



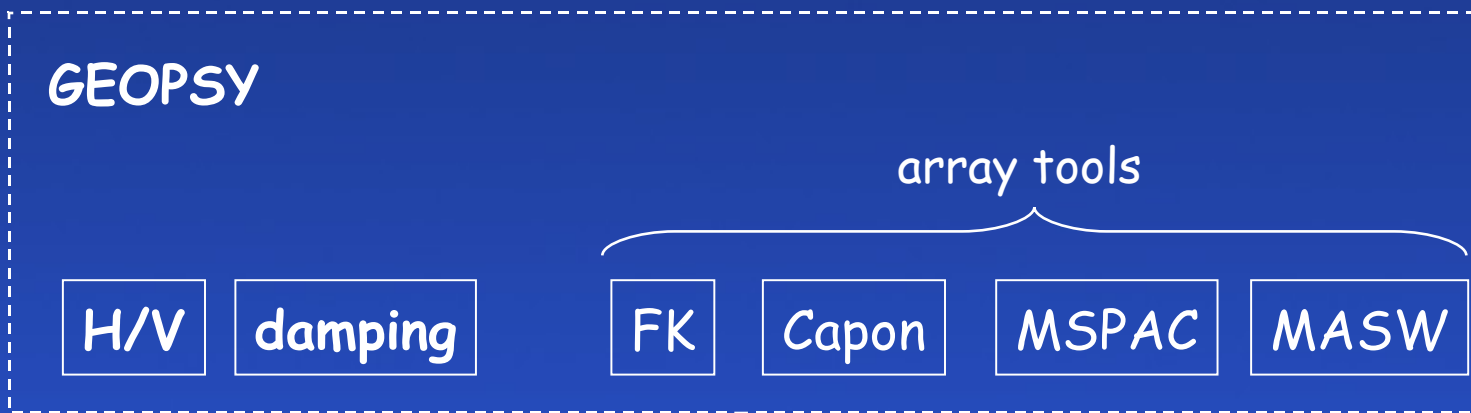
December 6th-12th, 2008, Thessaloniki, Greece

Using Ambient Vibration Array Techniques for Site Characterisation

A survival kit for Sesarray graphical tools

Tutorial

SESARRAY PACKAGE



figue

figures

gp tools

*Dispersion curves
 Ellipticity curves
 Autocorr. Curves
 ...*

build_array

Array response

Post-processing

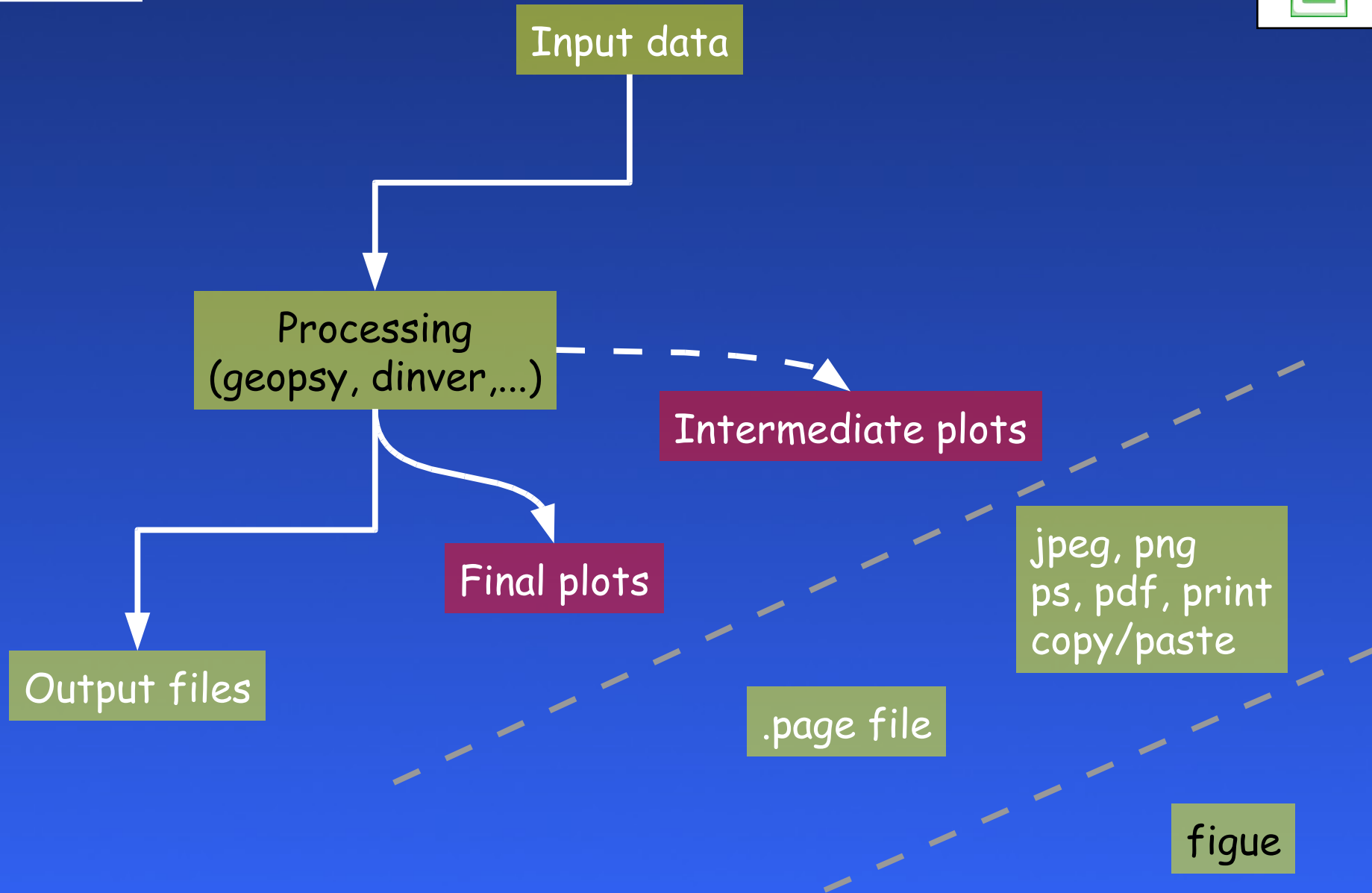
max2curve

spac2disp

DINVER

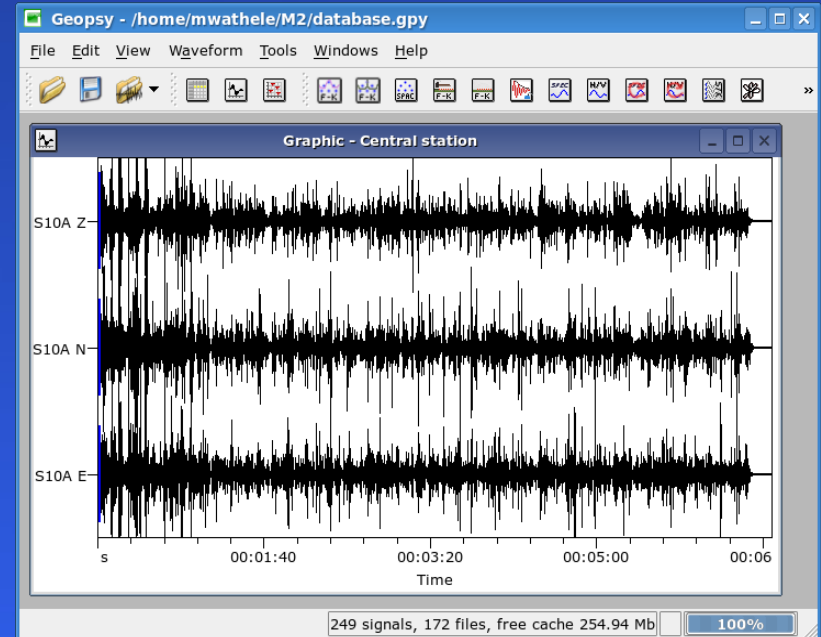
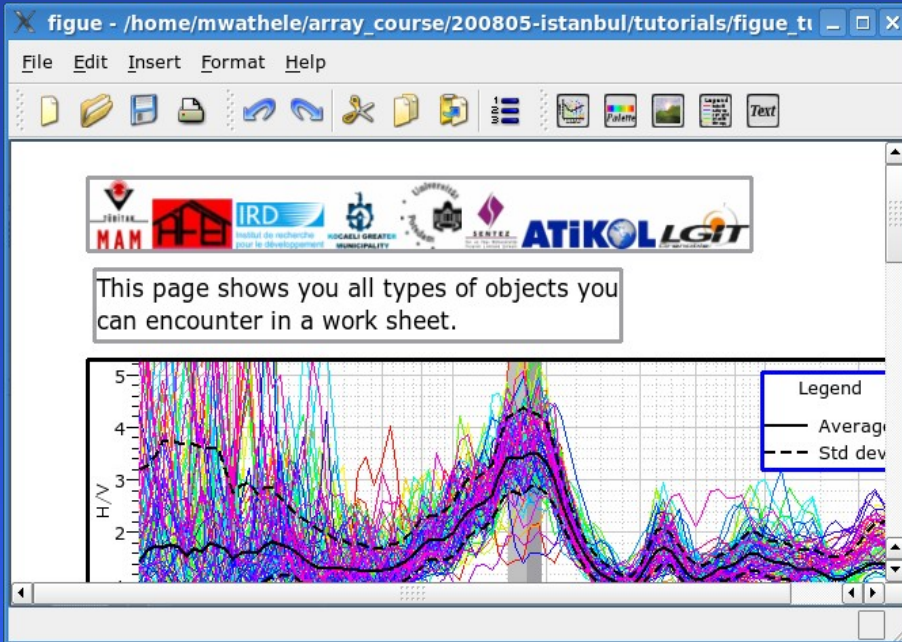
inversion

