  2.23555842      0.99487522  0.70271480  0.83980946      0.97421613
## 187  0.75245638      1.71527720  1.01596791  0.68651916      1.05957037
## 188 -0.03818128     -0.31028376 -0.48967276  1.91230127      0.51856960
## 189  0.73567430      1.66232963  0.99487522  0.67050162     -0.53318051
## 190  0.99487522      1.99828954  1.66232963  0.82184079     -0.83980946
## 191 -0.53318051     -0.07641832 -0.24416040  0.99487522     -0.75245638
## 192  0.19203379      0.59282318  0.29695946  0.70271480     -0.08918610
## 193  1.91230127      0.28368767  0.33710120  1.05957037     -1.03752256
## 194  1.61367018      0.29695946  0.71909690  0.71909690     -1.05957037
## 195  1.31706374      1.83849262  1.77352271  0.76945312     -0.99487522
## 196  1.25874673      1.08214564  1.38024023  1.01596791     -1.01596791
## 197  1.34797950      1.91230127  1.83849262  0.78667510     -0.97421613
##     ZSNU_norm.W.ADC GLVAR_area.W.ADC ZSVAR.W.ADC Entropy_area.W.ADC
## 1        0.43305527       0.43305527 -0.80413364        -1.66232963
## 2       -0.16617364      -0.21802303 -0.40526982        -0.39149488
## 3       -0.57772207       1.05957037  0.41912210         0.25729077
## 4        0.17908874       0.71909690 -0.44707302         0.39149488
## 5       -0.02545075       0.36416334 -0.15328619         0.03818128
## 6        0.35060018       1.77352271 -0.70271480         0.56275157
## 7        0.05091800       0.59282318 -0.16617364        -0.15328619
## 8       -0.23107198       0.00000000  0.05091800        -0.29695946
## 9        0.56275157      -0.25729077 -1.15343724        -1.31706374
## 10      -0.27046566       1.56855670 -0.29695946         0.33710120
```

```
## 11       0.11476746       0.10196844 -0.57772207        -0.05091800
## 12       0.32366339       0.51856960 -0.67050162         0.24416040
## 13      -1.41400510      -0.33710120  1.01596791        -0.46117919
## 14       0.28368767       0.06366298 -0.56275157        -0.06366298
## 15      -0.76945312       0.35060018  0.53318051         0.19203379
## 16      -0.06366298      -0.08918610 -0.51856960        -0.11476746
## 17      -0.37779383      -0.37779383 -0.35060018        -0.56275157
## 18       0.08918610       0.14042416 -0.54790615         0.23107198
## 19      -0.53318051       0.78667510  0.16617364         0.29695946
## 20      -0.31028376       0.82184079  0.20501110         0.51856960
## 21      -0.19203379       0.47537773 -0.10196844         0.31028376
## 22       0.36416334      -0.23107198 -0.20501110        -1.83849262
## 23      -0.59282318      -1.44946373  0.23107198        -1.71527720
## 24       0.07641832       0.50406856 -0.39149488         0.35060018
## 25      -0.70271480      -0.76945312  0.50406856        -0.53318051
## 26       0.03818128       0.44707302 -0.43305527         0.32366339
## 27       0.10196844       0.67050162 -0.27046566         0.08918610
## 28      -0.48967276      -0.07641832  0.17908874        -0.27046566
## 29       0.20501110       0.21802303 -0.47537773        -0.16617364
## 30      -1.83849262      -1.71527720  0.99487522        -1.23113036
## 31       0.62344075      -0.62344075 -1.23113036        -2.10223158
## 32      -0.12758531       0.62344075 -0.21802303         0.28368767
## 33      -0.65465430       0.99487522  1.31706374         0.60806071
## 34      -0.73567430       0.11476746  0.29695946        -0.31028376
## 35       0.21802303      -0.20501110 -0.65465430        -0.25729077
## 36      -0.01272434       0.80413364 -0.32366339         0.41912210
## 37       0.16617364       1.20442230 -0.50406856         0.57772207
## 38      -0.78667510       0.68651916  0.47537773        -0.47537773
## 39       0.27046566       0.46117919 -0.63896971         0.20501110
## 40      -0.85805346      -0.93409710  0.44707302        -0.73567430
## 41      -0.46117919       0.63896971 -0.07641832         0.44707302
## 42      -0.62344075      -0.60806071  0.43305527        -0.71909690
## 43      -0.51856960       0.87658763  0.78667510         0.54790615
## 44       0.60806071      -0.63896971 -1.28735798        -2.23555842
## 45       0.15328619      -0.91459156 -0.19203379        -1.99828954
## 46       0.48967276       0.54790615 -0.06366298        -0.02545075
## 47       0.59282318       1.66232963 -0.62344075         0.37779383
## 48       0.01272434      -0.43305527  0.21802303        -0.35060018
## 49      -0.68651916      -1.38024023  0.71909690        -1.91230127
## 50       0.37779383       0.15328619  0.01272434         0.27046566
## 51       0.47537773      -0.03818128 -0.23107198         0.14042416
## 52       0.46117919       0.56275157 -0.11476746         0.40526982
## 53       0.31028376       1.23113036  0.12758531         0.65465430
## 54      -0.10196844      -1.20442230  0.57772207        -1.05957037
## 55      -0.91459156      -2.23555842  0.54790615        -2.80216172
## 56       0.57772207      -0.10196844 -0.60806071        -1.48684468
## 57       0.24416040       0.17908874  0.03818128         0.21802303
## 58       0.19203379       1.01596791  0.07641832         0.46117919
## 59       0.63896971      -0.87658763 -0.78667510        -2.42690063
## 60      -0.15328619       0.24416040  0.48967276         0.12758531
## 61       0.39149488       0.76945312  0.11476746         0.43305527
## 62       0.33710120      -0.17908874 -0.17908874        -0.24416040
## 63      -0.05091800       1.12903457  0.39149488         0.59282318
## 64      -1.56855670      -2.42690063  1.48684468        -1.03752256
## 65       0.53318051      -0.53318051 -0.28368767        -0.67050162
```

