

# WuMapPy

## WuMapPy Documentation

*Release 0.20*

**Lionel Darras & Philippe Marty**

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## 1 Introduction

This project was initiated through cooperation between the french CNRS units [UMR5133-Archéorient \(FR\)](#) and [UMR7619-Métis \(FR\)](#)

## 2 Description

WuMapPy is a graphic user interface for friendly sub-surface geophysical survey data processing. All displaying or processing operations are realized by an other python module named GeophPy.

## 3 Features

- Processing data sets with geophysicals methods.
- Compatibility with Python 3.x

## 4 Installation

You can install, upgrade, uninstall wumappy with these commands:

```
$ pip install wumappy
$ pip install --upgrade wumappy
$ pip uninstall wumappy
```

Or if you don't have pip:

```
$ easy_install wumappy
```

Or download the zip file “WuMapPy-vx.y” and unzip it.

Then, you can install now WuMapPy with this command:

```
$ python setup.py install
```

WuMapPy and GeophPy are using others python modules. If the installation of one of these modules failed on windows, you can install independently thes modules using this useful web site : <http://www.lfd.uci.edu/~gohlke/pythonlibs/>

## 5 Command-line usage

WuMapPy has a command-line script that launches the software.:

```
$ wumappy

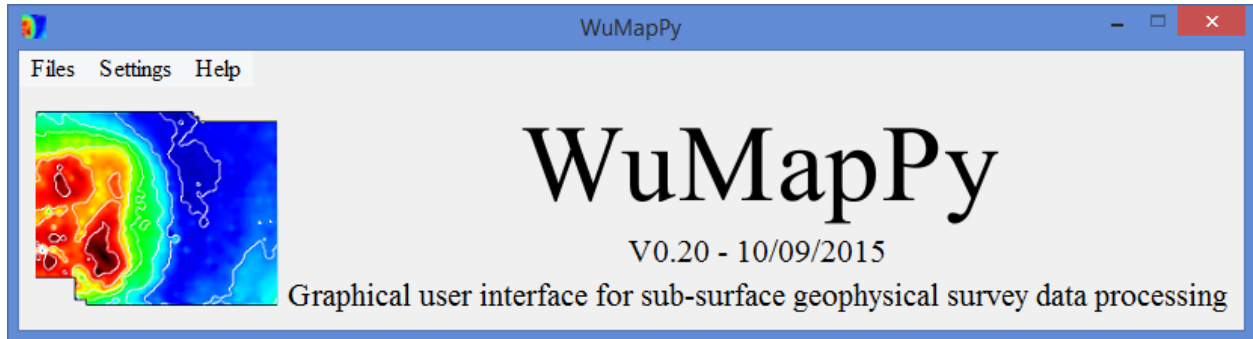
usage: wumappy
```

## 6 Graphical user interface

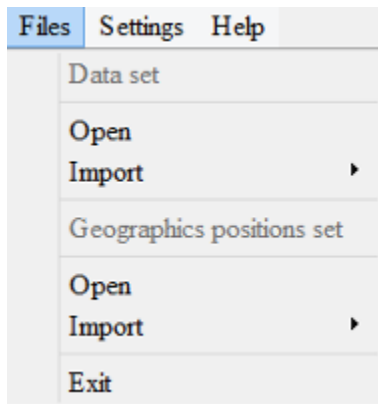
### 6.1 Introduction

The WuMapPy Graphic User Interface is developped using the “PySide” library.

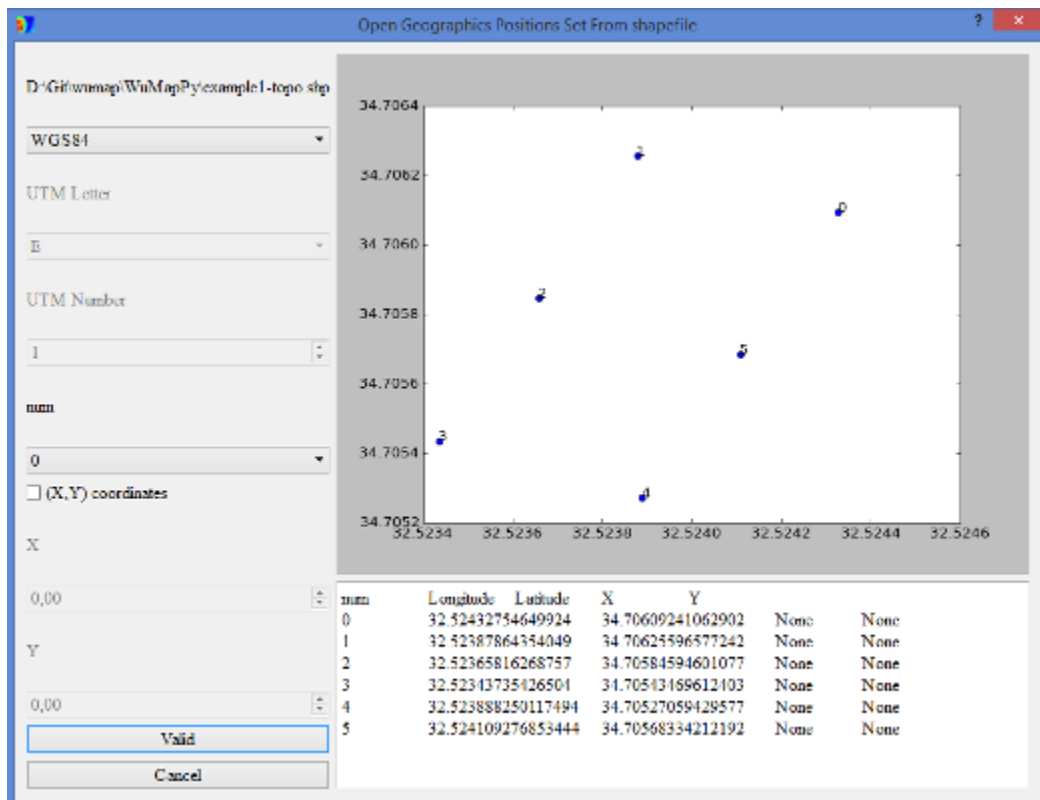
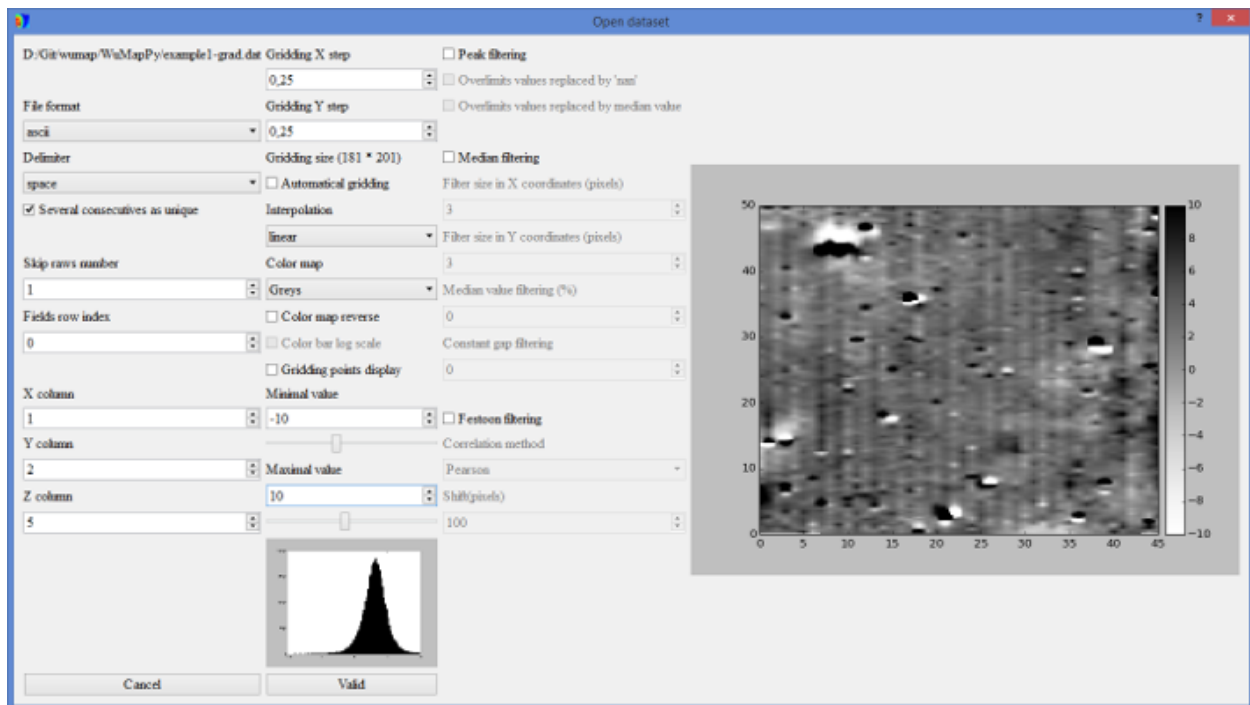
## 6.2 Main Window