workflow

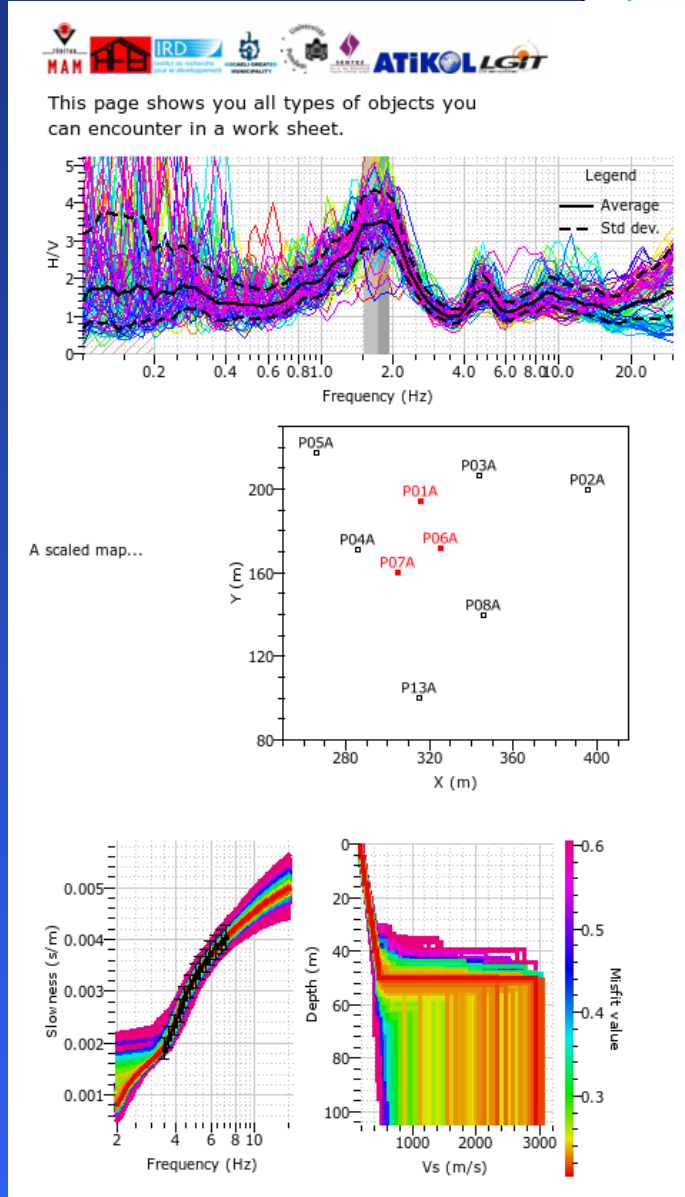
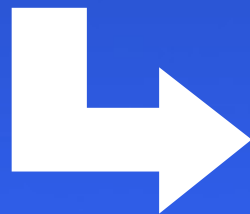
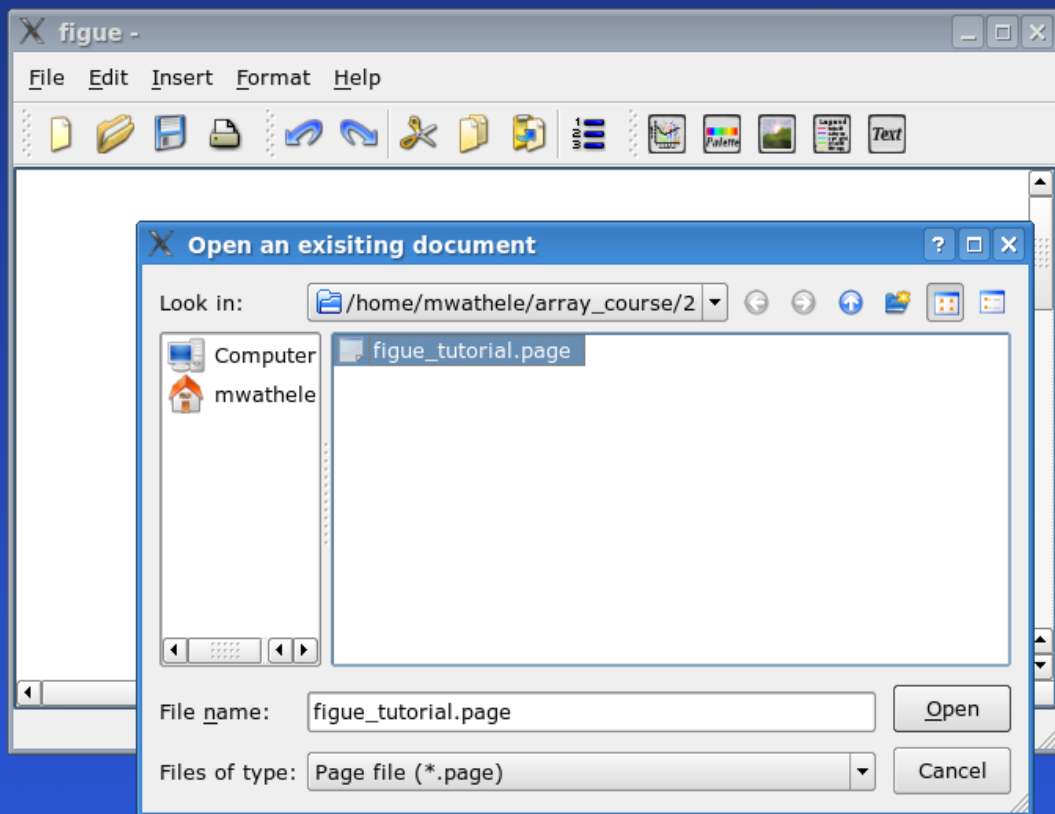


Objects inside a sheet or objects alone

"What you see is what you get"



example: exercise with figue



Image

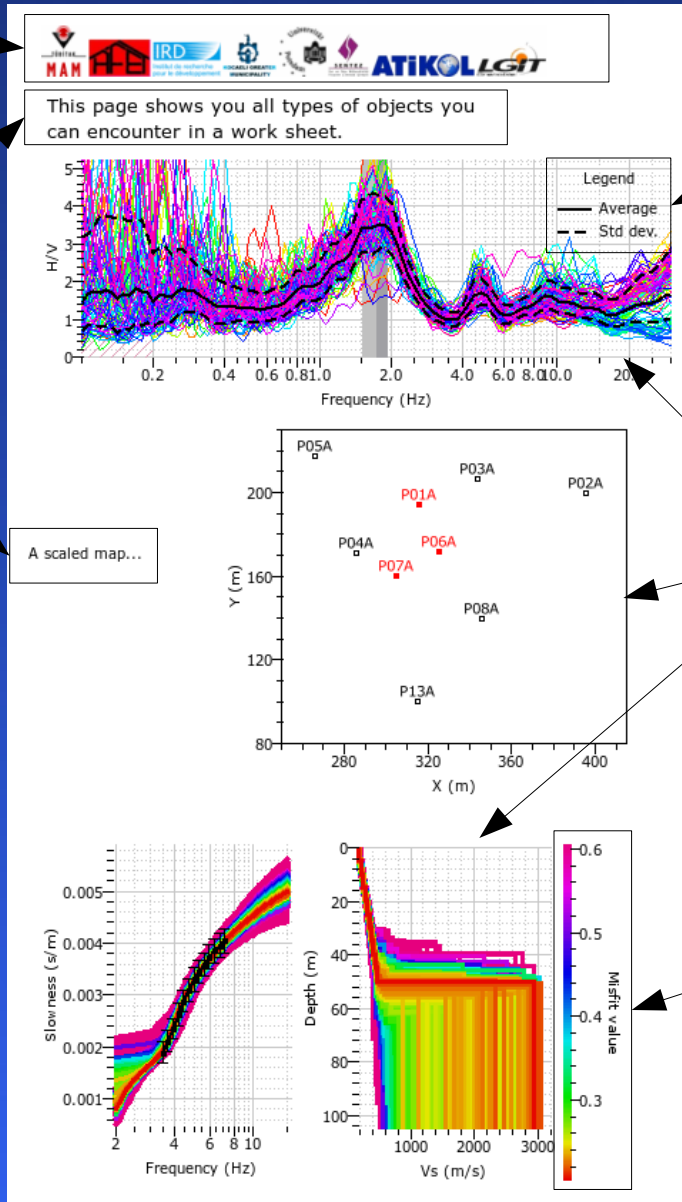
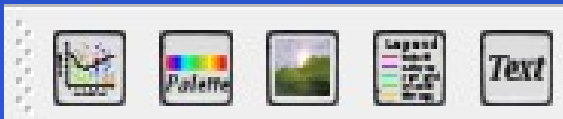
Text

