Package ‘kineticF’

June 4, 2015

Type Package

Title Framework for the Analysis of Kinetic Visual Field Data

Version 1.0

Depends R(> 3.1.0)

Imports circular, lqmm, splancs, sp, plotrix, MASS

Date 2015-06-04

Author Dipesh E Patel & Mario Cortina-Borja

Maintainer Dipesh E Patel <dipesh_patel@ucl.ac.uk>

Description Data cleaning, processing, visualisation and analysis for manual (Goldmann) and automated (Octopus 900) kinetic visual field data.

License GPL (>= 2)

NeedsCompilation no

LazyData true

Repository CRAN

Date/Publication 2015-06-04 17:32:34

R topics documented:

kineticF-package .................................................. 2
dele3e_points .................................................. 3
dist2full ......................................................... 4
do.rose.diag ...................................................... 4
gcomp ............................................................ 5
Goldmann demogr .................................................. 6
kf.sector ............................................................ 7
kf.sort ............................................................. 7
kFcheck ........................................................... 8
kFquant ............................................................ 9
kFsubj ............................................................ 10
M0001Oraw ....................................................... 11
M0001RGblind ..................................................... 12
kineticF-package

Framework for the Analysis of Kinetic Visual Field Data

Description

A collection of functions covering data cleaning, processing, visualisation and analysis for manual (Goldmann) and automated (Octopus 900) kinetic visual field data. The analysis is primarily aimed at summarising normative data, with code provided to allow programmers to adapt the basic functions to their specific needs.
Details

Package: kineticF
Type: Package
Version: 1.0
Date: 2015-06-04
License: GPL (>= 2)

Author(s)

Dipesh E Patel <dipesh_patel@ucl.ac.uk> and Mario Cortina-Borja <m.cortina@ucl.ac.uk>

---

**delete.points**

**Removal of unwanted points from a kinetic isopter**

**Description**

Deletes unwanted (practice or error) points from a kinetic isopter. Only called by function `kfsubj` to clean files when `perimeter = '0'`. This assumes that all Goldmann data have been cleaned and ordered at the point of digitisation. This function is for internal use and is not meant to be called by the user.

**Usage**

`delete.points(outer.iso)`

**Arguments**

- `outer.iso`: A matrix of coordinates

**Value**

Matrix of coordinates excluding deleted points

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja
**dist2full**  
*Distance structure to full symmetric matrix*

**Description**

Creates a symmetric distance matrix from a lower triangular vector structure. It is used to calculate distances within other functions. This function is for internal use and is not meant to be called by the user.

**Usage**

```r
dist2full(dis)
```

**Arguments**

- `dis` a distance structure

**Value**

a full symmetric matrix of distances

**References**


---

**do.rose.diag**  
*Rose diagrams of sector frequencies*

**Description**

Generates rose diagrams from sector frequencies and thus can only be called after calling `kf.sort`.

**Usage**

```r
do.rose.diag(Sector, freqs, shrink = 1/2, col = "salmon", prop = 1, 
rotation = NULL)
```

**Arguments**

- `Sector` numeric, vector of sector values
- `freqs` numeric, vector of frequencies of values within each sector
- `shrink` parameter that controls the size of the plotted circle. Default is 1. Larger values shrink the circle, while smaller values enlarge the circle
- `col` character, fill colour
- `prop` numerical constant determining the radii of the sectors. By default, `prop = 1`
- `rotation` numeric, angle of rotation
**gcomp**

**Value**

- figure: Rose diagram graphical output
- circ.freqs: numeric, vector of aggregated frequencies in 24 sectors

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja

**References**

rose.diag{circular}

**Examples**

```r
## kf.sort must be run before do.rose.diag
test <- kf.sort()

try3 <- do.rose.diag(test$mat.output$Sector, test$mat.output$III4e,
                     shrink=0.9, prop=2.5, col='salmon', rotation=0)
mtext(text='III4e points plotted', side=3, line=-18, cex=1.2)
```

---

**gcomp** *Input and output of Goldmann data*

**Description**

Populates a matrix containing all cleaned individual Goldmann area and KPRM data.