### Files

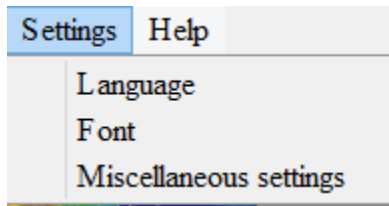


With this menu, you can open data set opening netcdf file or importing ascii files, and open geographics positions set opening ascii files or importing shapefiles :



(for more informations, cf. GeophPy documentation)

## Settings



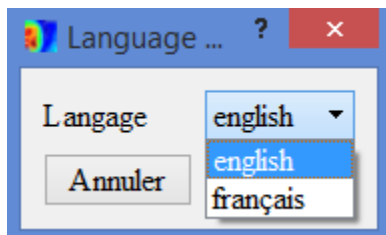
Language :

The language descriptions are presents as “lng” files in the “MAIN/.wumappy/resources” directory where “MAIN” is the user home directory. The default language for the Graphic User Interface is the english language, and it’s the only one generated by the code and saved as the “english.lng” file:

```
>>> english
FILES_ID      Files
SETTINGS_ID   Settings
FONT_ID       Font
MISCSETTINGS_ID Miscellaneous Settings
HELP_ID       Help
ABOUT_ID     About
```

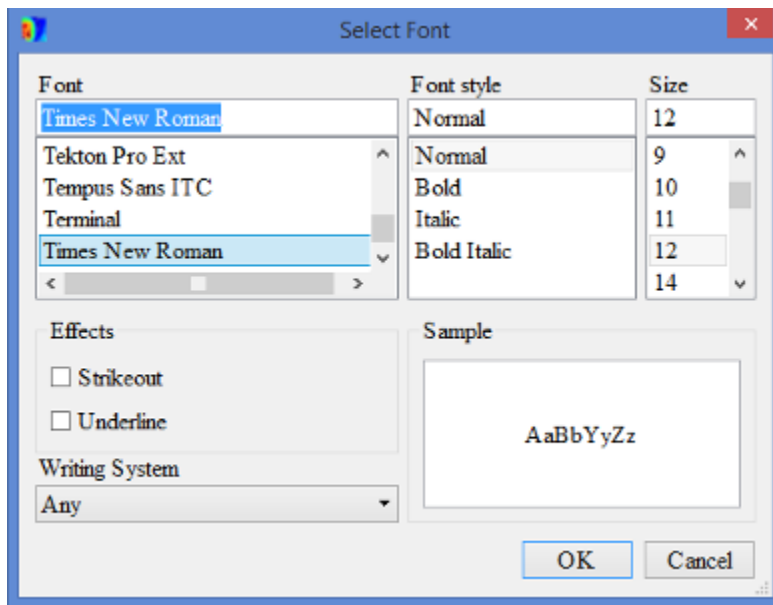
But it’s easy to add and use an other language, duplicating the “english.lng” file as “otherlanguage.lng” and by modifying the file adapting it to the language (the first line, and for all others rows, all fields of the second column to traduce the expression in the selected language.

With others language files in the “MAIN/wumappy/resources” directory, like “french.lng” and “spanish.lng”, the WuMapPy application automatically detect these languages files, and in the “Settings->Language” menu set the selection of these languages disponibles :

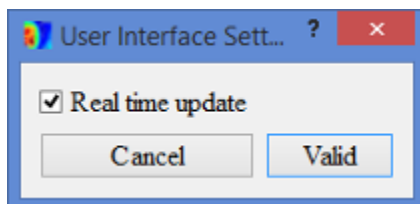


Font :

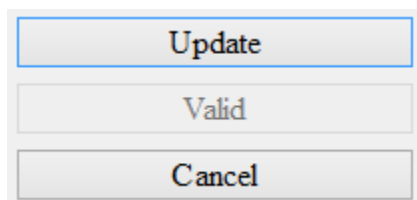
The font type and the font size used in the majority of the windows and dialog box can be modified selecting “Settings->Font” item.



Miscellaneous settings :



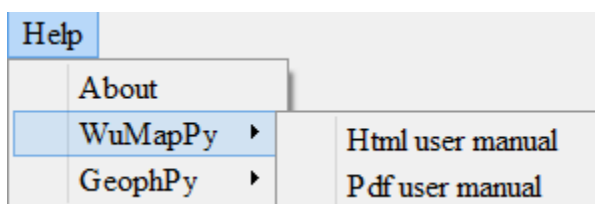
With this dialog box, it is possible to check/uncheck the flag of real-time update after a modification in a dialog box. If the flag is unchecked, a “Update” button will be displayed in the dialog box.



The cartography at the right of the box will be updated only if this “Update” button is clicked.

## Help

In this menu, it’s possible to access to the WuMapPy and GeophPy versions number and documentations in two formats (html or pdf).



On Linux operating system, to opening these documentations with the best application, you need, before starting “WuMapPy” application, to write the applications full names to use with html and pdf documents in the “config” file :

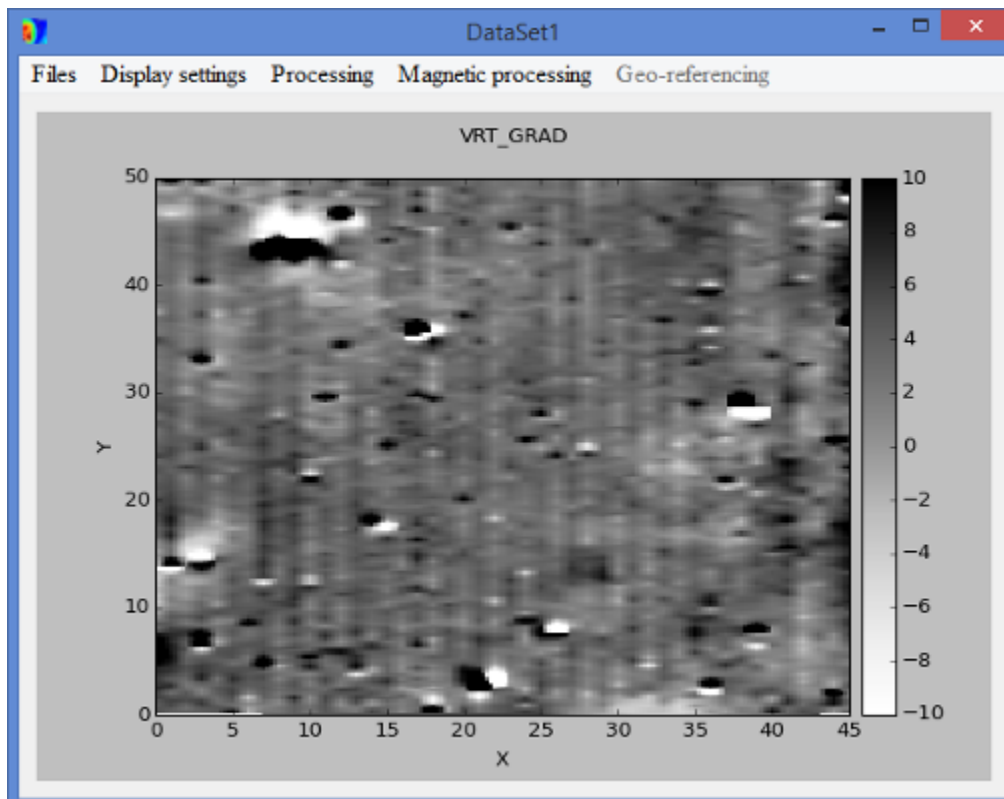
```
>>> [MISC]
      html_viewer = none
      pdf_viewer = none
```

with ‘none’, the default string, the application launches only the file full name (“../WuMapPy.pdf” for example), and the operating system define which application to execute to opening the documentation file.

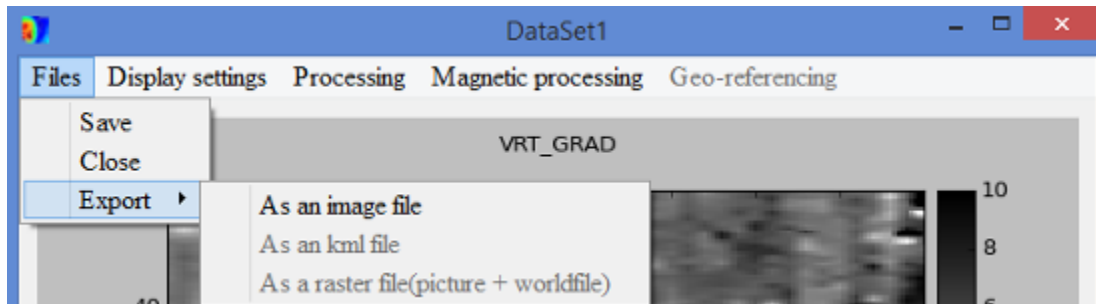
Note : The “config” file is saved in “~/wumappy” on Windows, or “~/wumappy” on Linux and Mac OS, where ‘~’ is the user directory.