Legend

2D plots

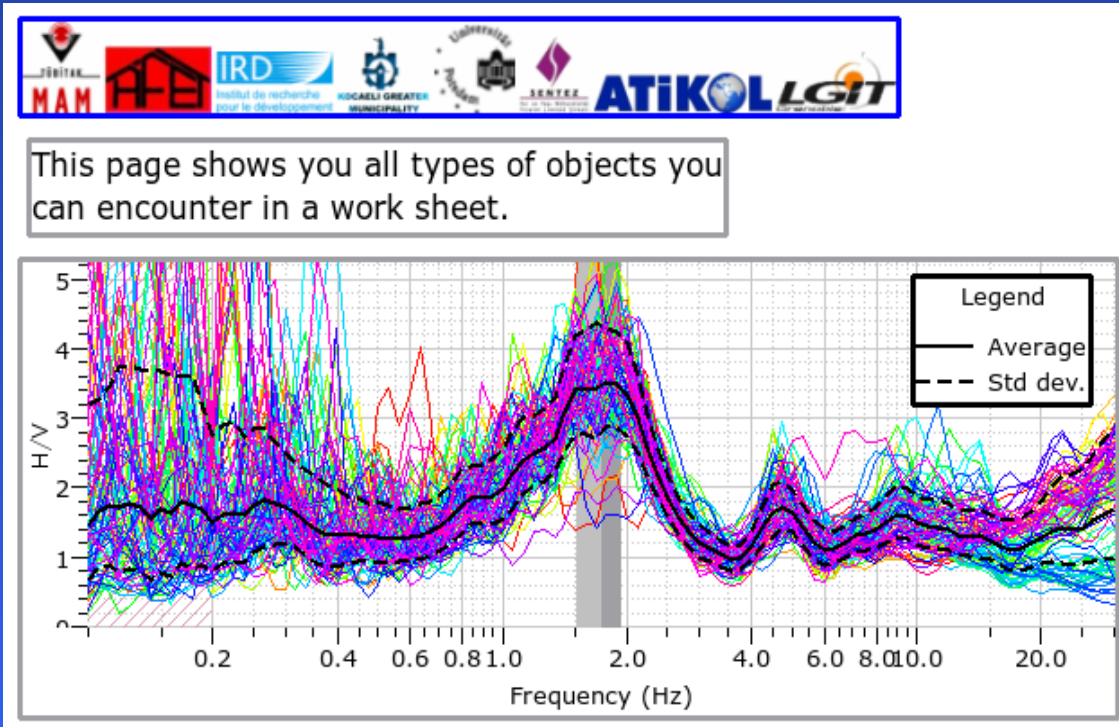
Palette

Types of objects



Classification of objects in a sheet

Blue: hover, object is not selected but will be if mouse is clicked
 Black: selected and active object (only one active at a time)
 Gray: selected object, part of a multiple selection, not active



Key strokes:

TAB

go to next object and
make it active

SHIFT

multiple selection

figure - /home/mwathele/array_course/200805-istanbul/tutorials/fig_

File Edit Insert Format Help

This page shows you all types of objects can

- Order
- Alignment
- Delete
- Print
- Export image as ...
- Copy
- Copy image
- Save make-up
- Save as a page
- Restore make-up

Property editor::figure - /home/mwathele/array_course/200

Object Text Sheet

Categories

Order

Resize

Expand/Collapse

Identification

Name object_1

QtbTextEdit

Geometry

X anchor(cm) 1.56733333333333

Y anchor(cm) 2.28266666666667

Anchor Top left corner

Width(cm) 9.52133333333333

Height(cm) 1.184

Constant width/height ratio

Print

Left margin(cm) 0.5

Right margin(cm) 0.5

Top margin(cm) 0.5

Bottom margin(cm) 0.5

Resolution 300 dpi

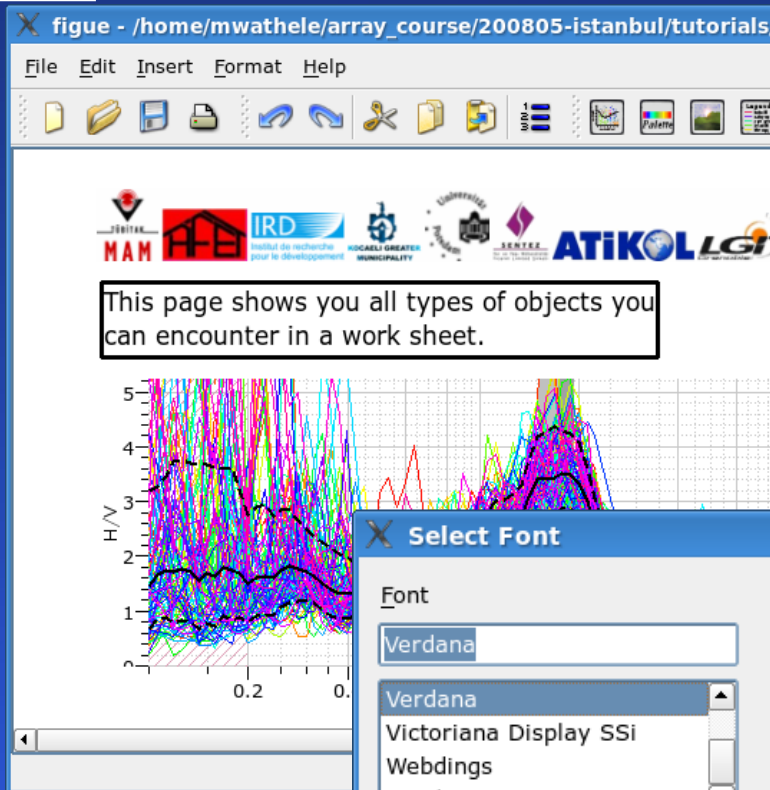
Transparency (alpha) 255

Transparent object (mask)

Properties of objects

Double click or menu

Properties of a text



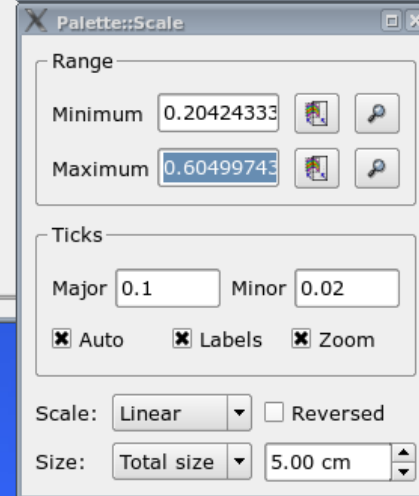
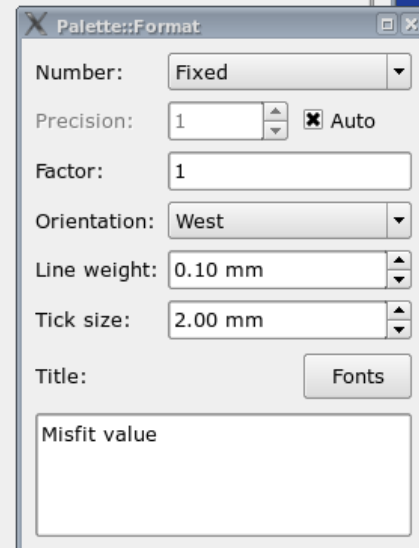
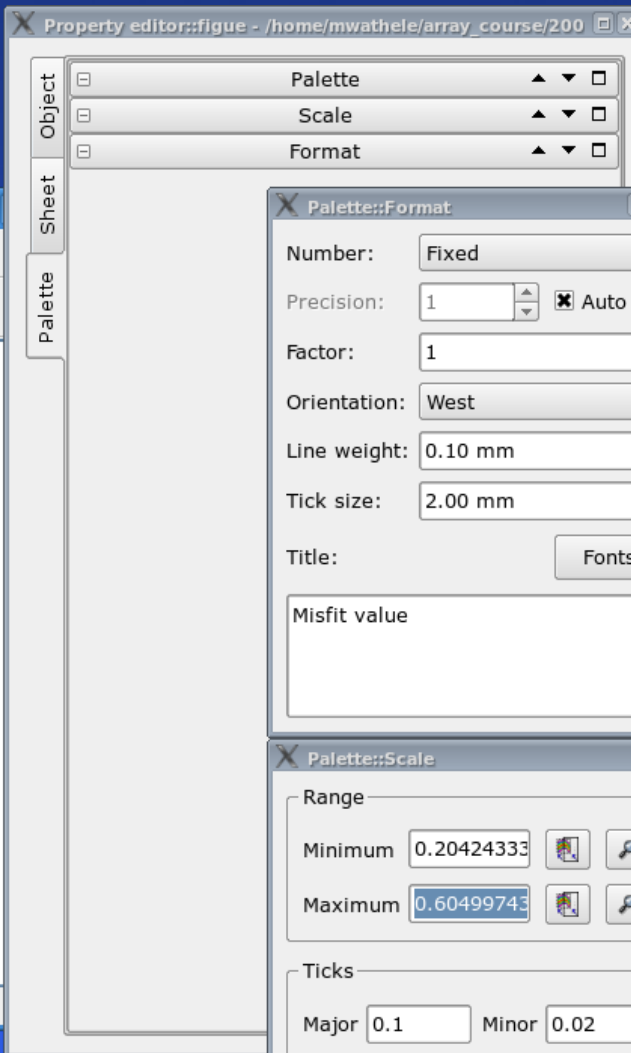
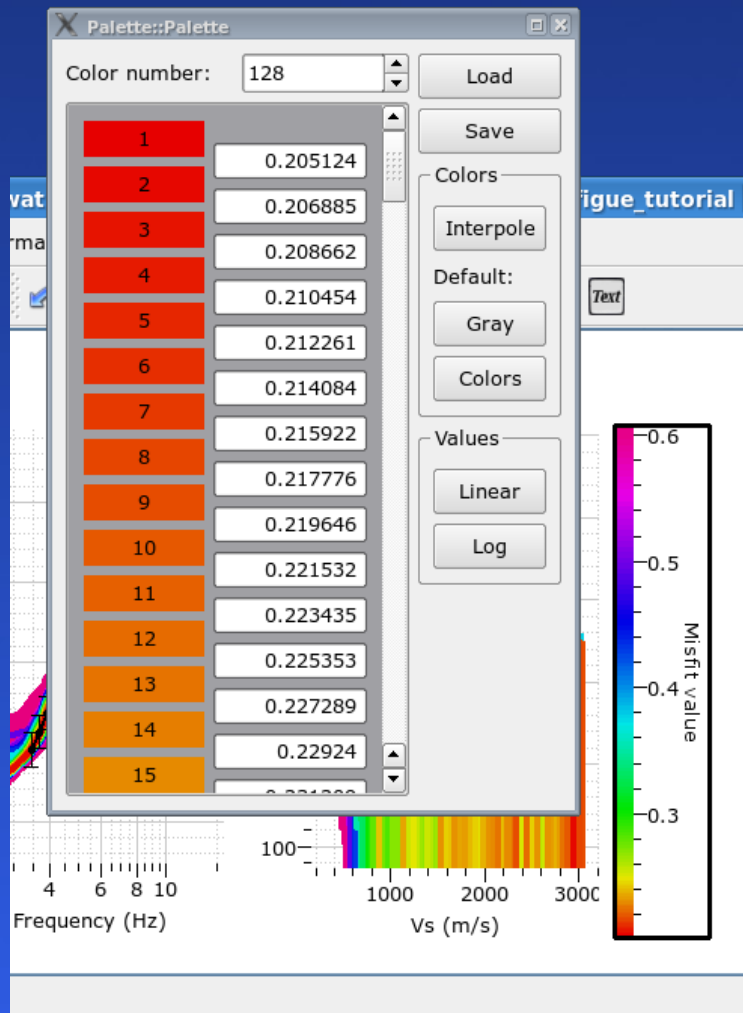
The screenshot shows the "Property editor" for a "Text" object. The window title is "Property editor::figure - /home/mwathele/array_course/200...". On the left, there is a vertical sidebar with "Object", "Text", and "Sheet" tabs. The "Text" tab is selected. The main area shows the text "This page shows you all types of objects you can encounter in a work sheet." Below the text, there are two checked options: "Text as data" and "Auto-resize to text". Under the "Fonts" section, there is a "change ..." button and a large empty rectangular box.