**Usage**

gcomp(inf = NULL, perimeter = "G", no.kprm = TRUE)

**Arguments**

- inf: name of the demographics matrix used
- perimeter: character, to remain as "G"
- no.kprm: logical, TRUE if no kinetic perimetry reliability measure (KPRM) has been used

**Value**

matrix containing information on ID, eye tested and areas

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja
Examples

```r
## Not run:
gcomp()
## End(Not run)
```

---

**Goldmann.demogr**

*Goldmann demographics*

**Description**

A matrix of subject demographics for Goldmann perimetry. Called with analysis functions.

**Usage**

```r
data("Goldmann.demogr")
```

**Format**

A data frame with 2 observations on the following 5 variables:

- **Study.ID.No.** a factor with levels on Study ID
- **Eye** a factor with levels Left and Right
- **Sex** a factor with levels Male and Female
- **Age** a numeric vector
- **Quality.of.test** a factor with levels Good witness, Fair witness and Poor witness

**Details**

This sample matrix demonstrates the required demographics format to the user.

**Source**

DEP and MCB

**Examples**

```r
data(Goldmann.demogr)
```
**kf.sector**

---

**Point extraction into 24 sectors**

**Description**

Extracts coordinate data from an individual dataset into sectors (every 15 degrees) and distances (from origin).

**Usage**

```r
kf.sector(file.name, is.octopus = FALSE)
```

**Arguments**

- `file.name`: file name using format defined for study ID and eye designation (either "R" or "L")
- `is.octopus`: logical, TRUE if Octopus perimeter has been used

**Value**

matrix containing sectors, frequencies and distances

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja

**Examples**

```r
kf.sector('M0001R', is.octopus=TRUE)
```

---

**kf.sort**

---

**Visaulisation of summary statistics**

**Description**

Plots summary statistics to aid data visualisation.

**Usage**

```r
kf.sort(inf = NULL, is.octopus = FALSE, range.sex = NULL, range.age = NULL, range.qual = NULL, plot.isopter = "III4e", CI.or.Quant = "CI", force23 = TRUE)
```
### Arguments

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>inf</td>
<td>name of the demographics matrix used</td>
</tr>
<tr>
<td>is.octopus</td>
<td>logical, TRUE if Octopus perimeter has been used</td>
</tr>
<tr>
<td>range.sex</td>
<td>character, either NULL (use all data) or &quot;Male&quot; or &quot;Female&quot;</td>
</tr>
<tr>
<td>range.age</td>
<td>numeric, either NULL (use all data) or single value or a vector of length 2 specifying a closed age range</td>
</tr>
<tr>
<td>range.qual</td>
<td>character, either NULL (use all data) or a single value from &quot;Good witness&quot;, &quot;Fair witness&quot;, &quot;Poor witness&quot;</td>
</tr>
<tr>
<td>plot.isopter</td>
<td>character, &quot;III4e&quot;, &quot;I4e&quot;, or &quot;I2e&quot;</td>
</tr>
<tr>
<td>CI.or.Quant</td>
<td>character, either &quot;CI&quot; or &quot;Quant&quot; for 95% CI&quot;s or 95% quantile envelope</td>
</tr>
<tr>
<td>force23</td>
<td>logical, FALSE to define the closure of the bands at sectors 23 and 1; TRUE to define it at sectors 23 and 2</td>
</tr>
</tbody>
</table>

### Value

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mat.output</td>
<td>data.frame, containing 24 rows (sectors) for each individual with columns: ID, sector, dists x 3, freqs x 3 (corresponding to 3 isopters)</td>
</tr>
<tr>
<td>regions</td>
<td>list with elements, inner, middle and outer - matrices containing coordinates of output statistics</td>
</tr>
<tr>
<td>areas</td>
<td>character, vector of area values defined by output statistics</td>
</tr>
</tbody>
</table>

### Author(s)

Dipesh E Patel & Mario Cortina-Borja

### Examples

```r
ekf.sort()
```

---

### Description

Plots curves or points for multiple individuals on a kinetic grid

### Usage

```r
kFcheck(mat.output, name.iso, plot.lines = TRUE, title1 = " ")
```
**kFquant**

**Arguments**

- `mat.output` : data.frame generated by `kf.sort`
- `name.iso` : character, one of "III4e", "I4e" or "I2e"
- `plot.lines` : logical, if TRUE individual isopters are plotted, otherwise individual data points are displayed
- `title` : character, specifying plot title

**Value**

Graphical output

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja

**Examples**

```r
## Only runs after kf.sort has run
test3<- kf.sort()
kFcheck(test3$mat.output, "III4e", title="III4e data", plot.lines=FALSE)
```

---

**kFquant**

*Quantile regression modelling of kinetic field data*

**Description**

Fits quantile regression models to kinetic field data and displays predicted isopter values for selected quantiles. Used to generate normative/control isopter values.

