Package 'log10'

November 23, 2009

Version 0.1.0-01

Date 2009-11-17

Title Decimal log plotting in two and three dimensions

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Depends R (>= 1.8.0)

Description Provides a range of function for 10-log plotting

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URL http://homepage.mac.com/tim.poisot

R topics documented:

`addlog` *Add elements on a decimal log x-y plot*

Description

Add elements on a decimal log x-y plot via *points*

Usage

```
addlog(x,y,log='xy',...)
```

Arguments

x	X-values
y	Y values, can be left blank (same behavior as *plot*)
log	Dimensions to be converted into 10-log : 'x', 'xy' or 'y'
...	Further arguments to be passed to logplot

Examples

```
a <- seq(from=1,to=100,by=1)^2
logplot(a,log='y')
addlog(a+1e3,log='y')
```

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hcp1 *High contrast palette 1*

Description

Provides a high contrast palette ranging from blue to red

Usage

```
hcp1(n)
```

Arguments

n	The number of colors to generate

Examples

```
data(volcano)
logfill(volcano,log='',pal=hcp1)
```

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hcp2 *High contrast palette 2*

Description

Provides a high contrast palette ranging from black to darkred

Usage

```
hcp2(n)
```

Arguments

n	The number of colors to generate

Examples

```
data(volcano)
logfill(volcano,log='',pal=hcp2)
```

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hcp3 *High contrast palette 3*

Description

Provides a high contrast palette ranging from turquoise to darkred

Usage

```
hcp3(n)
```

Arguments

n	The number of colors to generate

Examples

```
data(volcano)
logfill(volcano,log='',pal=hcp3)
```

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logaxis *Draw a 10-log scale axis*

Description

Add a 10-log scale axis on the specified side of the plot

Usage

```
logaxis(side,range)
```

Arguments

side	The side of the plot (same as *axis*)
range	The axis range, in power of ten

Note

This function is used internally by the package

logfill *Decimal x-y filledcontour plot*

Description

Plot a filledcontour plot with 10-log axes, and superposes a contour plot with values

Usage

```
logfill(z,pal=hcp3,f.nbins=100,c.nbins=10,log='xy',c.col='black',int=c('i','i'),
```

Arguments

z	The matrix to be plotted. X and Y coordinates must be passed as rownames and colnames respectively
pal	The color palette : the package provides *hcp1* and *hcp2*
f.nbins	Number of color shades for the plot
c.nbins	Number of lines for the overlapped contourplot : 0 suppresses the contourplot
log	Axes to be log-transformed
c.col	Color for the contour plot
int	A vector giving the type of the axes. Best not changed.
labcex	Character expansion of the contourplot
...	Further arguments to be passed to logplot

Examples

```
data(volcano)
par(mfcol=c(1,2),pty='s')
logfill(volcano)
logfill(volcano,log='')
```

loglm *Add a linear model to a plot*

Description

Plot the regression line of a linear model to a plot

Usage

```
loglm(mod,log='xy',range=NULL,...)
```

Arguments

`mod`	The matrix to be plotted. X and Y coordinates must be passed as rownames and colnames respectively
`log`	The axes to be transformed to log
`range`	The interval on which the regression line is to be plotted (calculated internally with the model terms if none is supplied)
`...`	Further arguments to be passed to addlog

Examples

```
a <- seq(from=1,to=10,by=0.1)
b <- a + abs(rnorm(length(a),0,5))
c <- 2*a + abs(rnorm(length(a),0,5))
logplot(a,b,log='xy',pch=19,ylim=c(1,100))
addlog(a,c,log='xy',pch=19,col='grey')
model <- lm(b~a)
model.2 <- lm(c~a)
loglm(model,col='red',log='xy')
loglm(model.2,col='blue',log='xy',range=c(2,8),lty=3)
```

`logplot` *Decimal x-y plot*

Description

Plot X and Y values with 10-log scales

Usage

```
logplot(x,y,log='xy',yint='r',xint='r',xlim=NULL,ylim=NULL,...)
```

Arguments

`x`	X-values
`y`	Y values, can be left blank (same behavior as *`plot`*)
`log`	Dimensions to be converted into 10-log : 'x', 'xy' or 'y'
`ylim`	Limit of the y axis
`xlim`	Limit of the x axis
`yint`	The type of y axis : internal of regular. See *`par`* and the *`yaxs`* option
`xint`	The type of x axis : internal of regular. See *`par`* and the *`xaxs`* option
`...`	Further arguments to be passed to plot

Examples

```
a <- seq(from=1,to=100,by=0.1)^2
logplot(a,log='y')
```

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