unimap - unigraph
Very quick user guide

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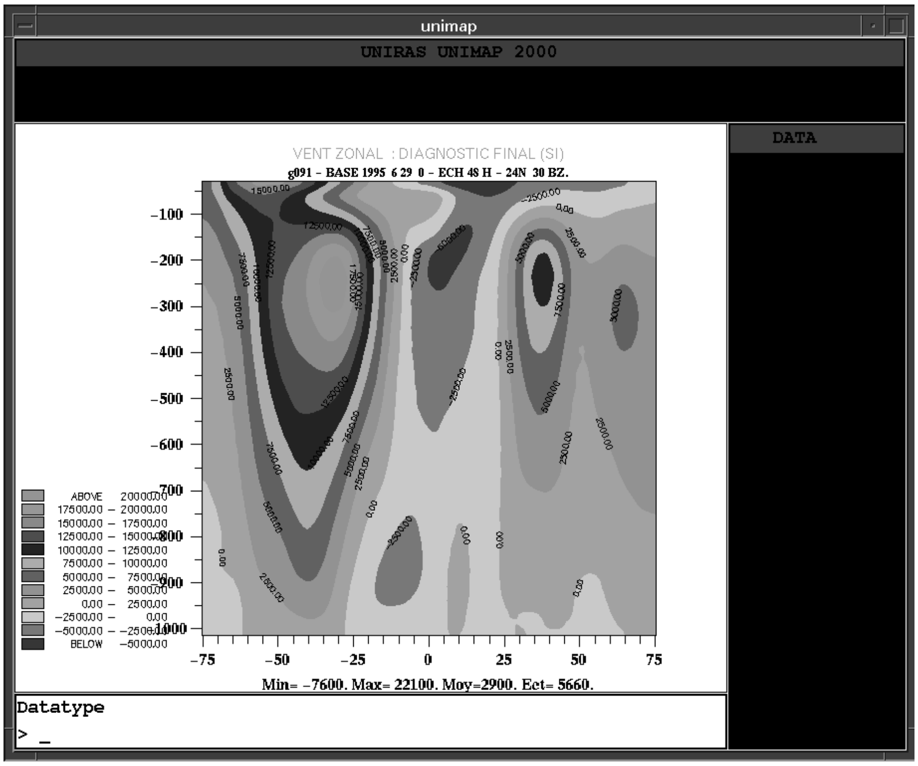
February 21, 2003



```
Datatype
> _
```

Contents

1 Introduction

unimap and unigraph are two interactive graphic utilities to be used on GMAP HP stations. They can also be used in batch mode. They read formatted data files in input, and give output on screen, printers or graphic files (e.g. postscript ones).

unimap is very useful to plot 2d irregular field, while unigraph will be used for 1d (multiple) curves.

2 unimap

The use of unimap will be explained in the following with an example. Guess you want to plot IRREGULAR data given by its X coordinate, Y coordinate, and value of the field at this location. In the IRREGULAR files read by unimap, the first field has to be the X coordinate (longitude for geographic fields), the second has to be the Y coordinate (latitude), and the third the field to plot. Example of irregular file data content:

```
 .0 70.0 .0
 9.74098407587231 68.37451725111111 .1093584975127442
 18.4263813802425 63.67421528224013 .4374339900509771
 25.11499434741058 56.40844474438496 .9842264776146985
 29.08200797790147 47.36456461532349 1.74973596020391
 29.89753479031717 37.52261963724297 2.73396243781861
 27.47319980033514 27.94913726196896 3.93690591045879
 22.07171732153828 19.6815528526881 5.35856637812447
 14.27842179310725 13.61578746488499 6.99894384081564
```

How to get unimap on GMAP workstations

```
#
# UNIRAS 5a
# GSHARP est en 6v5a (lancement Gsharp)
#
. /opt/uniras/6v5a/base/uni.profile
export UNILOC=.
#export unimap_geom='-geom 500x500'
export unimap_geom=' '
alias gp='export LANG=C ; gsharp ; export LANG=fr_FR.iso88591'
export LM_LICENSE_FILE=7121@xdata2
```

Get the first plot

Type um&. You get the unimap window.
To read the data field click on DATA > IRREGULAR > READ (name of file).
To go up in the menus click the center mouse button.

To plot the irregular read field you have read click on MAP > TYPE > DOT, and click on right mouse button. The irregular field plot appears, one dot per point of the field.

Superpose coasts

For geographical fields, you can get the coasts by typing DATA > BASEMAP > READ (/users/ext2/piriou/ch/fdc/ref). Then replot by typing right mouse button.

Get X and Y coordinates on the plot

LAYOUT > AXES > PRIMARY > YES.