The screenshot shows the "Select Font" dialog box. It has three columns: "Font", "Font style", and "Size".

Font	Font style	Size
Verdana	Normal	12
Victoriana Display SSI	Italic	14
Webdings	Bold	16
WindsorDemi	Bold Italic	18
ZaleskiCaps		20

 Below the columns are "Effects" (Strikeout, Underline), "Writing System" (Any), and a "Sample" area showing "AaBbYyZz". There are "OK" and "Cancel" buttons at the bottom.

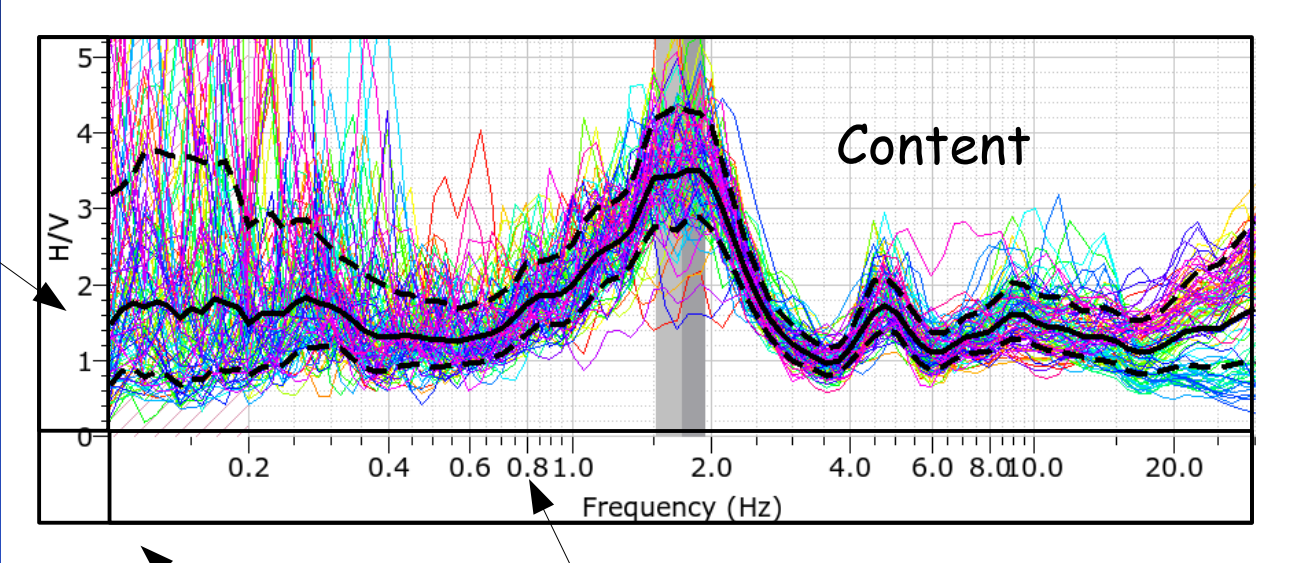
Properties of a palette



Properties of a 2D plot

- Layers
- Graphic
- Y Axis
- X Axis
- Object

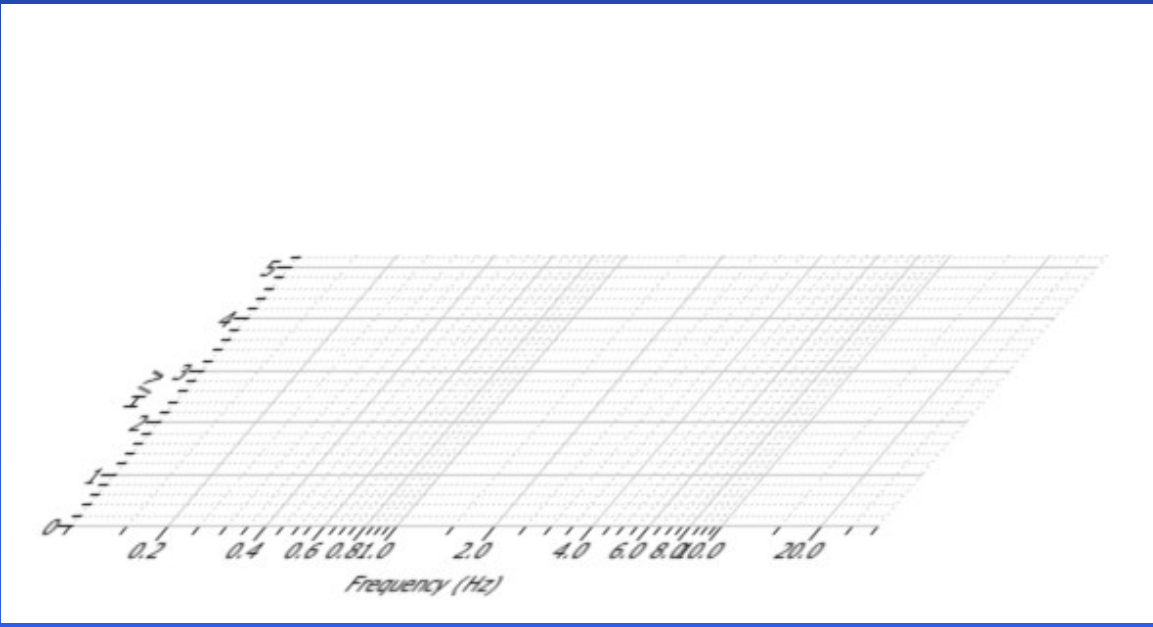
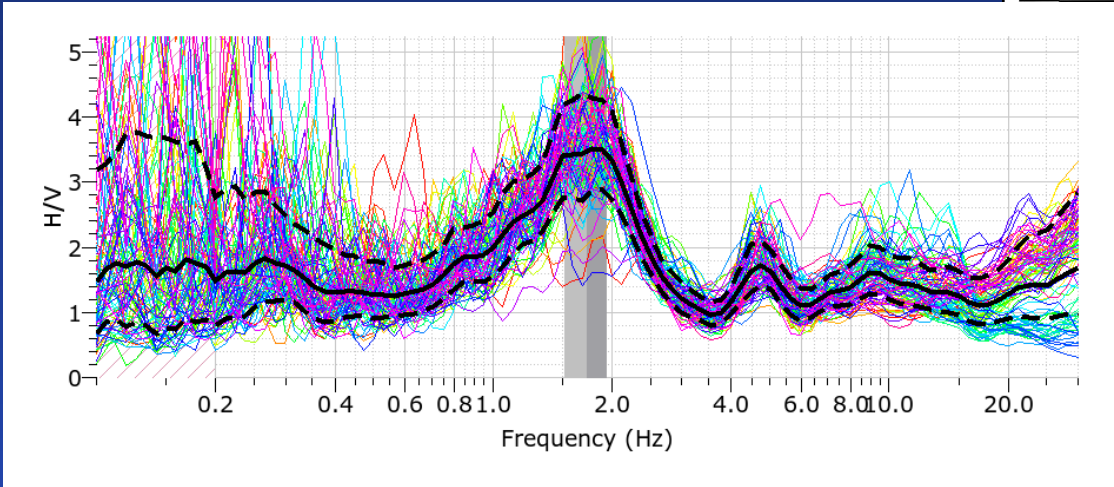
Y axis



