

Homework 2

1. ELECTRICAL METHOD

1.1. Download SW

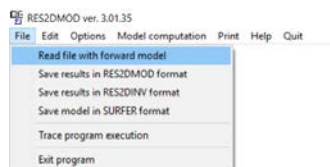
Download RES2DMOD and RES2DINV from BEEP (SW folder)

1.2. Simulation of an electrical acquisition

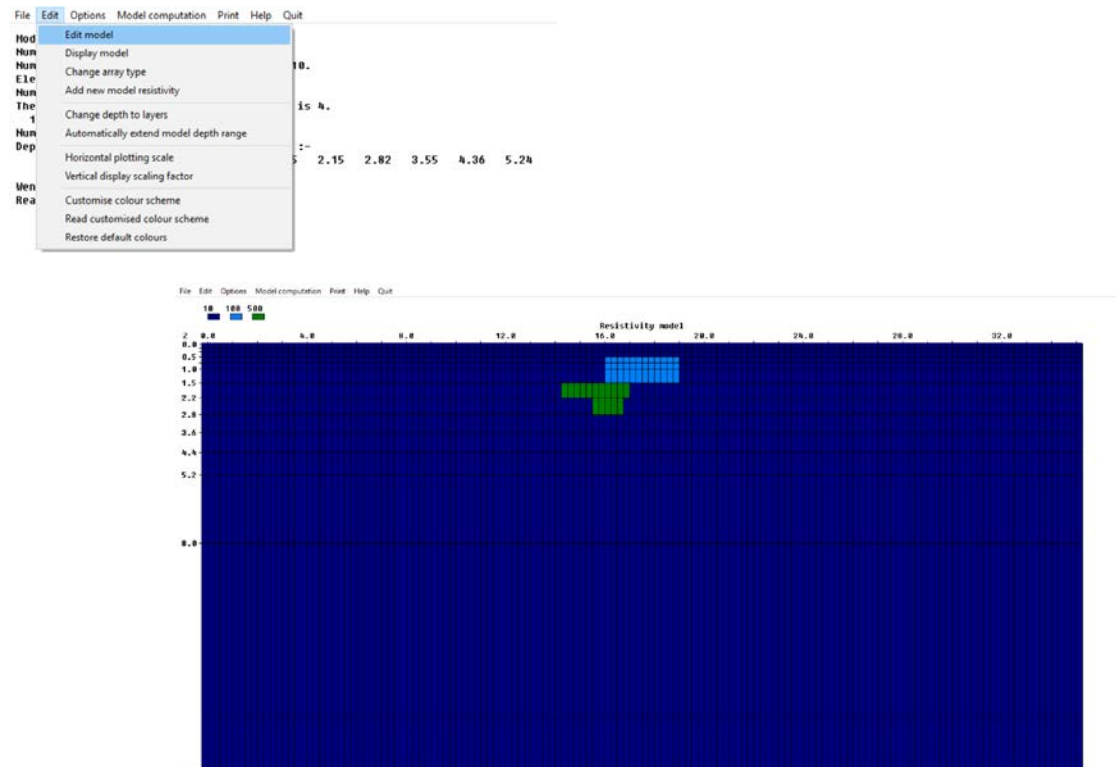
Use the SW RES2DMOD (RESistivity 2D MODeLING) to compute a synthetic pseudosection for a given user model.