**Usage**

```r
kFquant(inf = NULL, is.octopus = FALSE, range.sex = NULL,
        range.age = NULL, range.qual = NULL, plot.iso = "III4e",
        show.raw = FALSE, tau = c(0.025, 0.25, 0.5, 0.75, 0.975))
```

**Arguments**

- `inf` : character, name of the demographics matrix
- `is.octopus` : logical, TRUE if Octopus perimeter data
- `range.sex` : character, either NULL (use all data) or "Male" or "Female"
- `range.age` : numeric, either NULL (use all data) or single value or a vector of length 2 specifying a closed age range
- `range.qual` : character, either NULL (use all data) or a single value from "Good witness", "Fair witness", "Poor witness"
- `plot.iso` : character, "III4e", "I4e", or "I2e"
show.raw logical, superimpose raw data points on grid? Default is FALSE.
tau numeric, vector of quantiles to be fitted. Default is 5%, 25%, 50%, 75% and 95%.

Value

Graphical output

Author(s)

Dipesh E Patel & Mario Cortina-Borja

References


Examples

```r
## This requires sufficient data to generate robust models
kf.sort()
kFquant(range.qual="Good witness", range.age= 8:400, plot.iso="III4e", show.raw=FALSE)
```

---

**kFsubj**

*Plots a subject’s kinetic data*

**Description**

Displays Goldmann and Octopus perimetry data. Octopus data can also be cleaned and re-ordered by this function. Isopter area values are calculated and displayed.

**Usage**

```r
kFsubj(obj.name, perimeter = "G", no.cleaning = TRUE, no.kprm = TRUE, no.flip = TRUE)
```

**Arguments**

- `obj.name` object (subject) name using format defined for study ID - (please note: ID can only be 5 characters in length)
- `perimeter` either character, "G" (Goldmann) or "O" (Octopus)
- `no.cleaning` logical, TRUE if data have been cleaned and ordered
- `no.kprm` logical, TRUE if no kinetic perimetry reliability measure (KPRM) has been used
- `no.flip` logical, if FALSE, function displays mirror image along the y-axis for left-eye data
Value

Graphical output of isopters and list of values

Author(s)

Dipesh E Patel & Mario Cortina-Borja

Examples

data(Goldmann.demoR, package='kineticF', envir = environment())
data(M0001RGII4e, package='kineticF', envir = environment())
data(M0001G14e, package='kineticF', envir = environment())
data(M0001RGlind, package='kineticF', envir = environment())
test<- kFsubj(obj.name='M0001R', perimeter='G',
             no.cleaning=TRUE,
             no.kprm=TRUE, no.flip=TRUE)

M0001Oraw

Octopus raw data

Description

Sample data. Simulates Octopus raw .txt file string for subject 1.

Usage

data("M0001Oraw")

Format

A text string

Details

This dataset assumes a direct export from an Octopus 900 perimeter.

Source

DEP and MCB

Examples

data(M0001Oraw)
**M0001RGblind**

*Goldmann raw data*

**Description**
Sample data. Goldmann blind spot data for subject 1.

**Usage**
data("M0001RGblind")

**Format**
A data frame with 7 observations on the following 2 variables.
- **X**: a numeric vector, the x co-ordinate value
- **Y**: a numeric vector, the y co-ordinate value

**Source**
DEP and MCB

**Examples**
data(M0001RGblind)

---

**M0001RGI4e**

*Goldmann raw data*

**Description**
Sample data. Goldmann isopter I4e data for subject 1.

**Usage**
data("M0001RGI4e")

**Format**
A data frame with 15 observations on the following 2 variables.
- **X**: a numeric vector, the x co-ordinate value
- **Y**: a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0001RGIII4e)

---

**M0001RGIII4e**  
*Goldmann raw data*

Description

Sample data. Goldmann isopter III4e data for subject 1.

Usage

data("M0001RGIII4e")

Format

A data frame with 16 observations on the following 2 variables.

- X a numeric vector, the x co-ordinate value
- Y a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0001RGIII4e)
M0001ROblindproc  Octopus processed data

Description
Sample data. Octopus blind spot data for subject 1, that is cleaned and ordered, ready for analysis.