```
## 66      -0.50406856      -0.56275157  0.35060018        -0.50406856
## 67       0.23107198      -0.41912210  0.15328619        -0.28368767
## 68       0.54790615       1.34797950 -0.31028376         0.62344075
## 69      -0.03818128      -0.28368767  0.59282318        -0.62344075
## 70       0.65465430       0.28368767 -0.91459156        -1.52642702
## 71       0.25729077      -1.66232963  0.02545075        -1.56855670
## 72       0.50406856       1.17854682 -0.01272434         0.63896971
## 73       0.51856960      -0.95396468 -0.08918610        -0.75245638
## 74      -1.61367018      -2.80216172  1.56855670        -1.17854682
## 75       0.12758531      -1.61367018  0.14042416        -1.28735798
## 76       0.41912210      -0.48967276  0.19203379        -0.91459156
## 77      -0.28368767      -1.41400510  0.46117919        -1.77352271
## 78       0.44707302      -1.48684468 -0.14042416        -1.34797950
## 79      -0.40526982      -0.29695946  0.40526982        -0.63896971
## 80      -0.56275157       0.37779383  0.24416040         0.36416334
## 81      -0.47537773      -0.46117919 -0.12758531        -0.07641832
## 82       0.06366298       0.16617364 -0.33710120        -0.01272434
## 83      -0.80413364      -0.65465430  0.63896971        -0.40526982
## 84      -0.24416040       0.20501110 -0.41912210        -0.36416334
## 85      -0.11476746      -1.23113036 -0.24416040        -1.12903457
## 86      -0.87658763      -0.54790615  0.73567430        -0.59282318
## 87      -0.83980946      -0.47537773  0.62344075        -0.48967276
## 88      -1.66232963      -1.77352271  1.25874673        -0.78667510
## 89      -1.08214564      -0.78667510  0.56275157        -0.70271480
## 90      -1.99828954      -1.91230127  0.89542793        -0.89542793
## 91      -0.71909690      -0.82184079 -0.46117919        -0.41912210
## 92      -0.39149488      -1.03752256 -1.01596791        -0.83980946
## 93      -0.32366339      -1.52642702 -0.85805346        -1.44946373
## 94      -0.21802303       0.03818128 -1.12903457        -0.14042416
## 95      -0.43305527       0.95396468 -0.76945312         0.50406856
## 96      -1.12903457       0.32366339  0.08918610         0.15328619
## 97      -0.35060018      -0.05091800 -1.05957037         0.10196844
## 98      -1.01596791       0.33710120  0.10196844         0.16617364
## 99       0.40526982      -0.16617364 -0.02545075        -0.21802303
## 100     -1.31706374      -0.67050162  0.37779383        -0.44707302
## 101     -0.60806071      -1.28735798 -0.75245638        -1.25874673
## 102     -0.41912210      -1.05957037 -1.17854682        -0.85805346
## 103     -0.29695946      -0.99487522 -0.89542793        -0.80413364
## 104     -0.14042416       0.05091800 -1.03752256        -0.12758531
## 105     -0.17908874      -0.97421613 -0.83980946        -0.76945312
## 106      0.02545075       0.97421613 -0.37779383         0.53318051
## 107      0.00000000       0.27046566 -0.03818128         0.11476746
## 108     -0.08918610      -0.80413364  0.33710120        -0.37779383
## 109      0.29695946      -0.73567430  0.06366298        -0.57772207
## 110     -0.20501110      -0.14042416  0.27046566         0.17908874
## 111     -0.07641832      -0.11476746  0.25729077        -0.23107198
## 112      0.14042416       0.41912210  0.32366339         0.02545075
## 113     -0.33710120      -1.01596791 -0.93409710        -0.82184079
## 114     -1.77352271      -1.83849262  0.95396468        -0.87658763
## 115     -0.44707302      -0.50406856 -0.68651916        -1.10528634
## 116     -0.54790615      -1.25874673 -0.71909690        -1.20442230
## 117     -0.63896971      -0.39149488 -0.73567430        -0.60806071
## 118     -0.36416334       0.08918610 -0.99487522        -0.08918610
## 119     -0.25729077       0.53318051 -0.82184079        -0.10196844
## 120     -2.80216172      -2.10223158  0.28368767        -1.15343724
```