## 6.3 Data Set Window

The data set opened is displayed in a window with a menubar like this :

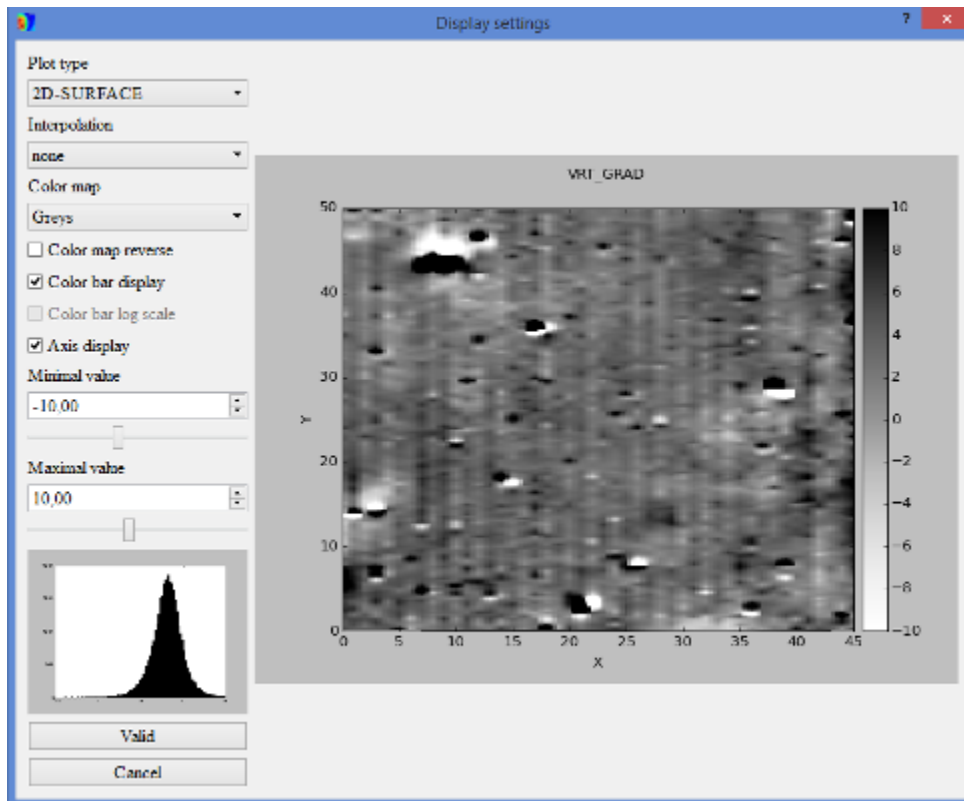


## Files



With this menu, it's possible to save the data set in a netcdf format file, and export the data set in several formats (ascii files, image, ...)

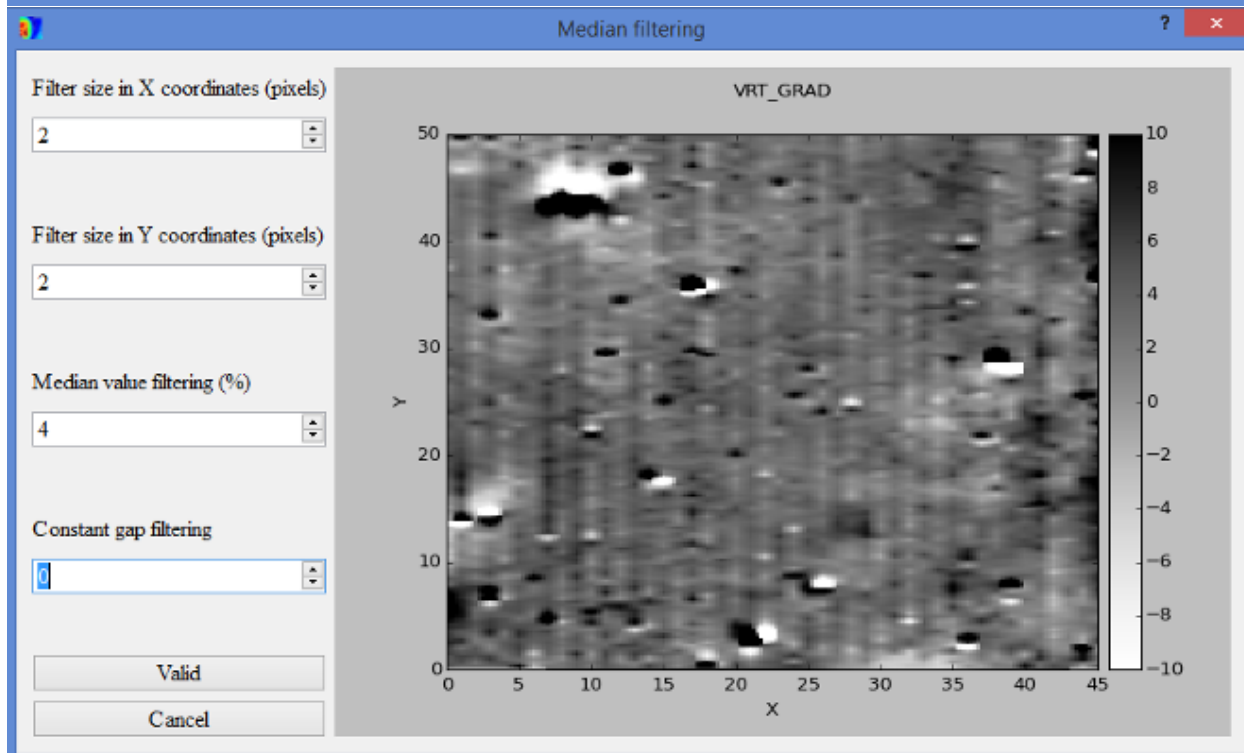
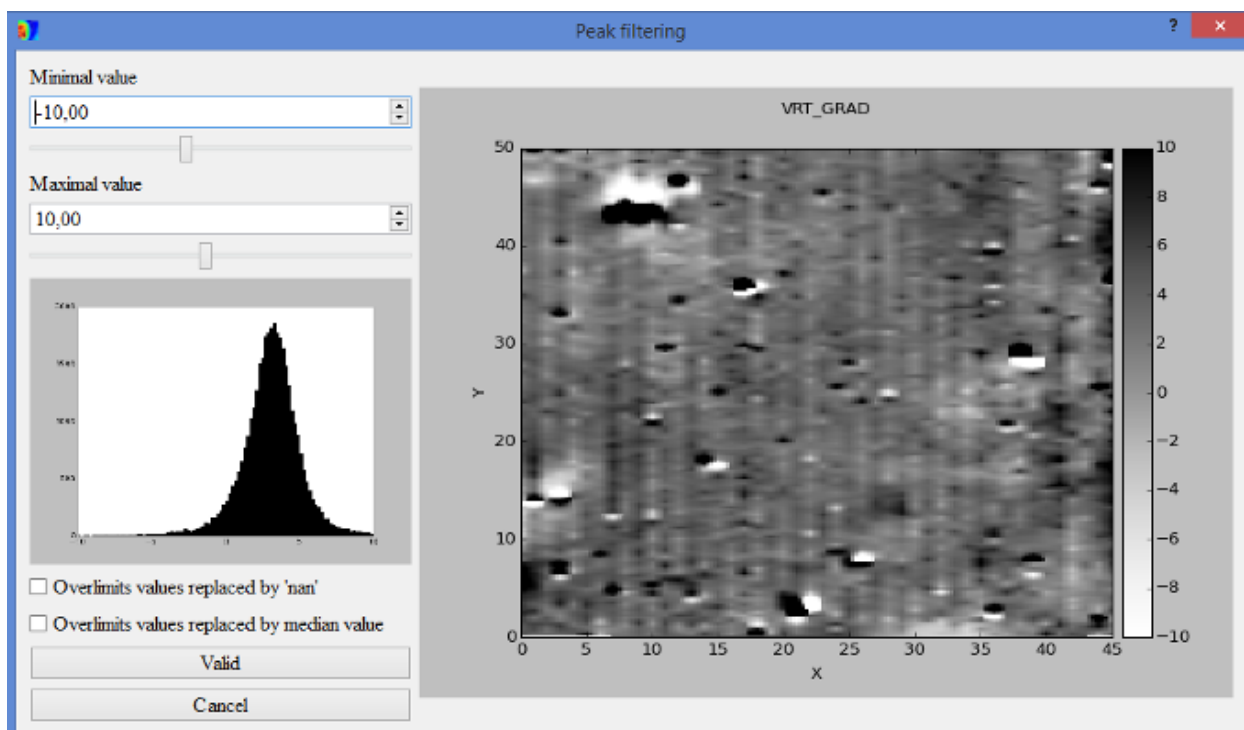
## Display Settings