Usage
data("M0001ROblindproc")

Format
A data frame with 8 observations on the following 2 variables.
- X  a numeric vector, the x co-ordinate value
- Y  a numeric vector, the y co-ordinate value

Source
DEP and MCB

Examples
data(M0001ROblindproc)

M0001ROblindraw  Octopus unprocessed data

Description
Sample data. Octopus blind spot data for subject 1, that requires cleaning and ordering, before analysis.

Usage
data("M0001ROblindraw")

Format
A data frame with 10 observations on the following 2 variables.
- X  a numeric vector, the x co-ordinate value
- Y  a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0001ROI4eproc)

Description

Sample data. Octopus isopter I4e data for subject 1, that is cleaned and ordered, ready for analysis.

Usage

data("M0001ROI4eproc")

Format

A data frame with 17 observations on the following 2 variables.

- X a numeric vector, the x co-ordinate value
- Y a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0001ROI4eproc)
### mPPPQroiTeraw

**Octopus unprocessed data**

**Description**

Sample data. Octopus isopter I4e data for subject 1, that requires cleaning and ordering, before analysis.

**Usage**

```r
data("mPPPQroiTeraw")
```

**Format**

A data frame with 17 observations on the following 2 variables.

- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value

**Source**

DEP and MCB

**Examples**

```r
data(M0001ROI4eraw)
```

---

### M0001ROI11I4eproc

**Octopus processed data**

**Description**

Sample data. Octopus isopter III4e data for subject 1, that is cleaned and ordered, ready for analysis.

**Usage**

```r
data("M0001ROI11I4eproc")
```

**Format**

A data frame with 19 observations on the following 2 variables.

- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value
**Source**

DEP and MCB

**Examples**

```r
data(M0001ROIII4eraw)
```

---

**M0001ROIII4eraw**  *Octopus unprocessed data*

**Description**

Sample data. Octopus isopter III4e data for subject 1, that requires cleaning and ordering, before analysis.

**Usage**

```r
data("M0001ROIII4eraw")
```

**Format**

A data frame with 23 observations on the following 2 variables.

- **X**  a numeric vector, the x co-ordinate value
- **Y**  a numeric vector, the y co-ordinate value

**Source**

DEP and MCB

**Examples**

```r
data(M0001ROIII4eraw)
```
**Description**

Sample data. Goldmann blind spot data for subject 2.

**Usage**

```r
data("M0002LGlbind")
```

**Format**

A data frame with 8 observations on the following 2 variables.

- `X` a numeric vector, the x co-ordinate value
- `Y` a numeric vector, the y co-ordinate value

**Source**

DEP and MCB

**Examples**

```r
data(M0002LGlbind)
```

---

**Description**

Sample data. Goldmann isopter I2e data for subject 2.

**Usage**

```r
data("M0002LG12e")
```

**Format**

A data frame with 24 observations on the following 2 variables.

- `X` a numeric vector, the x co-ordinate value
- `Y` a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0002LGI4e)

---

M0002LGI4e  Goldmann raw data

Description

Sample data. Goldmann isopter I4e data for subject 2.

Usage

data("M0002LGI4e")

Format

A data frame with 24 observations on the following 2 variables.

X  a numeric vector, the x co-ordinate value
Y  a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0002LGI4e)
**M0002LOblindproc**   *Octopus processed data*

**Description**
Sample data. Octopus blind spot data for subject 2, that is cleaned and ordered, ready for analysis.

**Usage**
```r
data("M0002LOblindproc")
```

**Format**
A data frame with 7 observations on the following 2 variables.
- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value

**Source**
DEP and MCB

**Examples**
```r
data(M0002LOblindproc)
```

---

**M0002LOblindraw**   *Octopus unprocessed data*

**Description**
Sample data. Octopus blind spot data for subject 2, that requires cleaning and ordering, before analysis.

**Usage**
```r
data("M0002LOblindraw")
```

**Format**
A data frame with 7 observations on the following 2 variables.
- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0002LOI2eproc)

Description

Sample data. Octopus isopter I2e data for subject 2, that is cleaned and ordered, ready for analysis.

Usage

data(M0002LOI2eproc)

Format

A data frame with 14 observations on the following 2 variables.

X a numeric vector, the x co-ordinate value

Y a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0002LOI2eproc)
**M0002LOI2eraw**  
*Octopus unprocessed data*

**Description**
Sample data. Octopus isopter I2e data for subject 1, that requires cleaning and ordering, before analysis.