```
## 121     -1.71527720      -0.85805346 -1.44946373        -0.51856960
## 122     -1.28735798      -1.15343724 -1.99828954        -0.99487522
## 123     -1.17854682      -1.56855670 -1.71527720        -1.61367018
## 124     -1.10528634       0.01272434 -2.42690063        -0.20501110
## 125     -1.38024023       0.91459156 -1.61367018         0.47537773
## 126     -2.10223158       0.29695946 -1.25874673         0.05091800
## 127     -1.23113036      -0.06366298 -2.23555842         0.00000000
## 128     -1.91230127       0.31028376 -1.20442230         0.06366298
## 129     -0.67050162      -0.19203379 -1.34797950        -0.32366339
## 130     -2.23555842      -0.68651916 -0.87658763        -0.54790615
## 131     -1.48684468      -1.34797950 -1.56855670        -1.41400510
## 132     -1.34797950      -1.17854682 -2.80216172        -1.01596791
## 133     -1.15343724      -1.10528634 -1.77352271        -0.95396468
## 134     -0.99487522       0.02545075 -2.10223158        -0.19203379
## 135     -1.03752256      -1.08214564 -1.66232963        -0.93409710
## 136     -0.89542793       0.93409710 -1.41400510         0.48967276
## 137     -0.93409710       0.25729077 -1.38024023         0.01272434
## 138     -0.97421613      -0.83980946 -0.95396468        -0.43305527
## 139     -0.75245638      -0.75245638 -1.31706374        -0.65465430
## 140     -1.05957037      -0.15328619 -1.08214564         0.07641832
## 141     -0.95396468      -0.12758531 -1.10528634        -0.33710120
## 142     -0.82184079       0.40526982 -0.97421613        -0.03818128
## 143     -1.20442230      -1.12903457 -1.83849262        -0.97421613
## 144     -2.42690063      -1.99828954  0.31028376        -1.08214564
## 145     -1.44946373      -1.31706374 -1.48684468        -1.38024023
## 146     -1.52642702      -0.40526982 -1.52642702        -0.68651916
## 147     -1.25874673       0.07641832 -1.91230127        -0.17908874
## 148      0.87658763      -0.31028376  1.91230127         0.70271480
## 149      1.52642702       1.25874673  0.91459156         1.66232963
## 150      1.77352271       1.10528634  0.75245638         1.48684468
## 151      1.71527720       1.71527720  0.83980946         1.77352271
## 152      1.44946373       2.42690063  1.12903457         2.80216172
## 153      1.17854682      -0.24416040  1.66232963         0.87658763
## 154      0.78667510      -0.70271480  1.52642702         0.67050162
## 155      2.23555842       1.03752256  0.36416334         0.76945312
## 156      1.38024023       1.31706374  0.97421613         1.61367018
## 157      1.31706374       1.99828954  1.03752256         1.91230127
## 158      2.42690063       0.12758531 -0.05091800         0.68651916
## 159      1.12903457       1.41400510  1.44946373         1.44946373
## 160      1.56855670       1.83849262  1.10528634         1.83849262
## 161      1.48684468       0.89542793  0.76945312         1.28735798
## 162      1.20442230       2.10223158  1.34797950         2.10223158
## 163      0.71909690      -0.71909690  2.42690063         0.89542793
## 164      1.99828954       0.60806071  0.68651916         1.03752256
## 165      0.91459156       0.48967276  1.28735798         1.12903457
## 166      1.34797950       0.75245638  1.17854682         1.25874673
## 167      2.10223158       2.80216172  0.67050162         2.23555842
## 168      1.23113036       0.85805346  1.71527720         1.08214564
## 169      2.80216172       1.44946373 -0.36416334         0.75245638
## 170      1.41400510      -0.51856960  0.93409710         0.73567430
## 171      1.83849262       2.23555842  0.87658763         2.42690063
## 172      1.91230127      -0.01272434  0.85805346         0.99487522
## 173      0.70271480      -0.89542793  2.80216172         0.83980946
## 174      1.28735798      -0.44707302  1.15343724         0.82184079
## 175      1.61367018       0.65465430  1.20442230         0.91459156
```