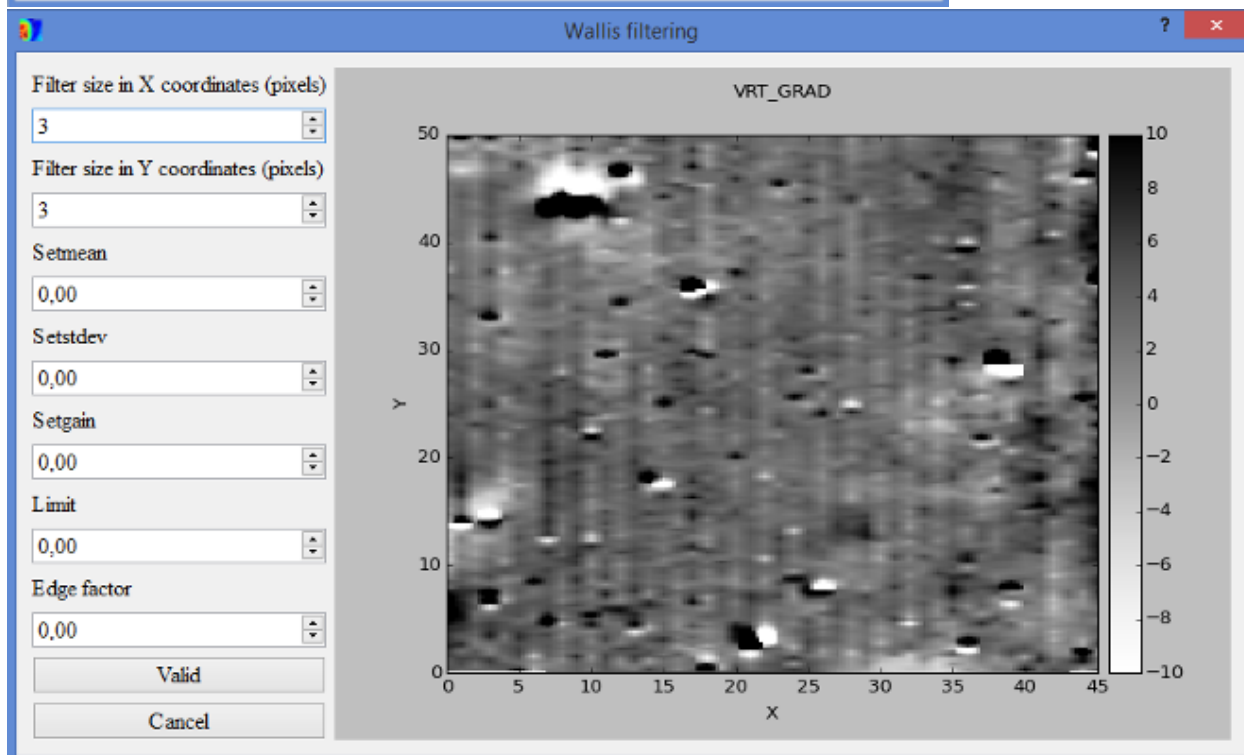
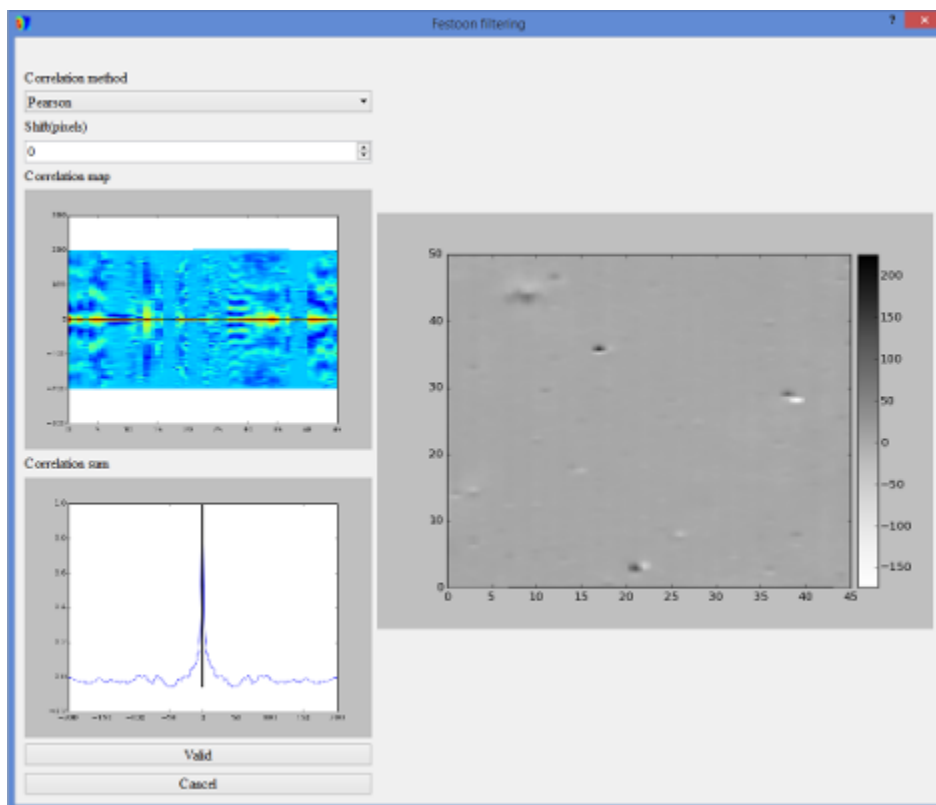