Print margin

X axis



Layers of a 2D plot



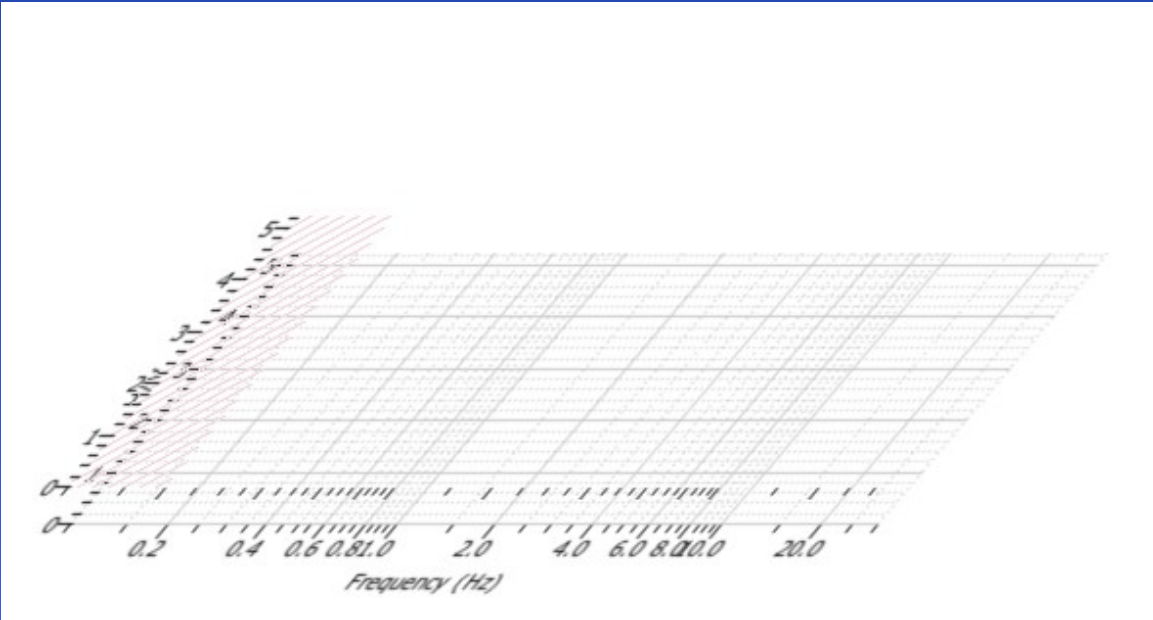
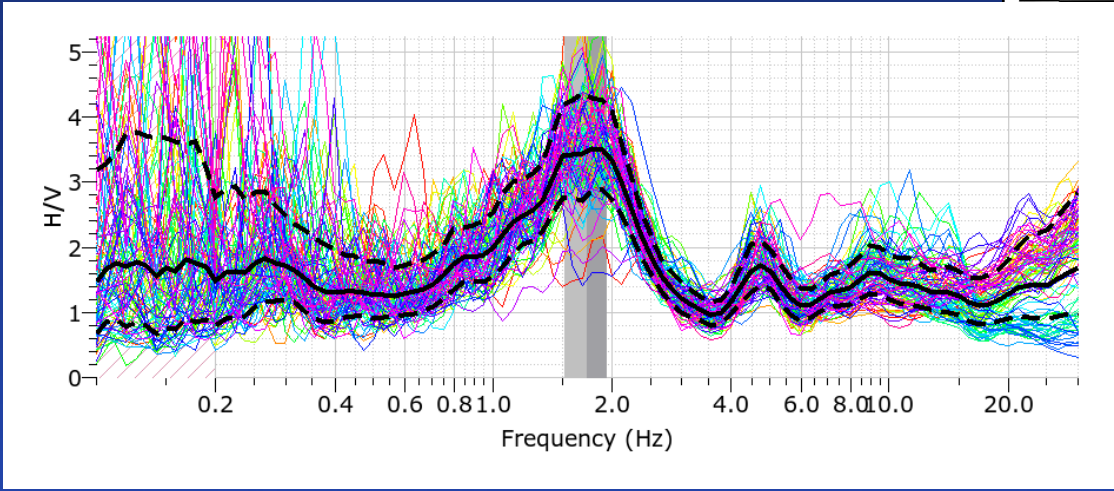
Background: grid lines

Layer stack

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1



Delete

Elements of a 2D plot



Parallel bands

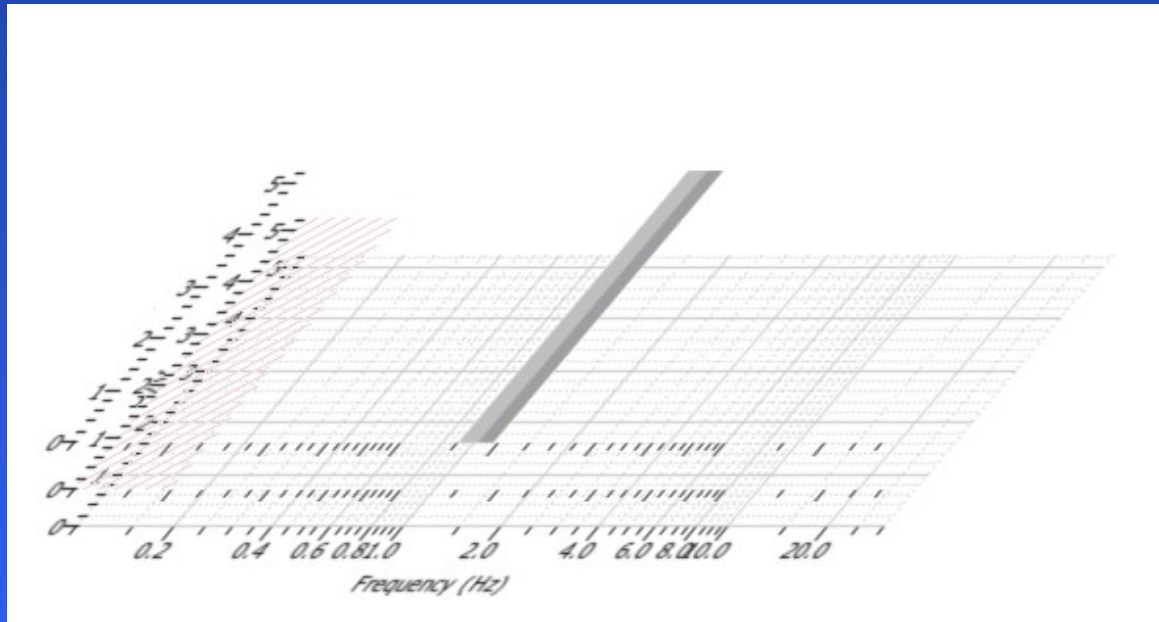
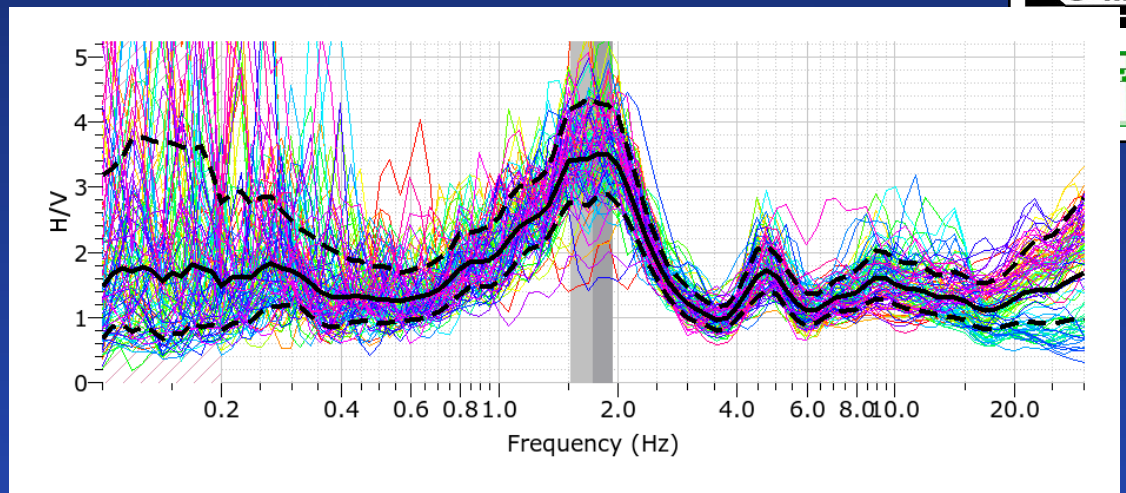
Layer stack