```
## 176      1.05957037      -0.32366339  1.41400510         0.71909690
## 177      1.66232963      -0.35060018  0.80413364         0.80413364
## 178      0.97421613       0.83980946  1.38024023         1.05957037
## 179      0.89542793       1.61367018  1.23113036         1.71527720
## 180      0.93409710       0.73567430  0.82184079         1.34797950
## 181      1.25874673       1.28735798  0.65465430         1.38024023
## 182      0.83980946       0.39149488  1.83849262         1.20442230
## 183      1.08214564       1.38024023  0.60806071         1.23113036
## 184      1.15343724      -0.27046566  0.70271480         0.85805346
## 185      0.80413364       0.57772207  1.99828954         1.10528634
## 186      0.82184079       0.70271480  1.77352271         1.15343724
## 187      0.68651916      -0.57772207  2.23555842         0.97421613
## 188      0.75245638       0.23107198  1.61367018         1.01596791
## 189      0.67050162      -0.59282318  2.10223158         0.93409710
## 190      0.85805346       0.19203379  0.51856960         1.17854682
## 191      0.99487522      -0.02545075 -0.48967276         0.95396468
## 192      1.03752256      -0.36416334 -0.25729077         0.78667510
## 193      1.10528634       1.15343724 -0.59282318         1.31706374
## 194      0.95396468       1.91230127  0.00000000         1.99828954
## 195      0.73567430       1.48684468  1.05957037         1.52642702
## 196      1.01596791       1.08214564 -0.53318051         1.41400510
## 197      0.76945312       1.52642702  1.08214564         1.56855670
```

We split the data into training data (`80%`) and testing data (`20%`). Also we may tune an SVM model with `train()`function with radial basis kernel using the data *SVMsplitdatatrain* and 10-fold CV.