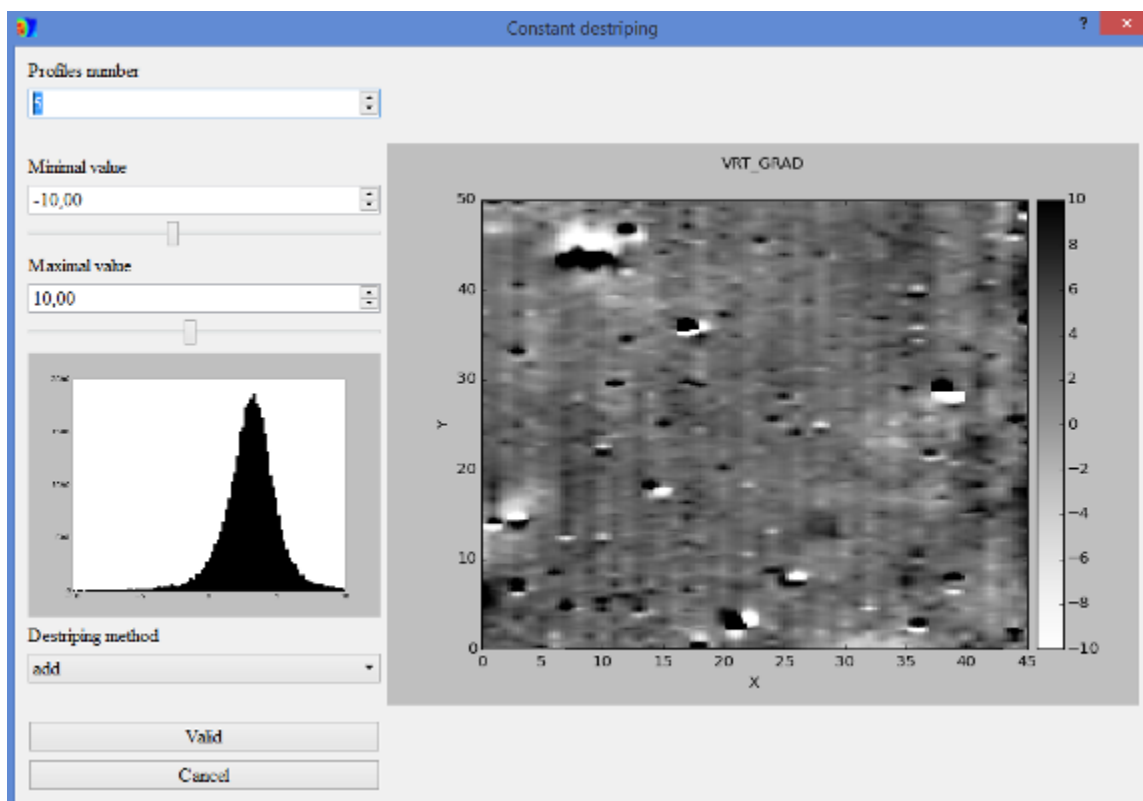
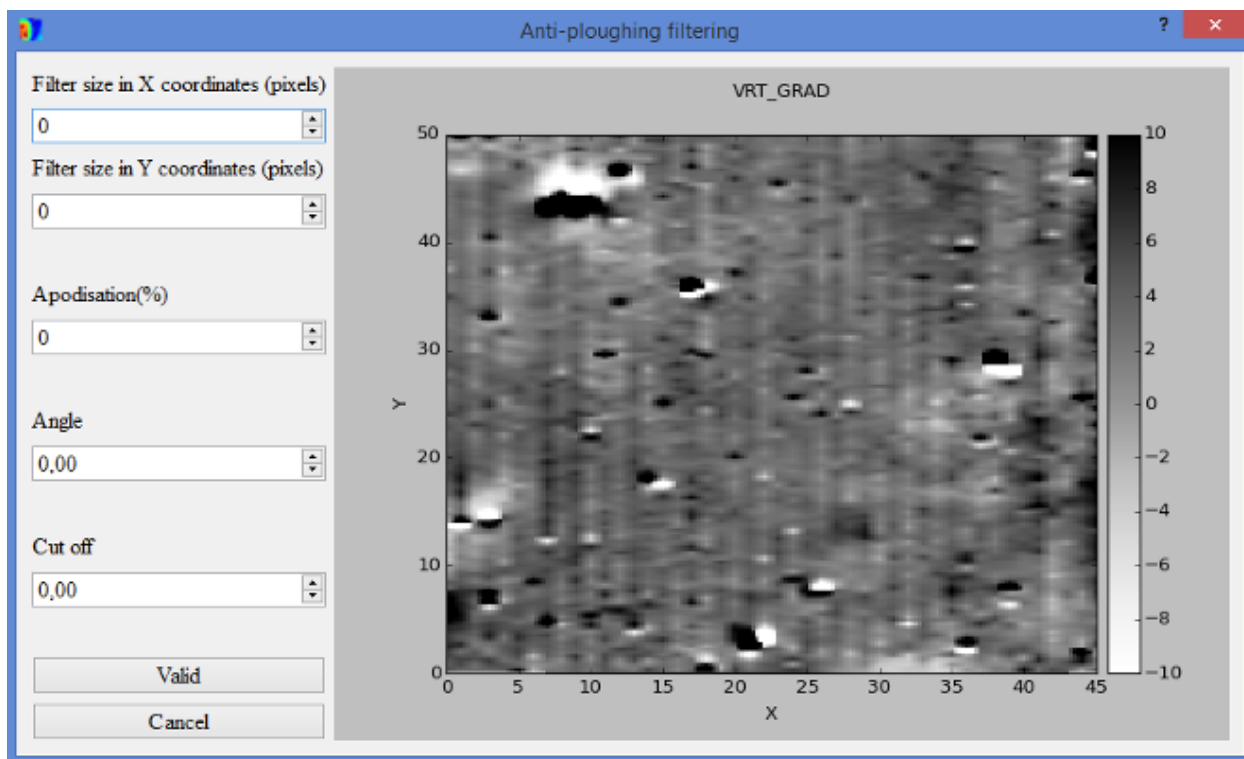
## Processing

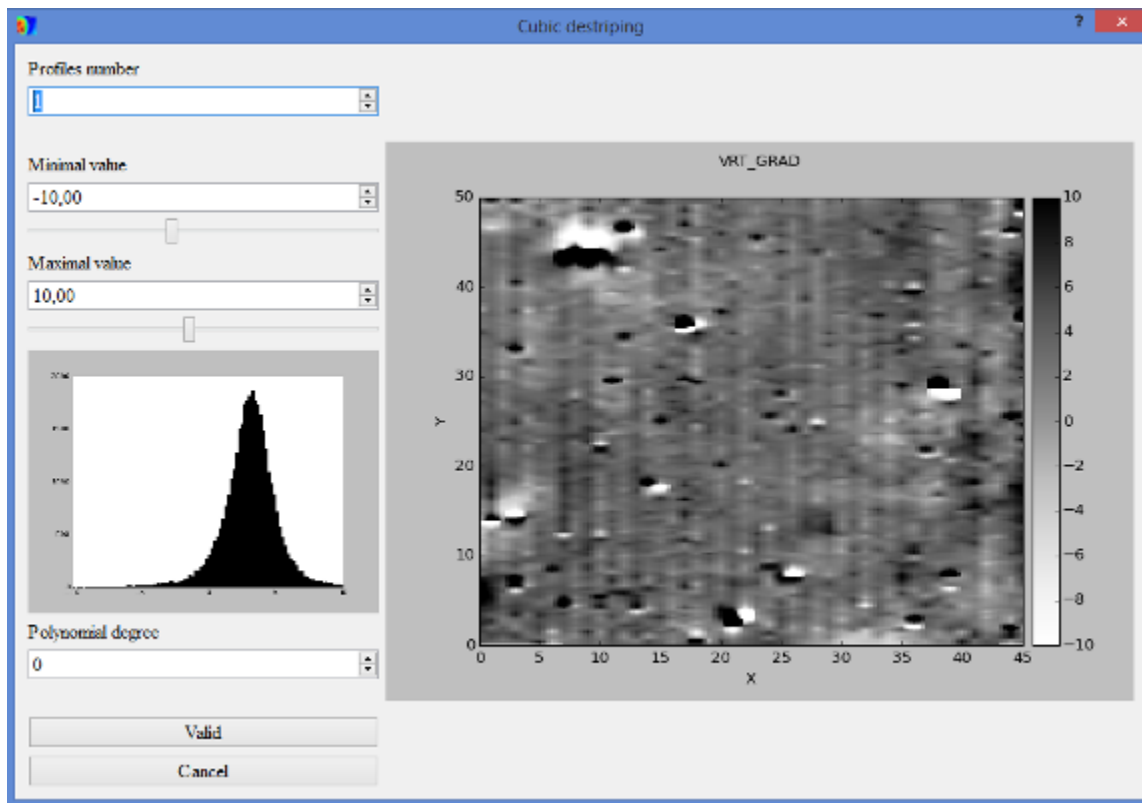
Severals general processing dialog box are availables :