graph

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1

Delete

Elements of a 2D plot






Parallel bands

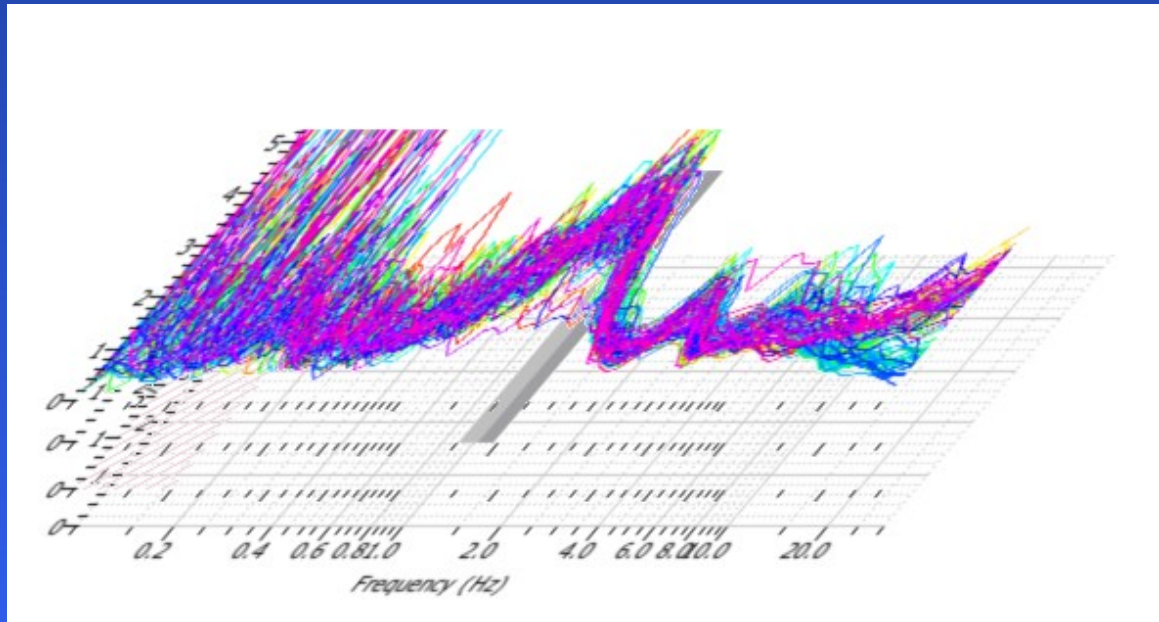
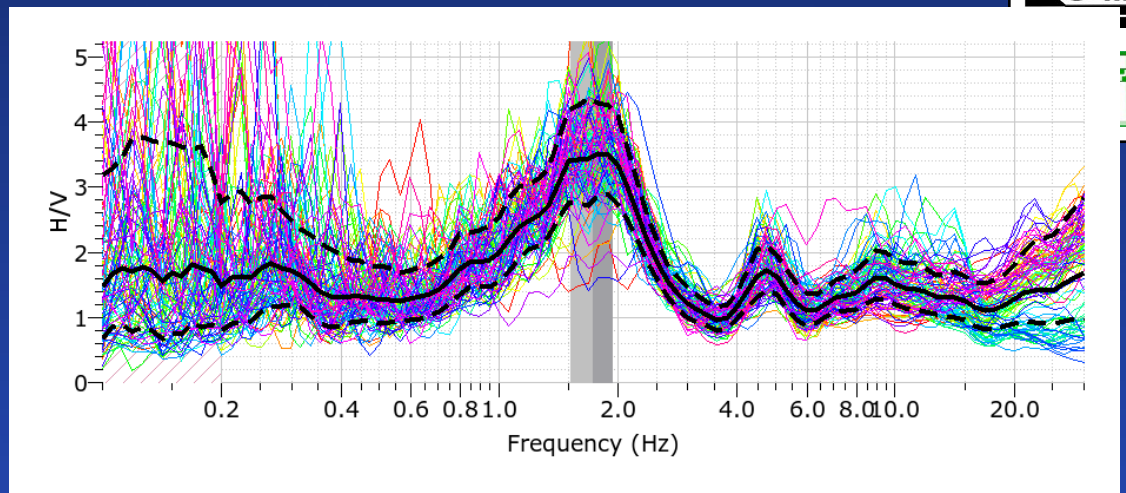
Layer stack

graph

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1

Layers of a 2D plot





XY Color lines

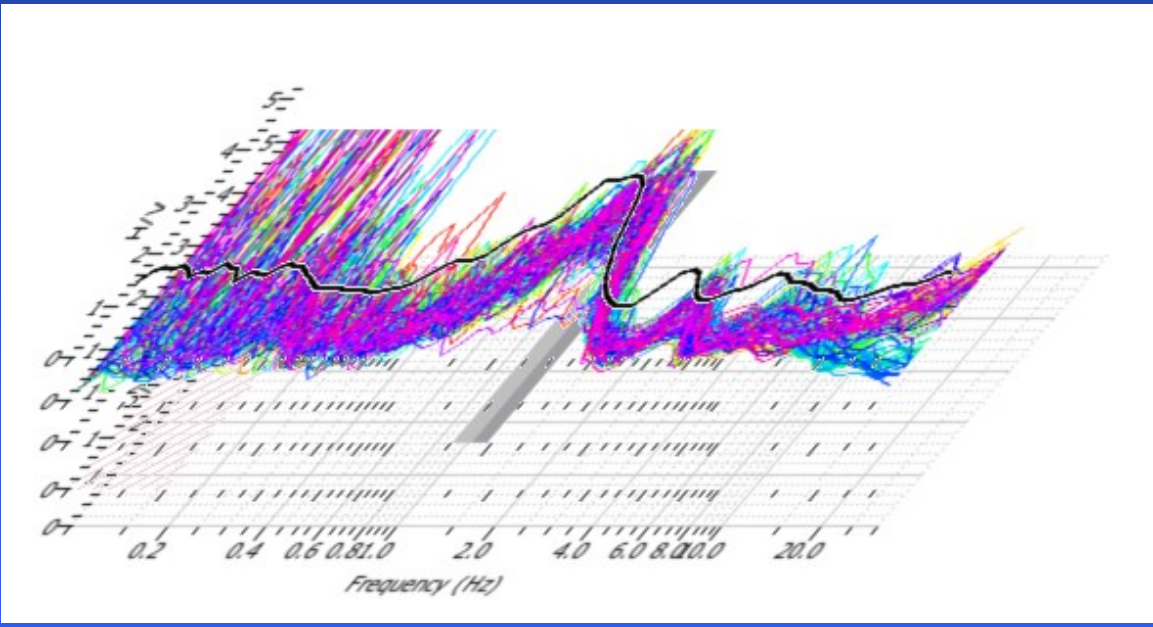
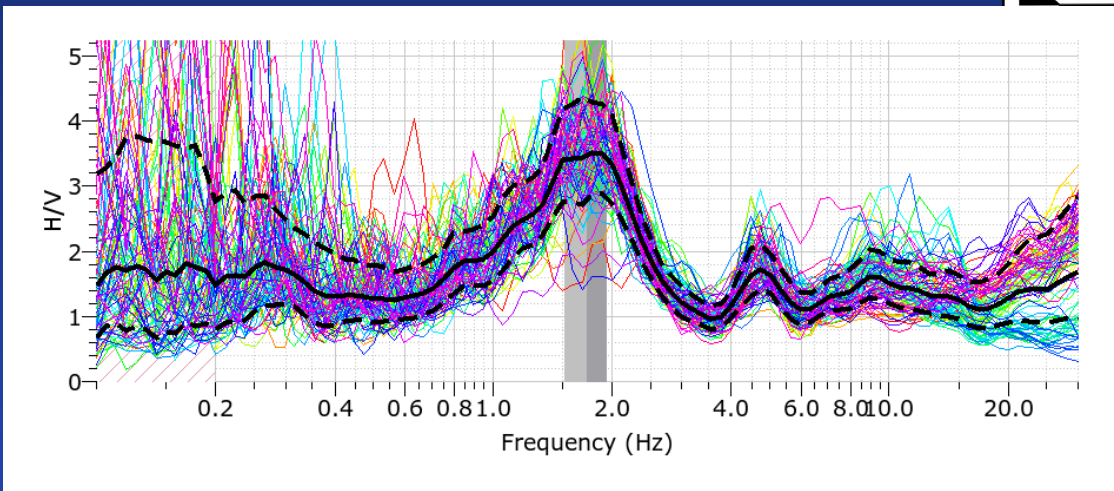
Layer stack