```
# Load Failure.binary data

SVMrdata$Failure.binary=as.factor(SVMrdata$Failure.binary)

# Create training (80%) and test (20%) sets
set.seed(123)  # for reproducibility
SVMrsplit <- initial_split(SVMrdata, prop = 0.8, strata = "Failure.binary")
SVMsplitdatatrain <- training(SVMrsplit)
SVMsplitdatatest  <- testing(SVMrsplit)
```

we use *getModelInfo()* function to extirpate the hyper-parameters from various SVM implementations with distinct kernel functions.

```
# Linear (i.e., soft margin classifier)
caret::getModelInfo("svmLinear")$svmLinear$parameters

##   parameter   class label
## 1         C numeric  Cost

# Polynomial kernel
caret::getModelInfo("svmPoly")$svmPoly$parameters

##   parameter   class             label
## 1    degree numeric Polynomial Degree
## 2     scale numeric             Scale
## 3         C numeric              Cost

# Radial basis kernel
caret::getModelInfo("svmRadial")$svmRadial$parameters
```

```
##   parameter   class label
## 1     sigma numeric Sigma
## 2         C numeric  Cost
```

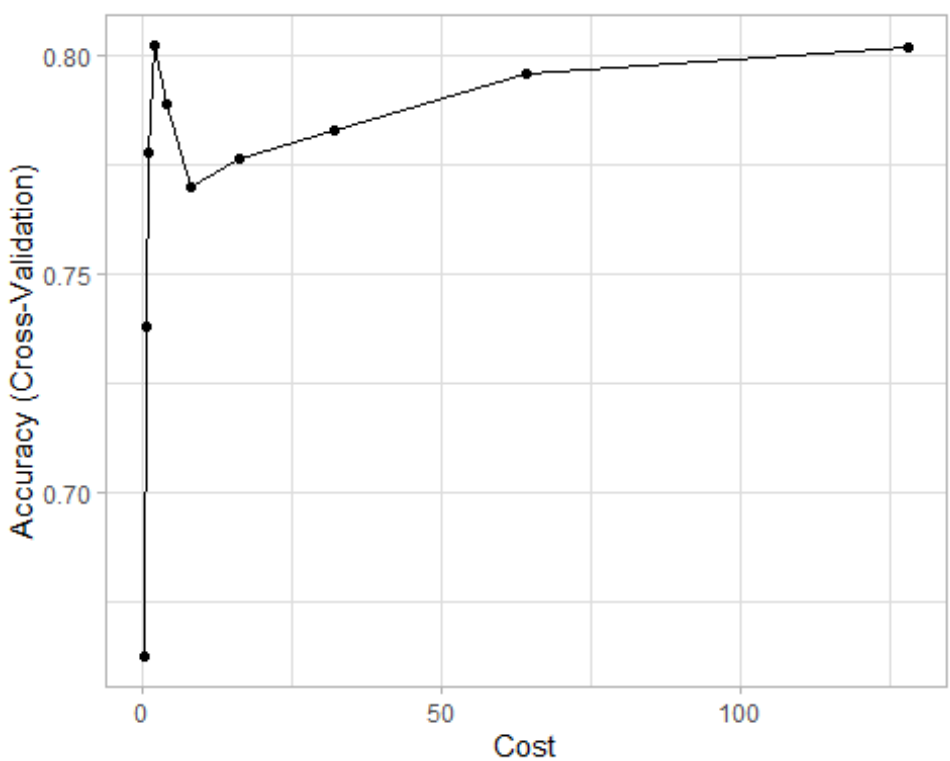
Run SVM Model in Training phase

Using `SVMsplitdatatrain`, we can tune an SVM model with radial basis kernel.

```
set.seed(1854)  # for reproducibility
SVMsplitdataff <- train(
  Failure.binary ~ .,
  data = SVMsplitdatatrain,
  method = "svmRadial",
  preProcess = c("center", "scale"),
  trControl = trainControl(method = "cv", number = 10),
  tuneLength = 10
)
```

Plotting the results, we can observe that smaller values of the cost parameter (`C ≈ 16–64`) foster better cross-validated accuracy scores to these training data.