**Usage**
```r
data("M0002LOI2eraw")
```

**Format**
A data frame with 17 observations on the following 2 variables.

- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value

**Source**
DEP and MCB

**Examples**
```r
data(M0002LOI2eraw)
```

---

**M0002LOI4eproc**  
*Octopus processed data*

**Description**
Sample data. Octopus isopter I4e data for subject 2, that is cleaned and ordered, ready for analysis.

**Usage**
```r
data("M0002LOI4eproc")
```

**Format**
A data frame with 16 observations on the following 2 variables.

- **X** a numeric vector, the x co-ordinate value
- **Y** a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0002LO14eraw)

---

M0002LO14eraw   Octopus unprocessed data

Description

Sample data. Octopus isopter I4e data for subject 2, that requires cleaning and ordering, before analysis.

Usage

data("M0002LO14eraw")

Format

A data frame with 21 observations on the following 2 variables.

X a numeric vector, the x co-ordinate value

Y a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0002LO14eraw)
M00020raw  Octopus raw data

Description
Sample data. Simulates Octopus raw .txt file string for subject 2.

Usage
data("M00020raw")

Format
A text string

Details
This dataset assumes a direct export from an Octopus 900 perimeter.

Source
DEP and MCB

Examples
data(M00020raw)

M0003RGIII4e  Goldmann raw data

Description
Sample data. Goldmann isopter III4e data for subject 3.

Usage
data("M0003RGIII4e")

Format
A data frame with 23 observations on the following 2 variables.
X a numeric vector, the x co-ordinate value
Y a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0004LGIII4e)

Description

Sample data. Goldmann isopter III4e data for subject 4.

Usage

data("M0004LGIII4e")

Format

A data frame with 13 observations on the following 2 variables.

X a numeric vector, the x co-ordinate value
Y a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0004LGIII4e)
Goldmann raw data

Sample data. Goldmann isopter III4e data for subject 5.

Usage
data("M0005RGIII4e")

Format
A data frame with 23 observations on the following 2 variables.

- \( X \) a numeric vector, the x co-ordinate value
- \( Y \) a numeric vector, the y co-ordinate value

Source
DEP and MCB

Examples
data(M0005RGIII4e)

Goldmann raw data

Sample data. Goldmann Kinetic Perimetry Reliability Measure (KPRM) data for subject 5.

Usage
data("M0005RGrmeas")

Format
A data frame with 4 observations on the following 2 variables.

- \( X \) a numeric vector, the x co-ordinate value
- \( Y \) a numeric vector, the y co-ordinate value
Source

DEP and MCB

Examples

data(M0006RGIII4e)

---

**M0006RGIII4e**  
*Goldmann raw data*

Description

Sample data. Goldmann isopter III4e data for subject 6.

Usage

data("M0006RGIII4e")

Format

A data frame with 18 observations on the following 2 variables.

- x: a numeric vector, the x co-ordinate value
- y: a numeric vector, the y co-ordinate value

Source

DEP and MCB

Examples

data(M0006RGIII4e)
Data frames with Goldmann isopter III4e data:

**M0007LGIII4e**

*Goldmann raw data*

**Description**

Sample data. Goldmann isopter III4e data for subject 7.

**Usage**

```r
data("M0007LGIII4e")
```

**Format**

A data frame with 23 observations on the following 2 variables.

- **X**: a numeric vector, the x co-ordinate value
- **Y**: a numeric vector, the y co-ordinate value

**Source**

DEP and MCB

**Examples**

```r
data(M0007LGIII4e)
```

---

**M0008RGIII4e**

*Goldmann raw data*

**Description**

Sample data. Goldmann isopter III4e data for subject 8.

**Usage**

```r
data("M0008RGIII4e")
```

**Format**

A data frame with 23 observations on the following 2 variables.

- **X**: a numeric vector, the x co-ordinate value
- **Y**: a numeric vector, the y co-ordinate value
**ocomp**

**Source**
DEP and MCB

**Examples**

data(M0008RG1114e)

---

**Description**

Populates a matrix containing all cleaned individual Octopus area and KPRM data.