graph

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1



Delete

Layers of a 2D plot





Dynamic XY Color lines

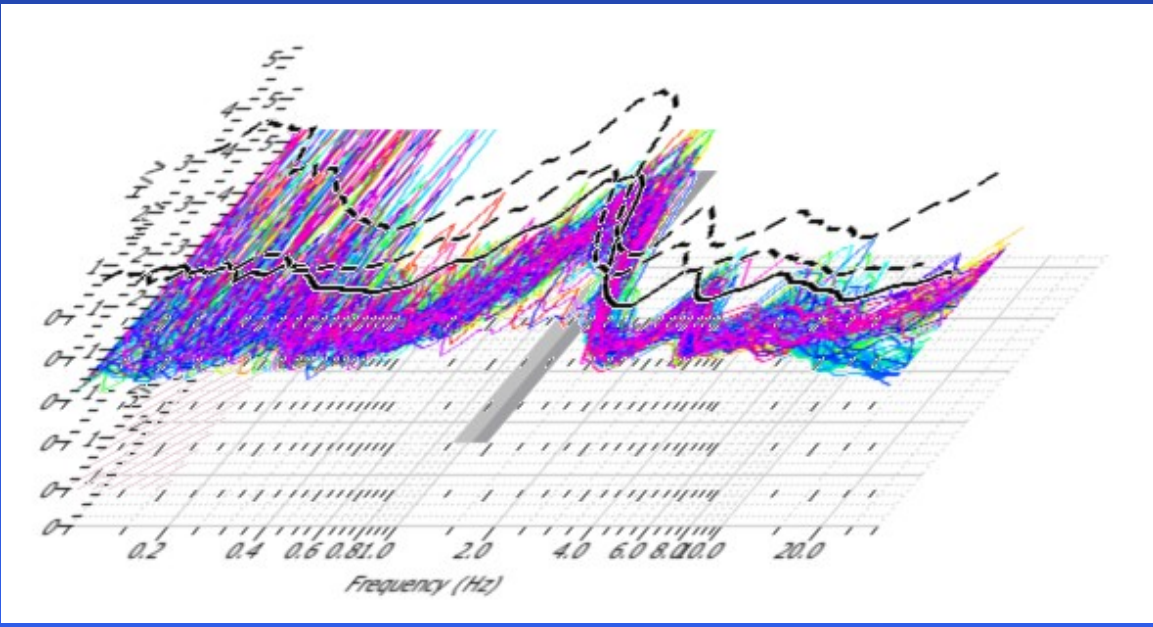
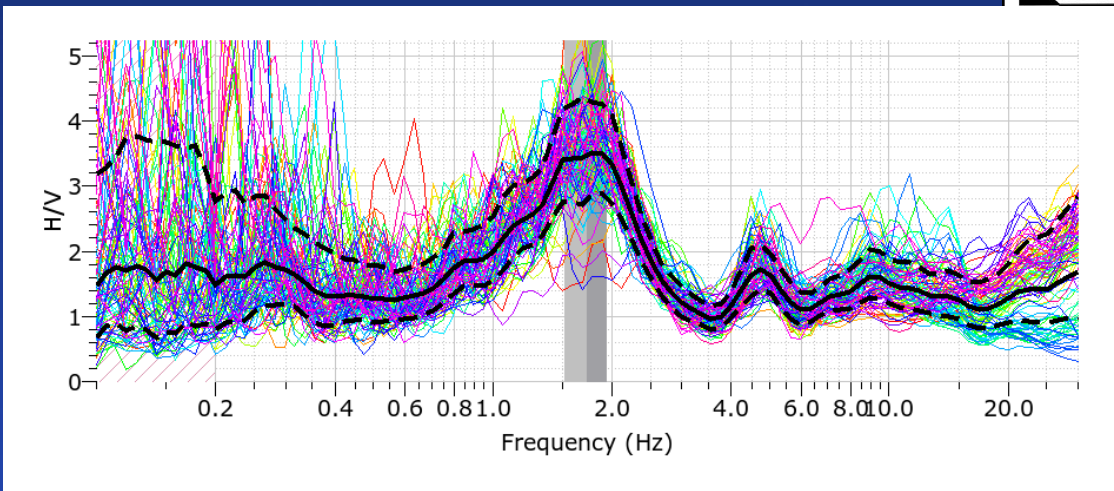
Layer stack

graph

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1



Delete

Layers of a 2D plot



Dynamic XY Color lines

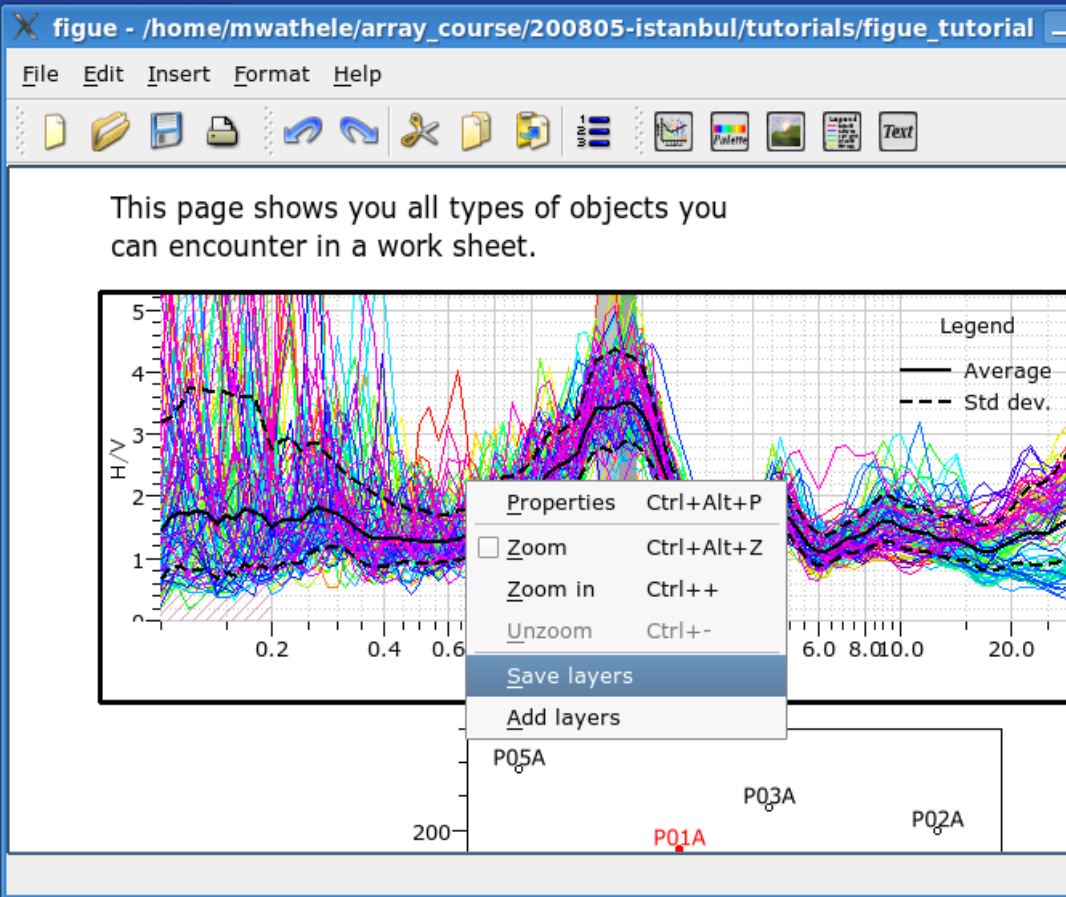
Layer stack

graph

	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1

Load, Re-order, Delete, ... layers

Files: *.layer



Property editor::figure - /home/mwathele/array_course/200805-i

Format

Horizontal Axis
 Vertical Axis
 Grid lines
 Transparent content (Mask)
 Print content as bitmap

Line weights (mm)

Contour:
 Grid line:

Layer stack

graph

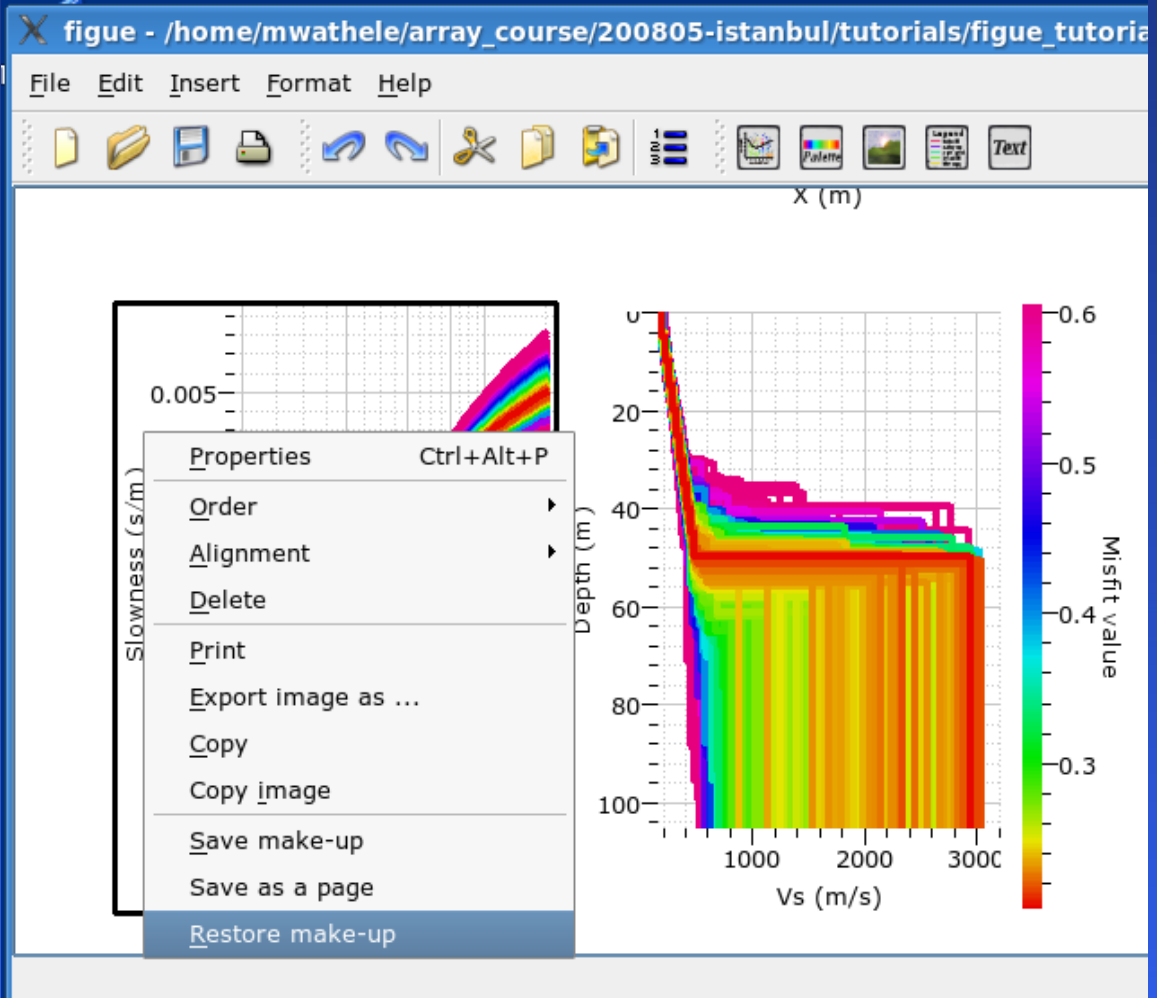
	Type	Name	Opacity
1	ParallelBands	T10	1
2	ParallelBands	f0	1
3	XUniqueYColorLines	Windows	1
4	DynXYColorLines	Average	1
5	DynXYColorLines	Stddev	1

restore "makeups"

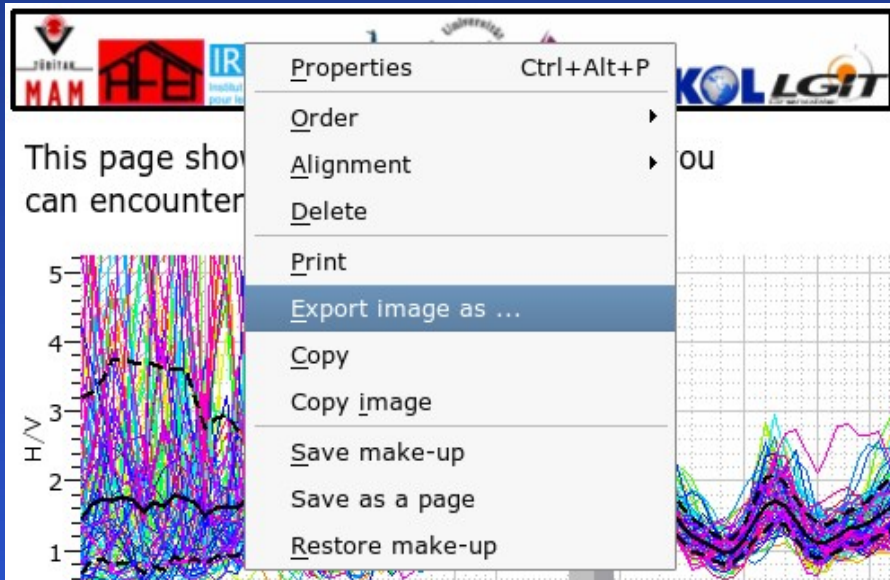
Files: *.mkup

Load "object.mkup"

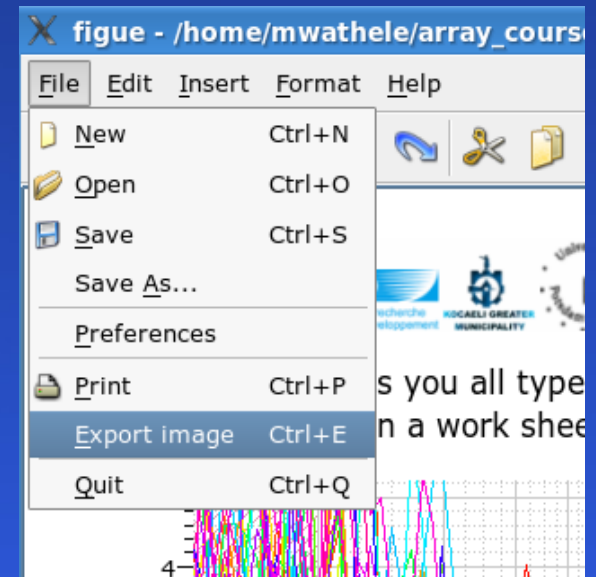
Be careful: difference between makeups for sheets (menu "Format") and for objects



Context menu from objects

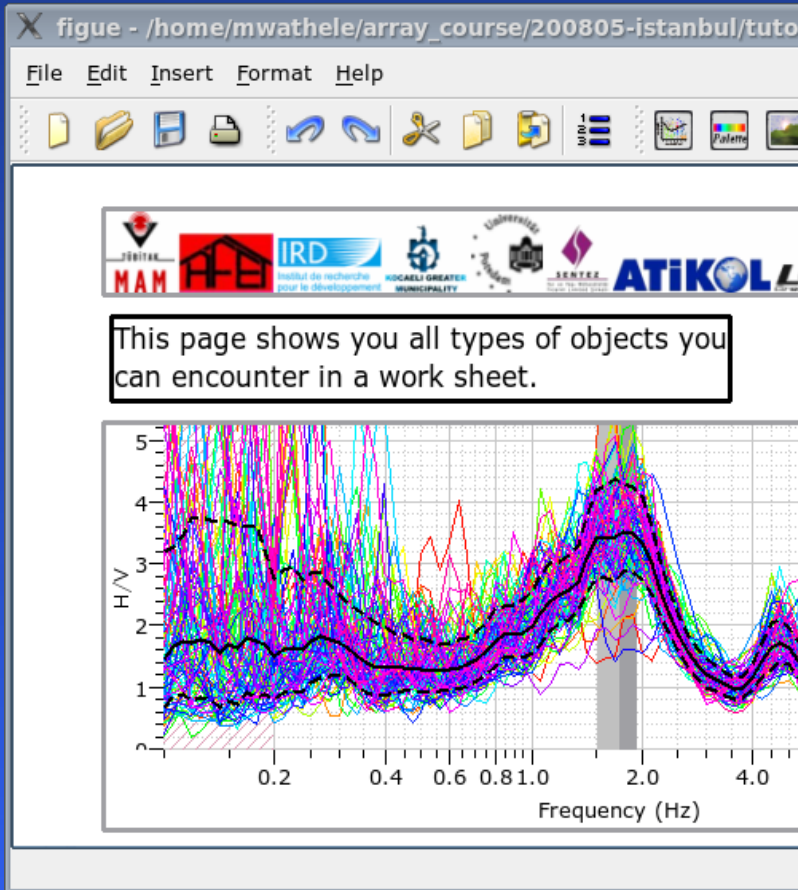


Create an image of the whole sheet



Changing output resolution

“ctrl+a” to select all objects



The Property editor window shows settings for a text object. The window title is "Property editor::figure - /home/mwathele/array_course/200805-i". The settings are organized into sections:

- Identification:** Name: object_1, Type: QtbTextEdit
- Geometry:** X anchor(cm): 1.56733333333333, Y anchor(cm): 2.28266666666667, Anchor: Top left corner, Width(cm): 9.52133333333333, Height(cm): 1.184, Constant Width/Height ratio
- Print:** Left margin(cm): 0.5, Right margin(cm): 0.5, Top margin(cm): 0.5, Bottom margin(cm): 0.5
- Text:** Resolution: 100 dpi, Transparency (alpha): 255, Transparent object (mask)

Collating image production from command line

```
figue figure_tutorial.page -e figure_tutorial.png -f PNG -dpi 50
```

Whole sheet into a PNG file with low resolution

```
figue figure_tutorial.page -e figure_tutorial.pdf -f PDF -dpi 300
```

High quality PDF

```
figue -h  
Usage: figue [OPTIONS] [FILE]...  
Customize your figures saved as .page and convert into usual  
image format (see option --format). FILE(s) are .page files.  
These files are tar.gz files containing an xml (contents.xml)  
and eventually some other binary files.  
[...]
```

For more information

as a quick plotter

```
cat curve.txt | figure -c -m dc.mkup
```

Plot a curve stored in a 2-column text file
with format saved in a "makeup" file (object kind)

Other types of plots: grids, dots, many curve,...
see option -h for more information.