Make a zoom on a particular area

DATA > IRREGULAR > WINDOW (LON1 LAT1 CR LON2 LAT2 CR). Instaed of giving explicit latitude and longitude values you can use mouse and click in two opposite window coins.

Change number of classes of the plot

Example: you want to plot the field from the value 4 to 8 by step 1: MAP > STYLE > CLASS > EXTREMES (4 8) > INTERVAL (1).

Get contour or isoline plot

You first need to create regular data: INTERPOLATE > GRIDCELLS (choose a number of points on X and Y of the grid on which to interpolate consistent with your irregular data grid).

Then plot contour by MAP > TYPE > CONTOUR.

Plot isoline by MAP > TYPE > LINE. To get on isolines the value of the field, see below.

Get value of the field on isolines

MAP > STYLE > ANNOTATE > METHOD > MOVE.
MAP > STYLE > ANNOTATE > HEIGHT (size of the numbers).
MAP > STYLE > ANNOTATE > DECIMALS (numbers of digits after coma).

Put titles

LAYOUT > TITLE > MAIN TITLE and then submenus are easy to understand!...

Get color paper output

HARDCOPY > DEVICE > POSTSCRIPT A4 couleur.
HARDCOPY > PRINT.

Get black and white paper output

HARDCOPY > DEVICE > POSTSCRIPT LASGMAP3.
HARDCOPY > PRINT.

Get postscript file

HARDCOPY > DEVICE > Fichier postscript A4 couleur: postc.ps.
HARDCOPY > PRINT.
The result will be on the postc.ps file.

Change legend

LAYOUT > LEGEND > CHANGE. The submenus are easy to understand!...

Use unimap in command mode

In order to avoid typing the same sequence of intructions while making multiple plots, what you do can be saved in a command file which you can rerun. This command file is a "text editable" one, so you can modify it before rerun (to change only a file name, for example). To do that, firstly save what you are currently doing: OPTIONS > LOGGING > YES (name of output command file). Type what you have to do on unimap. When you exit unimap, you get a file suffixed ".cmd" in which is written all unimap intructions you have executed.

To rerun it, enter unimap. Type "@name_of_the_file_with_no_suffix". The command file name_of_the_file_with_no_suffix.cmd runs on unimap.

Quit unimap

EXIT > YES.

BE CURIOUS

Many features of unimap can't be explained here. Be curious and use friendly mouse interface to learn more!...

3 unigraph

The use of unigraph will be explained in the following with an example. Guess you want to plot two curves given by their X coordinate and Y coordinate.

For example the first file contains

```
 .0 7
 6 8
 9 -2.0000
```

and the secund

```
 8  6
 .2  4
```

You want to plot these two curves on the same frame.

How to get unigraph on GMAP workstations

Same path and initialization as unimap.

Get the first plot

Type ug&. You get the unigraph window.

To read the data field click on DATA > IMPORT > REPORT > FILE NAME (name of file). The mention appears: 3 data values: T1 T2, which means that in your file unigragh has read two fields, with 3 data values each.

You can read the secund file the same way, and get the T3 and T4 unigraph fields.

To go up in the menus click the center mouse button.

To plot the data read from field: GRAPH > CREATE > Expression/dataset > name of the field to be put on Y coordinate. Click on "X (value)". Put the field you want to be put on X coordinate. Click on "Graph name" if you want to give an explicit name on your curve. This name will be the one appearing in the legend.

To choose the pattern, color of the curve, go in the GRAPH > CURVE menu.

Press right mouse button to plot.

To superpose a second curve, use GRAPH > CREATE again.

Get a legend

GROUP > LEGEND > ENABLE > YES.

Make a zoom on a particular area

GROUP > LIMITS.

Modify title

Click on it. The menu appears.

Get paper or file outputs

Same as unimap, so see above.

Use unigraph in command mode

In order to avoid typing the same sequence of intructions while making multiple plots, what you do can be saved in a command file which you can rerun. This command file is a "text editable" one, so you can modify it before rerun (to change only a file name, for example). To do that, firstly save what you are currently doing: OPTIONS > DIALOG > USE MOUSE (yes), Command logging (on). Type what you have to do on unigraph. When you exit unigraph, you get a file "UGRLOG.cmd" in which is written all unigraph intructions you have executed.

To rerun it, enter unigraph. Type "@name_of_the_file_with_no_suffix". The command file name_of_the_file_with_no_suffix.cmd runs on unigraph.

Quit unigraph

EXIT > YES.

BE CURIOUS

Many features of unigraph can't be explained here. Be curious and use friendly mouse interface to learn more!...