```
# Plot results
ggplot(SVMsplitdataff) + theme_light()
```




```
# Print results
SVMsplitdataff$results
```

```
##          sigma      C  Accuracy     Kappa AccuracySD   KappaSD
## 1  0.001998749   0.25 0.6627451 0.0000000 0.01891300 0.0000000
## 2  0.001998749   0.50 0.7378922 0.2715440 0.06418046 0.2198366
## 3  0.001998749   1.00 0.7779902 0.4565954 0.07142465 0.1608304
## 4  0.001998749   2.00 0.8023039 0.5196491 0.09057479 0.2186000
## 5  0.001998749   4.00 0.7889216 0.5030643 0.07639949 0.1942976
```

```
## 6  0.001998749   8.00 0.7697059 0.4653629 0.07092559 0.1830668
## 7  0.001998749  16.00 0.7763725 0.4861127 0.06283611 0.1498343
## 8  0.001998749  32.00 0.7826716 0.4985015 0.07602914 0.1806382
## 9  0.001998749  64.00 0.7960049 0.5248585 0.07147503 0.1670975
## 10 0.001998749 128.00 0.8018873 0.5429164 0.08701199 0.2010434
```

Control parameter

For us to acquire the predicted class probabilities from an Support vector machine, additional parameters is sessential to be estimated. The predicted class probabilities are often more useful than the predicted class labels. For instance, we would need the predicted class probabilities if we were using an optimization metric like AUC. In that case, we can set `classProbs = TRUE` in the call to `trainControl()`.

```
class.weights = c("No" = 1, "Yes" = 10)

# Control params for SVM
SVMtcontrol <- trainControl(
  method = "cv",
  number = 10,
  classProbs = TRUE,
  summaryFunction = twoClassSummary  # also needed for AUC/ROC
)

SVMsplitdatatrain$Failure.binary=fct_recode(SVMsplitdatatrain$Failure.binary,No="0",Yes="
1")
```

Print the AUC values during Training

```
# Tune an SVM
set.seed(5628)  # for reproducibility
SVMtrainauc <- train(
  Failure.binary ~ .,
  data = SVMsplitdatatrain,
  method = "svmRadial",
  preProcess = c("center", "scale"),
  metric = "ROC",  # area under ROC curve (AUC)
  trControl = SVMtcontrol,
  tuneLength = 10
)