**Usage**

```r
ocomp(inf = NULL, no.kprm = TRUE, perimeter = "O")
```

**Arguments**

- `inf` name of the demographics matrix used
- `no.kprm` logical, `TRUE` if no kinetic perimetry reliability measure (KPRM) has been used
- `perimeter` character, either "G" or "O"

**Value**

matrix containing information on ID, eye tested and areas

**Author(s)**

Dipesh E Patel & Mario Cortina-Borja

**Examples**

```r
## Not run:
ocomp(no.kprm=TRUE)

## End(Not run)
```
**Octopus demographics**

**Description**
A sample matrix of subject demographics for Octopus perimetry. Called with analysis functions.

**Usage**
data("Octopus.demogr")

**Format**
A data frame with 2 observations on the following 5 variables.
- Study.ID.No. a factor with levels M0001 M0002
- Eye a factor with levels Left and Right
- Sex a factor with levels Male and Female
- Age a numeric vector
- Quality.of.test a factor with levels Good witness, Fair witness and Poor witness

**Details**
This sample matrix demonstrates the required demographics format to the user.

**Source**
DEP and MCB

**Examples**

data(Octopus.demogr)

**Octopus data cleaner**

**Description**
Transforms text strings into coordinate values by isopters, one subject at a time. NOTE: For this function to run, a demographics file must exist (columns: Study ID No, Eye, Sex, Age, Quality of test). Only subjects with values on at least Study ID No and Eye can be processed.

**Usage**
preprocess.octopus(octopus.file, octopus.demogr = Octopus.demogr)
Arguments

octopus.file  name of the matrix containing individual raw data text string
octopus.demogr  name of the demographics matrix

Value

Matrix of coordinates and isopter values

Author(s)

Dipesh E Patel & Mario Cortina-Borja

Examples

```r
# For example, import raw data with:
# M0010raw<- paste(scan("C:\Data\Octopus_raw\M0010.txt", sep=';', what=''), collapse=';')

preprocess.octopus(M0010raw)
```

Description

Opens a plot window and displays a kinetic perimetry grid

Usage

```r
set.template(void = TRUE)
```

Arguments

void  Adds the ‘void’ areas of a Goldmann field to the kinetic plot. Default is TRUE.

Value

Graphical output

Author(s)

Dipesh E Patel & Mario Cortina-Borja

Examples

```r
set.template(void=FALSE)
```
stop.identify

Stops the process of re-ordering a matrix of coordinates

Description
Changes the order in which a matrix of coordinates is plotted to allow closure on a polygon. This function is for internal use and is not meant to be called by the user.

Usage
stop.identify(xy)

Arguments
xy matrix of coordinates

Value
A re-ordered matrix of coordinates

Author(s)
Dipesh E Patel & Mario Cortina-Borja
## Index

**Topic** datasets

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldmann.demogr</td>
<td>6</td>
</tr>
<tr>
<td>M0001Oraw</td>
<td>11</td>
</tr>
<tr>
<td>M0001RGlind</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGI4e</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGIII4e</td>
<td>13</td>
</tr>
<tr>
<td>M0001ROblindproc</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROblindraw</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROI4eproc</td>
<td>15</td>
</tr>
<tr>
<td>M0001ROI4eraw</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eproc</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eraw</td>
<td>17</td>
</tr>
<tr>
<td>M0002LGlind</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI2e</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI4e</td>
<td>19</td>
</tr>
<tr>
<td>M0002LObblindproc</td>
<td>20</td>
</tr>
<tr>
<td>M0002LObblindraw</td>
<td>20</td>
</tr>
<tr>
<td>M0002LOI4eproc</td>
<td>21</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4proc</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>23</td>
</tr>
<tr>
<td>M0002Oraw</td>
<td>24</td>
</tr>
<tr>
<td>M0003RGIII4e</td>
<td>24</td>
</tr>
<tr>
<td>M0004LGI4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGII4I4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGmeas</td>
<td>26</td>
</tr>
<tr>
<td>M0006RGII4I4e</td>
<td>27</td>
</tr>
<tr>
<td>M0007LGI4I4e</td>
<td>28</td>
</tr>
<tr>
<td>M0008RGII4I4e</td>
<td>28</td>
</tr>
<tr>
<td>Octopus.demogr</td>
<td>30</td>
</tr>
</tbody>
</table>