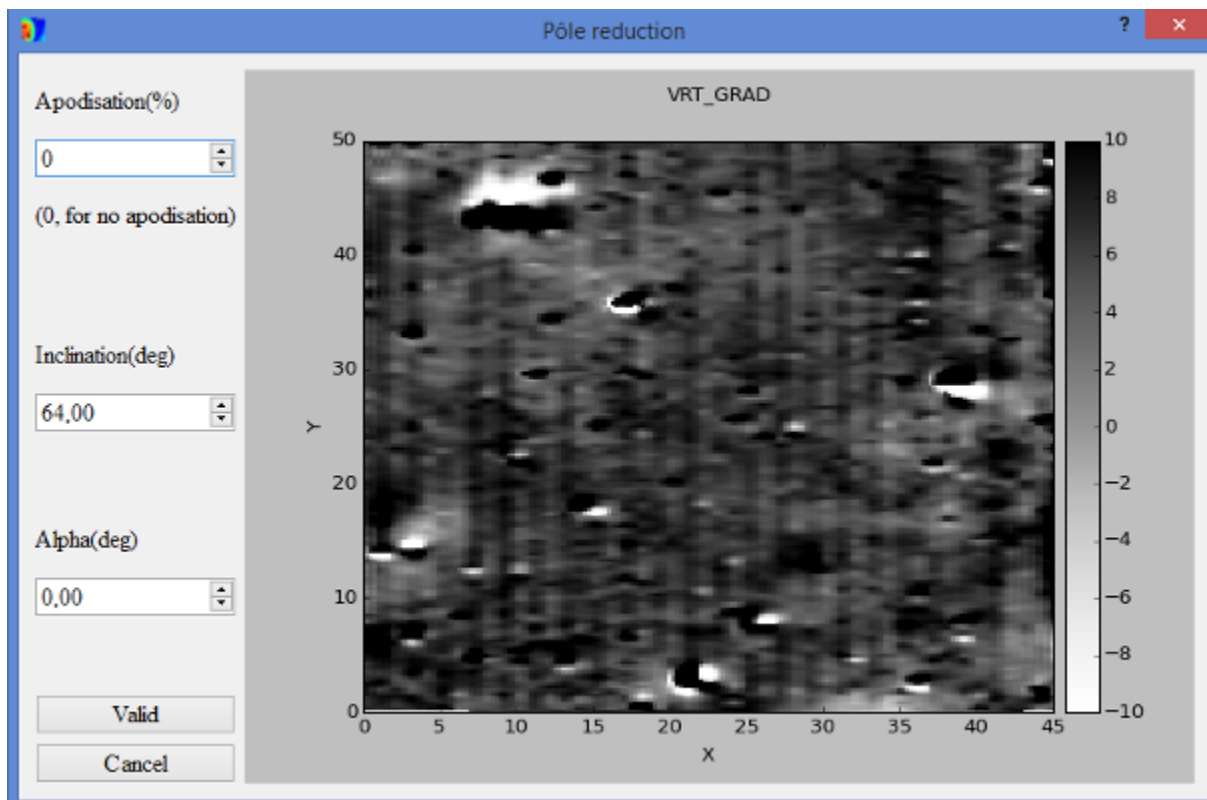
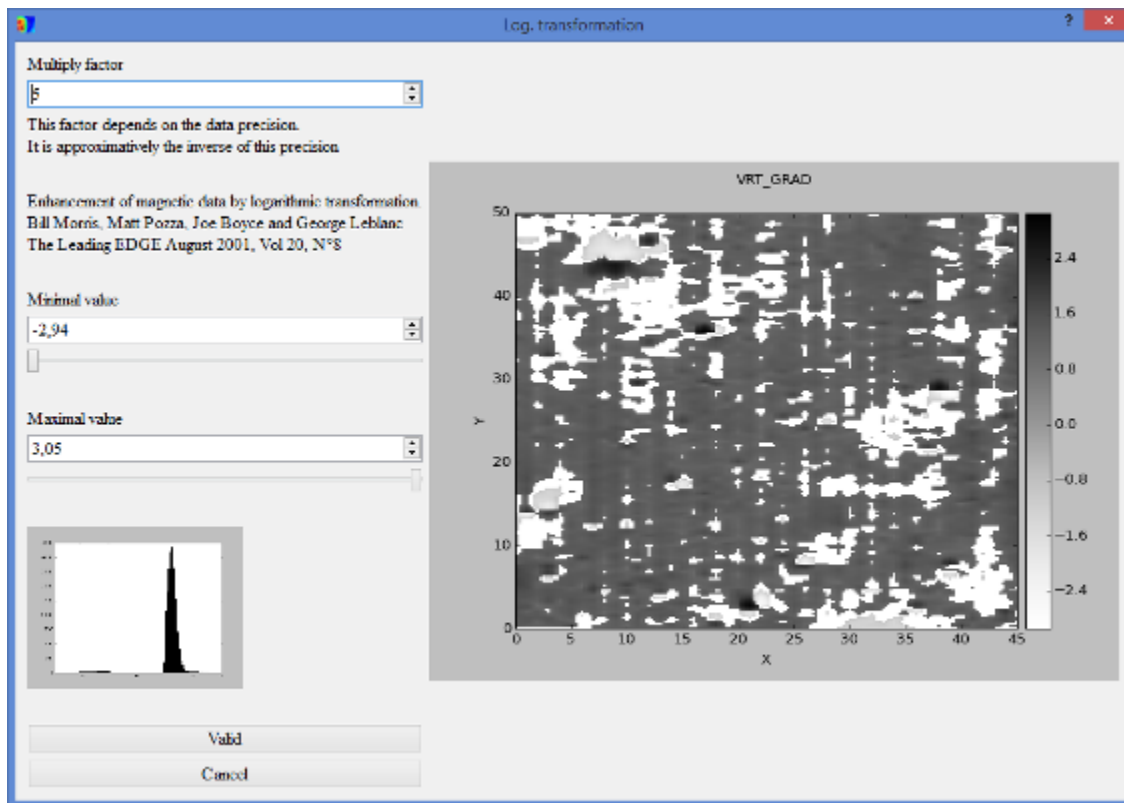


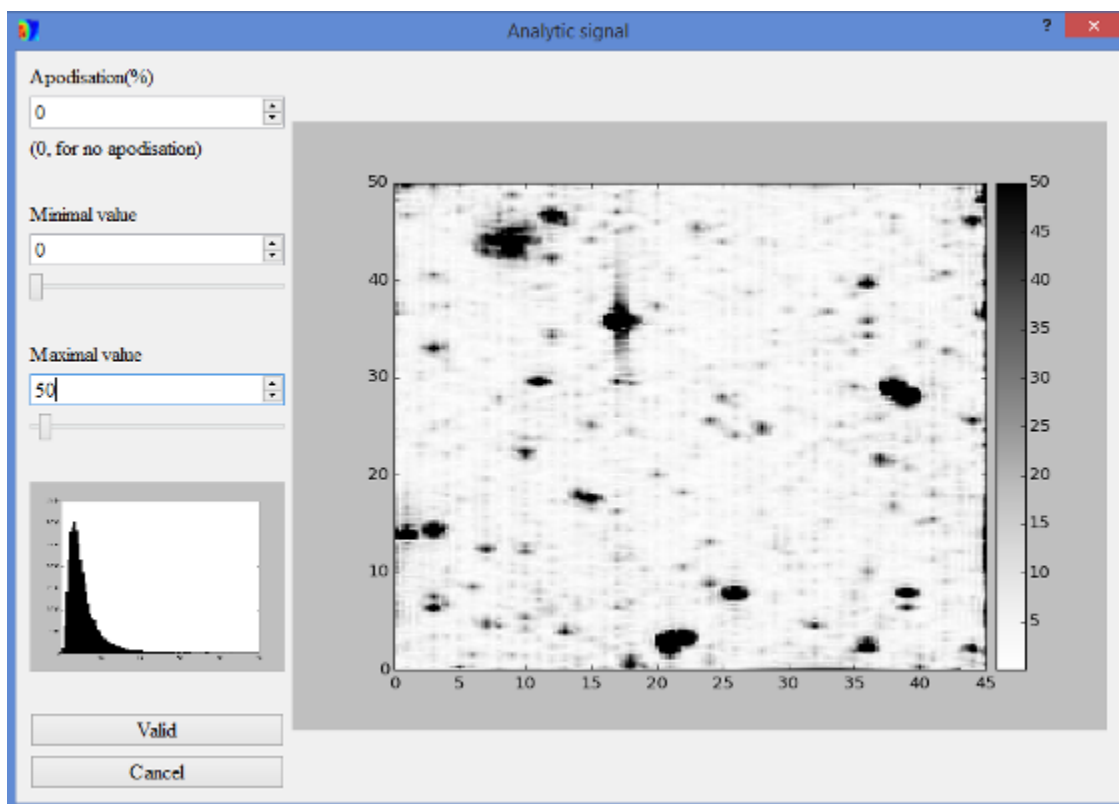
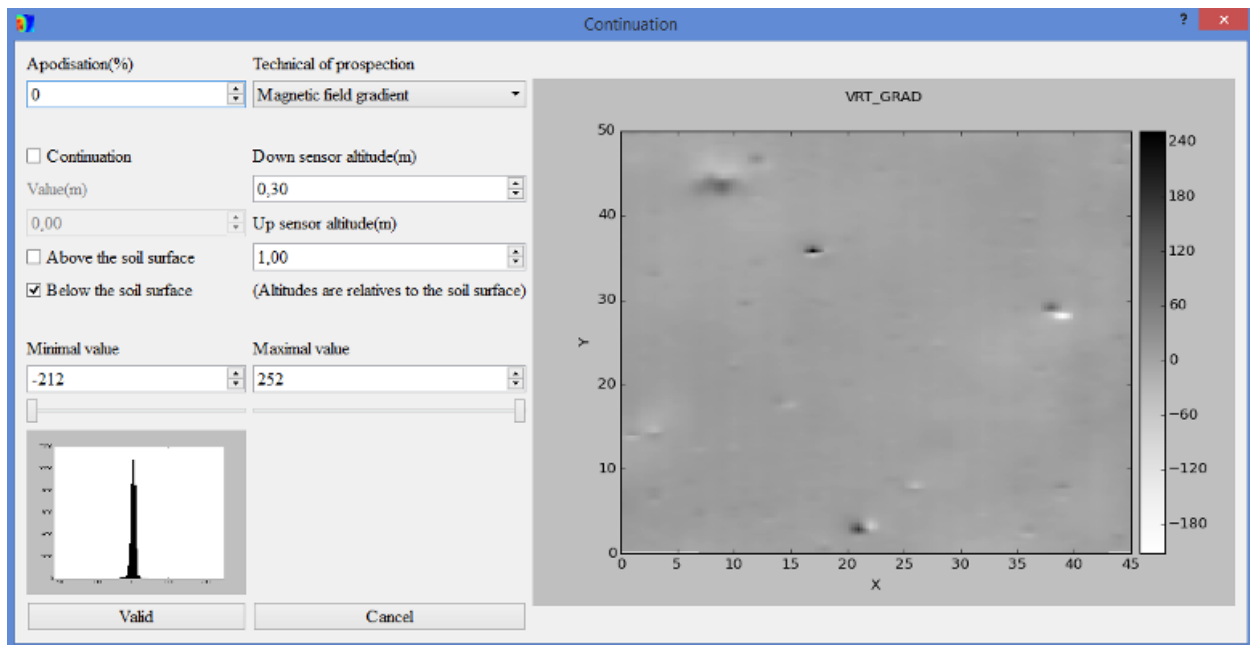