# Print results
SVMtrainauc$results

##          sigma      C       ROC      Sens      Spec      ROCSD     SensSD
## 1  0.001697891   0.25 0.8102727 0.8445455 0.5033333 0.09982583 0.12592723
## 2  0.001697891   0.50 0.8102727 0.8536364 0.5033333 0.09982583 0.12708861
## 3  0.001697891   1.00 0.8323939 0.8827273 0.5233333 0.09919217 0.11244425
## 4  0.001697891   2.00 0.8520606 0.9036364 0.6033333 0.09942461 0.09988055
## 5  0.001697891   4.00 0.8582121 0.9236364 0.6366667 0.09545946 0.09679909
## 6  0.001697891   8.00 0.8729697 0.9427273 0.5766667 0.11486557 0.06542227
## 7  0.001697891  16.00 0.8901818 0.9327273 0.6366667 0.13222606 0.07892762
## 8  0.001697891  32.00 0.8830000 0.9418182 0.5933333 0.13402578 0.06886193
## 9  0.001697891  64.00 0.8812121 0.9418182 0.6133333 0.15158268 0.05019704
## 10 0.001697891 128.00 0.8659697 0.9236364 0.6133333 0.15790577 0.08454491
##       SpecSD
## 1  0.2224721
## 2  0.2224721
```

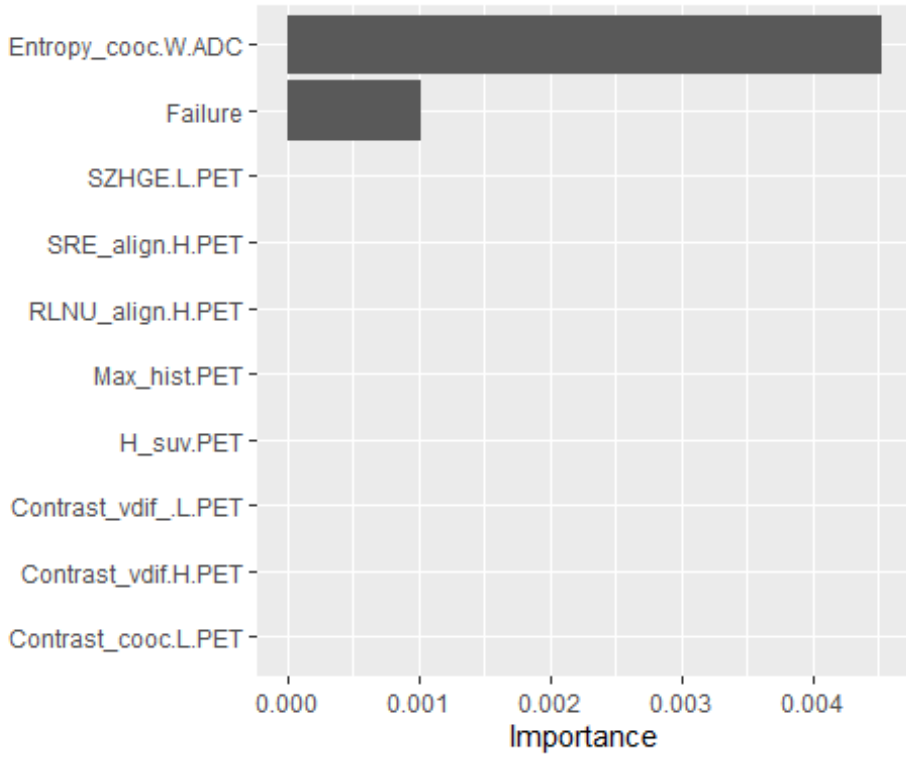
```
## 3  0.2403958
## 4  0.2157101
## 5  0.2235792
## 6  0.1937607
## 7  0.2027283
## 8  0.2968144
## 9  0.2563755
## 10 0.3182514
```

```
confusionMatrix(SVMtrainauc)
```

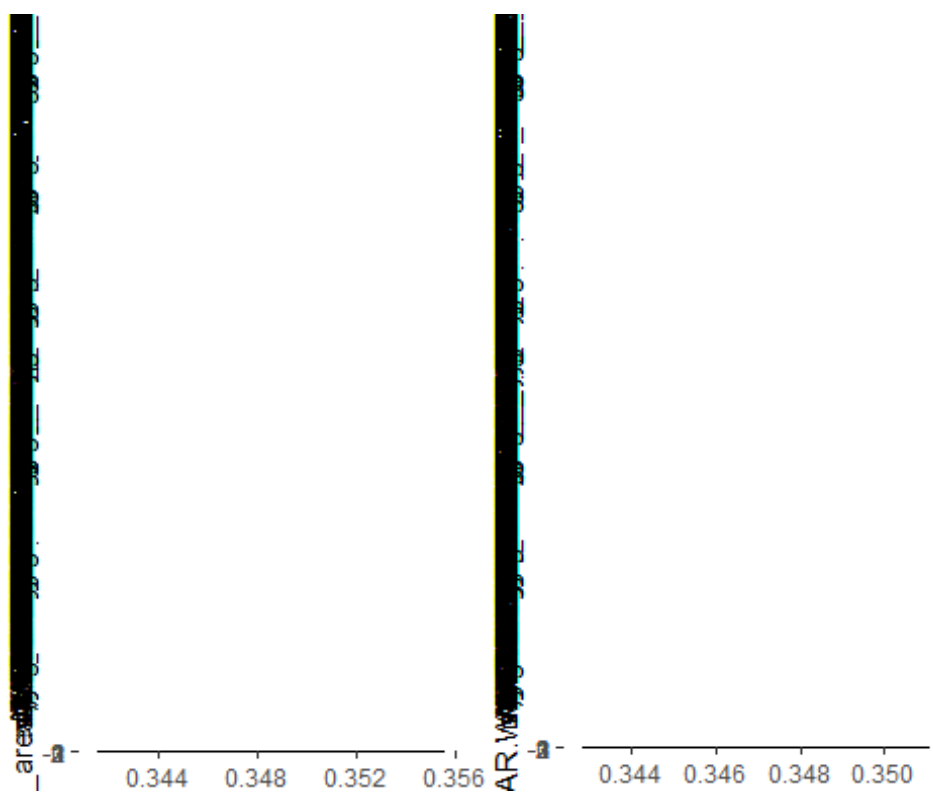
```
## Cross-Validated (10 fold) Confusion Matrix
##
## (entries are percentual average cell counts across resamples)
##
##           Reference
## Prediction   No  Yes
##        No  61.8 12.1
##        Yes  4.5 21.7
##
##  Accuracy (average) : 0.8344
```

Print the Top 20 important features during Training To compute the vip scores we just call `vip()` with `method = "permute"` and pass our previously defined predictions wrapper to the `pred_wrapper` argument.