**Topic** kineticF

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>kineticF (kineticF-package)</td>
<td>2</td>
</tr>
<tr>
<td>kineticF-package</td>
<td>2</td>
</tr>
<tr>
<td>M0001Oraw</td>
<td>11</td>
</tr>
<tr>
<td>M0001RGlind</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGI4e</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGIII4e</td>
<td>13</td>
</tr>
<tr>
<td>M0001ROblindproc</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROblindraw</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROI4eproc</td>
<td>15</td>
</tr>
<tr>
<td>M0001ROI4eraw</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eproc</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eraw</td>
<td>17</td>
</tr>
<tr>
<td>M0002LGlind</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI2e</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI4e</td>
<td>19</td>
</tr>
<tr>
<td>M0002LObblindproc</td>
<td>20</td>
</tr>
<tr>
<td>M0002LObblindraw</td>
<td>20</td>
</tr>
<tr>
<td>M0002LOI4eproc</td>
<td>21</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4proc</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>23</td>
</tr>
<tr>
<td>M0002Oraw</td>
<td>24</td>
</tr>
<tr>
<td>M0003RGIII4e</td>
<td>24</td>
</tr>
<tr>
<td>M0004LGI4I4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGII4I4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGmeas</td>
<td>26</td>
</tr>
<tr>
<td>M0006RGII4I4e</td>
<td>27</td>
</tr>
<tr>
<td>M0007LGI4I4e</td>
<td>28</td>
</tr>
<tr>
<td>M0008RGII4I4e</td>
<td>28</td>
</tr>
<tr>
<td>ocomp</td>
<td>29</td>
</tr>
<tr>
<td>Octopus.demogr</td>
<td>30</td>
</tr>
<tr>
<td>preprocess.octopus</td>
<td>30</td>
</tr>
</tbody>
</table>

**Topic** preprocessNpoints

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>delete.points</td>
<td>3</td>
</tr>
<tr>
<td>dist2full</td>
<td>4</td>
</tr>
<tr>
<td>do.rose.diag</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>gcomp</td>
<td>5</td>
</tr>
<tr>
<td>Goldmann.demogr</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>kf-sector</td>
<td>7</td>
</tr>
<tr>
<td>kf.sort</td>
<td>7</td>
</tr>
<tr>
<td>kfcheck</td>
<td>8</td>
</tr>
<tr>
<td>kfquant</td>
<td>9</td>
</tr>
<tr>
<td>kfsbj</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>kineticF</td>
<td>2</td>
</tr>
<tr>
<td>kineticF-package</td>
<td>2</td>
</tr>
<tr>
<td>M0001Oraw</td>
<td>11</td>
</tr>
<tr>
<td>M0001RGlind</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGI4e</td>
<td>12</td>
</tr>
<tr>
<td>M0001RGIII4e</td>
<td>13</td>
</tr>
<tr>
<td>M0001ROblindproc</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROblindraw</td>
<td>14</td>
</tr>
<tr>
<td>M0001ROI4eproc</td>
<td>15</td>
</tr>
<tr>
<td>M0001ROI4eraw</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eproc</td>
<td>16</td>
</tr>
<tr>
<td>M0001ROI4II4eraw</td>
<td>17</td>
</tr>
<tr>
<td>M0002LGlind</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI2e</td>
<td>18</td>
</tr>
<tr>
<td>M0002LGI4e</td>
<td>19</td>
</tr>
<tr>
<td>M0002LObblindproc</td>
<td>20</td>
</tr>
<tr>
<td>M0002LObblindraw</td>
<td>20</td>
</tr>
<tr>
<td>M0002LOI4eproc</td>
<td>21</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4proc</td>
<td>22</td>
</tr>
<tr>
<td>M0002LOI4eraw</td>
<td>23</td>
</tr>
<tr>
<td>M0002Oraw</td>
<td>24</td>
</tr>
<tr>
<td>M0003RGIII4e</td>
<td>24</td>
</tr>
<tr>
<td>M0004LGI4I4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGII4I4e</td>
<td>25</td>
</tr>
<tr>
<td>M0005RGmeas</td>
<td>26</td>
</tr>
<tr>
<td>M0006RGII4I4e</td>
<td>27</td>
</tr>
<tr>
<td>M0007LGI4I4e</td>
<td>28</td>
</tr>
<tr>
<td>M0008RGII4I4e</td>
<td>28</td>
</tr>
<tr>
<td>ocomp</td>
<td>29</td>
</tr>
<tr>
<td>Octopus.demogr</td>
<td>30</td>
</tr>
<tr>
<td>preprocess.octopus</td>
<td>30</td>
</tr>
</tbody>
</table>

preprocess.Npoints
set.template, 31
stop.identify, 32