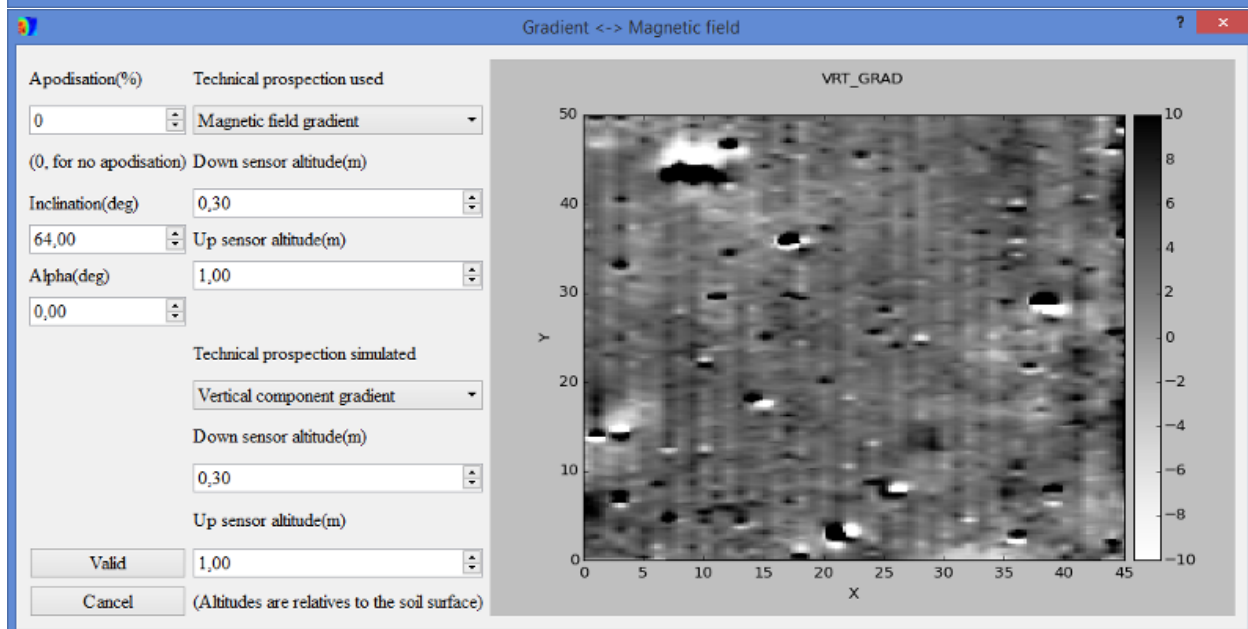
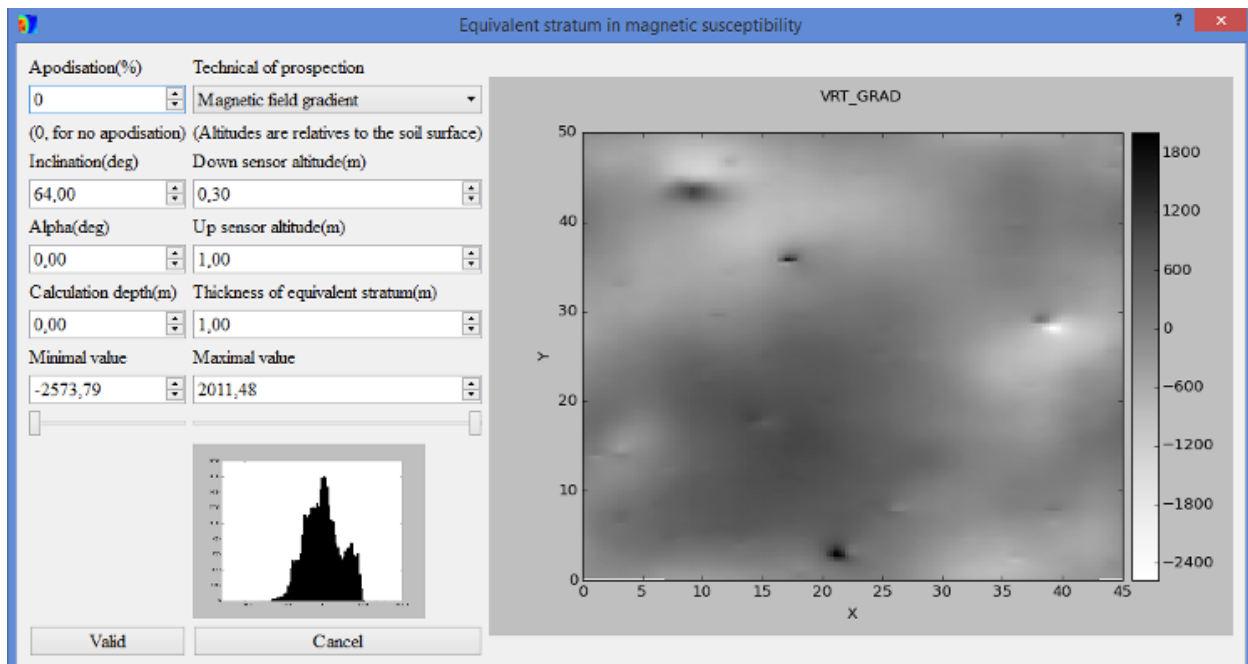
(For more informations about the processing functions, see GeophPy documentation.)

## Magnetic Processing

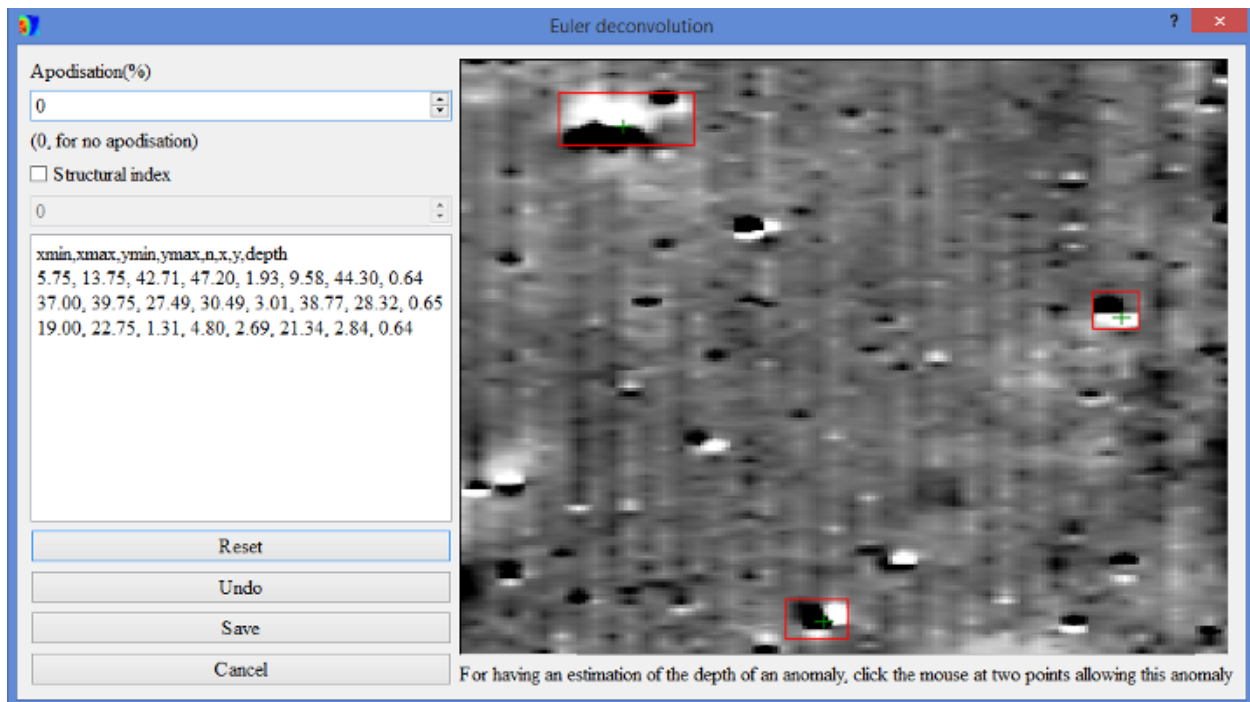
Severals magnetic processing dialog box are availables :