```
SVMprobay <- function(object, newdata) {
  predict(object, newdata = newdata, type = "prob")[, "Yes"]
}

# Variable importance plot
set.seed(2827)  # for reproducibility
vip(SVMtrainauc, method = "permute", nsim = 5, train = SVMsplitdatatrain,
    target = "Failure.binary", metric = "auc", reference_class = "Yes",
    pred_wrapper = SVMprobay)
```




```
SVMfeatures <- setdiff(names(SVMrdata), names(SVMrdata)[c(1,2)])
SVMrpdps <- lapply(SVMfeatures, function(x) {
  partial(SVMtrainauc, pred.var = x, which.class = 2,
          prob = TRUE, plot = TRUE, plot.engine = "ggplot2") +
    coord_flip()
})

grid.arrange(grobs = SVMrpdps,  ncol = 2)
```



Print the AUC values during Testing

```
SVMsplitdatatest$Failure.binary=fct_recode(SVMsplitdatatest$Failure.binary,No="0",Yes="1"
)

# Tune an SVM with radial
set.seed(5628)  # for reproducibility
SVMtestauc <- train(
  Failure.binary ~ .,
  data = SVMsplitdatatest,
  method = "svmRadial",
  preProcess = c("center", "scale"),
  metric = "ROC",  # area under ROC curve (AUC)
  trControl = SVMtcontrol,
  tuneLength = 10
)

# Print results
SVMtestauc$results

##          sigma      C       ROC      Sens Spec     ROCSD    SensSD SpecSD
## 1  0.001959001   0.25 0.6750000 0.9666667    0 0.2872013 0.1054093      0
## 2  0.001959001   0.50 0.5750000 0.9333333    0 0.3320577 0.1405457      0
## 3  0.001959001   1.00 0.6250000 1.0000000    0 0.3148829 0.0000000      0
## 4  0.001959001   2.00 0.3083333 0.9000000    0 0.3168372 0.2249829      0
## 5  0.001959001   4.00 0.3500000 0.9000000    0 0.4021547 0.2249829      0
## 6  0.001959001   8.00 0.3916667 0.9000000    0 0.3889881 0.2249829      0
## 7  0.001959001  16.00 0.3083333 0.9000000    0 0.3514740 0.2249829      0
## 8  0.001959001  32.00 0.4250000 0.8333333    0 0.3976202 0.2832789      0
## 9  0.001959001  64.00 0.3750000 0.9333333    0 0.3833937 0.1405457      0
## 10 0.001959001 128.00 0.4083333 0.8666667    0 0.3937200 0.2810913      0

confusionMatrix(SVMtestauc)

## Cross-Validated (10 fold) Confusion Matrix
##
## (entries are percentual average cell counts across resamples)
##
##           Reference
## Prediction   No  Yes
##        No  62.5 35.0
##        Yes  2.5  0.0
##
##  Accuracy (average) : 0.625
```