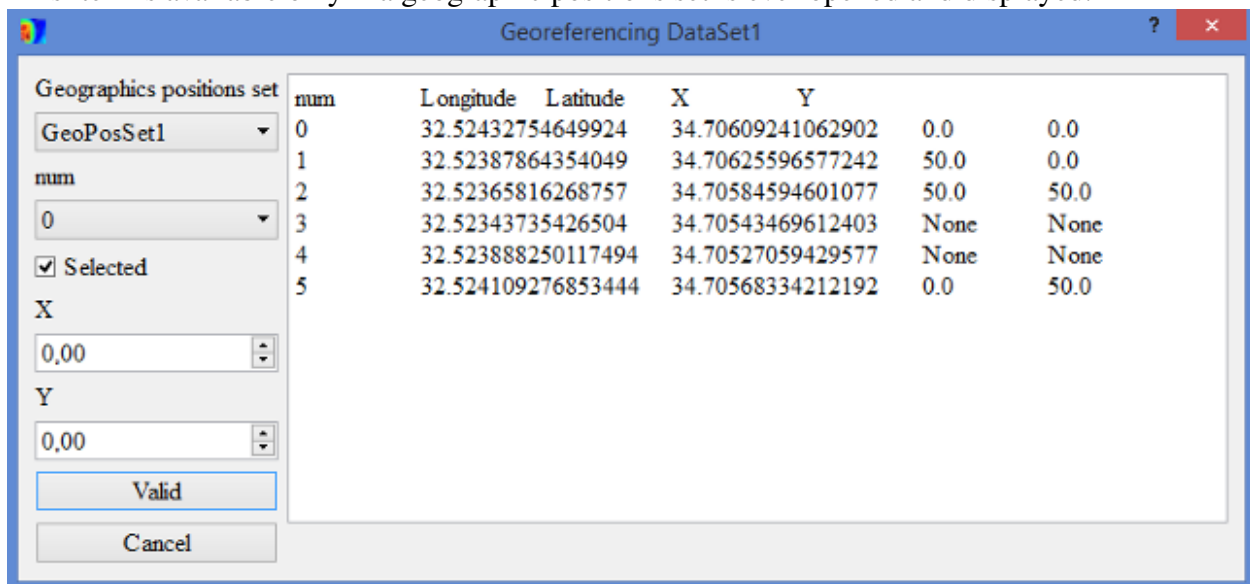


The “Undo” Button allow to cancel the last action. After having calculated Euler deconvolution for severals zones, it’s possible to save these data in a “csv” file (with ‘;’ as delimiter) by clicking on the “Save” button.

(For more informations about the magnetic processing functions, see GeophPy documentation.)

## Georeferencing

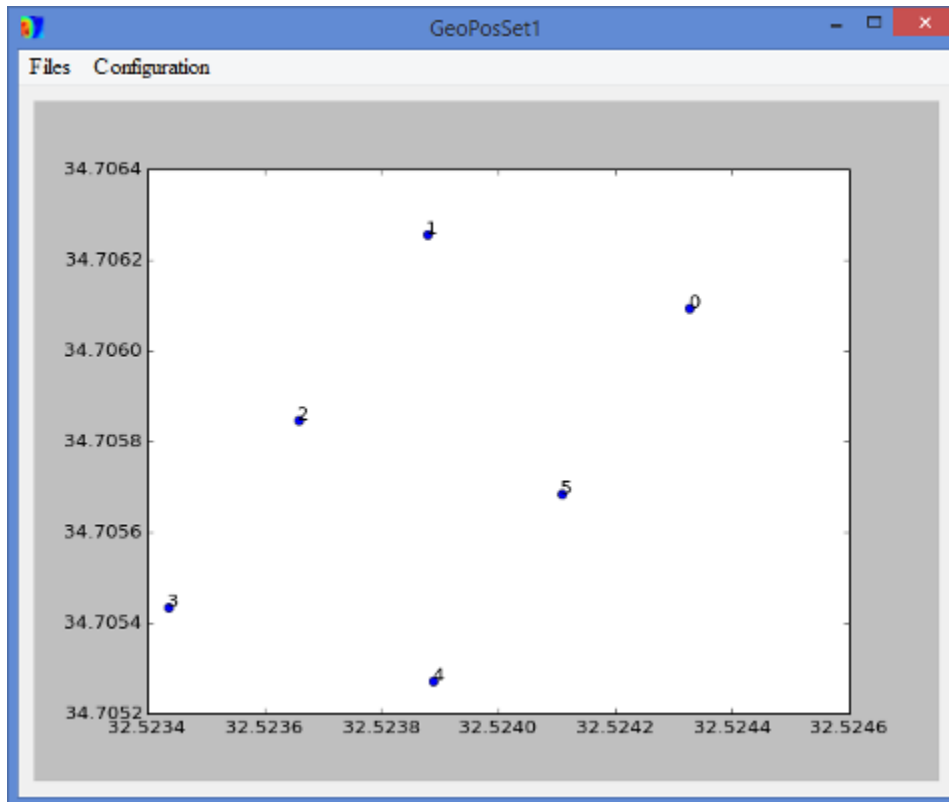
This item is available only if a geographic positions set is ever opened and displayed.



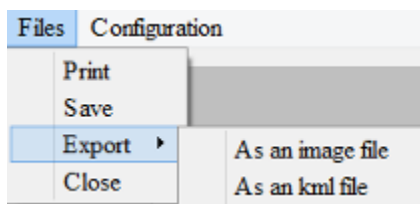


## 6.4 Geographic Positions Set Window

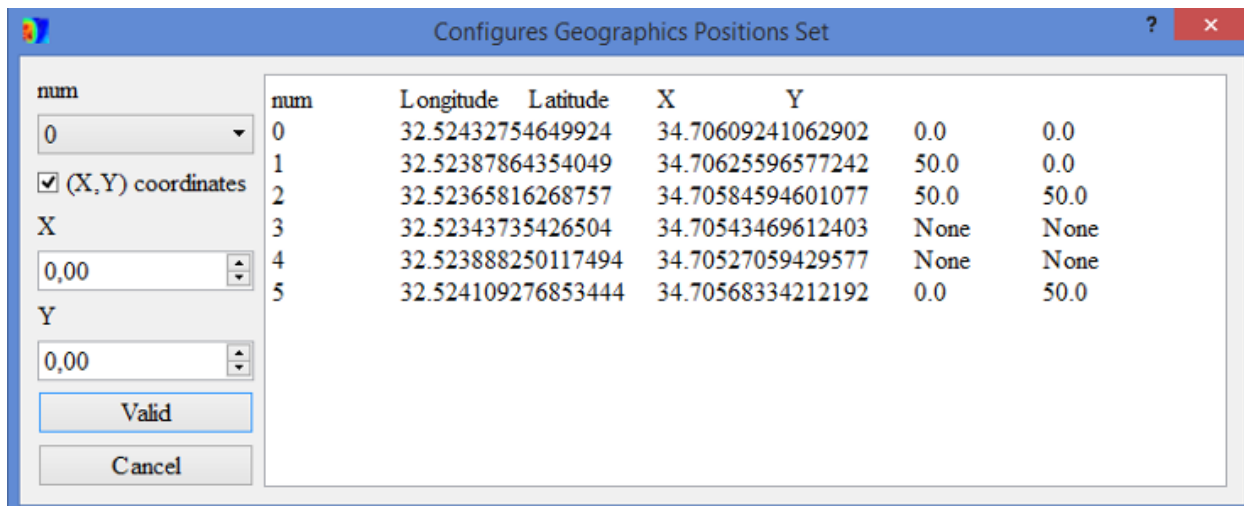
The geographics positions set opened is displayed in a window with a menubar like this :



### Files



## Configuration



num	Longitude	Latitude	X	Y
0	32.52432754649924	34.70609241062902	0.0	0.0
1	32.52387864354049	34.70625596577242	50.0	0.0
2	32.52365816268757	34.70584594601077	50.0	50.0
3	32.52343735426504	34.70543469612403	None	None
4	32.523888250117494	34.70527059429577	None	None
5	32.524109276853444	34.70568334212192	0.0	50.0

This item allows to georeference geographic positions with (x,y) local positions.

## 7 Feedback & Contribute

Your feedback is more than welcome. Write email to [lionel.darras@mom.fr](mailto:lionel.darras@mom.fr) and [philippe.marty@upmc.fr](mailto:philippe.marty@upmc.fr)

## 8 Changelog

### 8.1 Version 0.20

Released on 2015-09-10.

- Initial version.