Enter the RES2DMOD folder, start the SW by running RES2DMOD.EXE

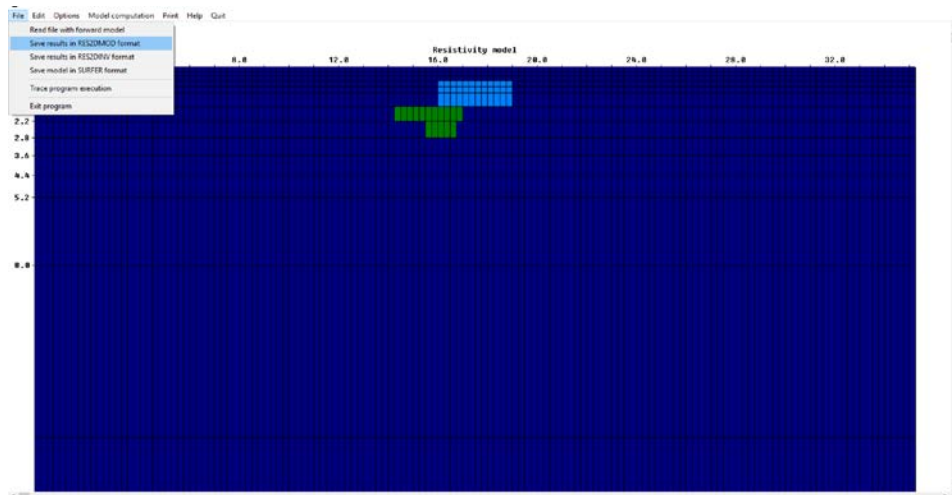
Load (FILE menu) a model: I suggest BLOCK_ONE.MOD.



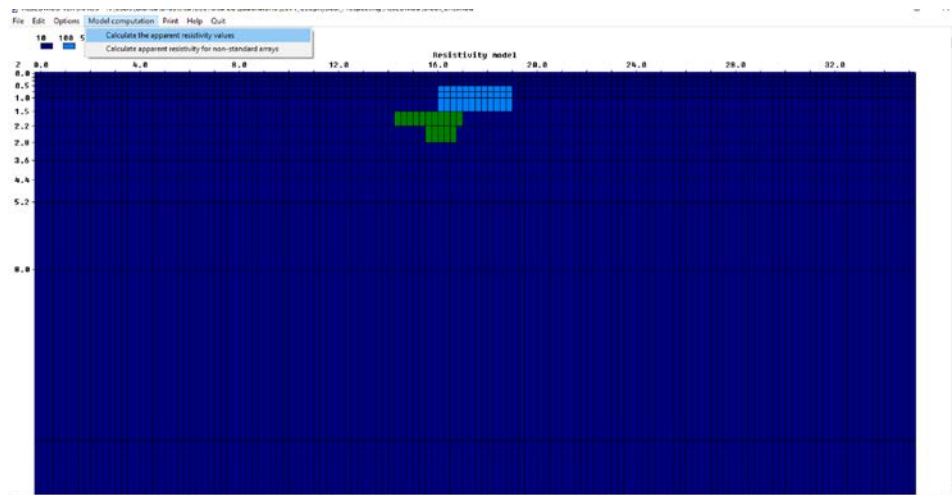
Use EDIT to modify the model by deleting and assigning new resistivity values with the mouse, and to build a simulation scenario (e.g. a cavity, a layer, a localized anomaly, a specific shape anomaly, ...).



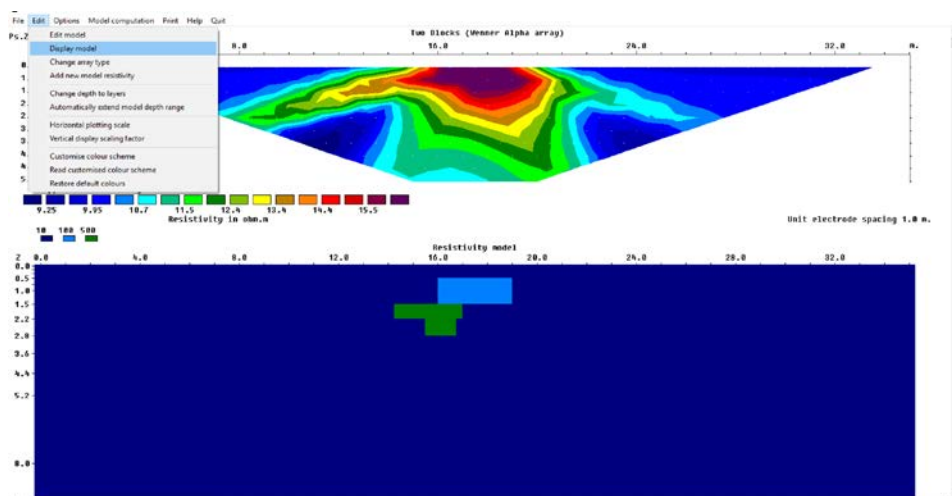
Save the new model (res2dmod format) with another name.



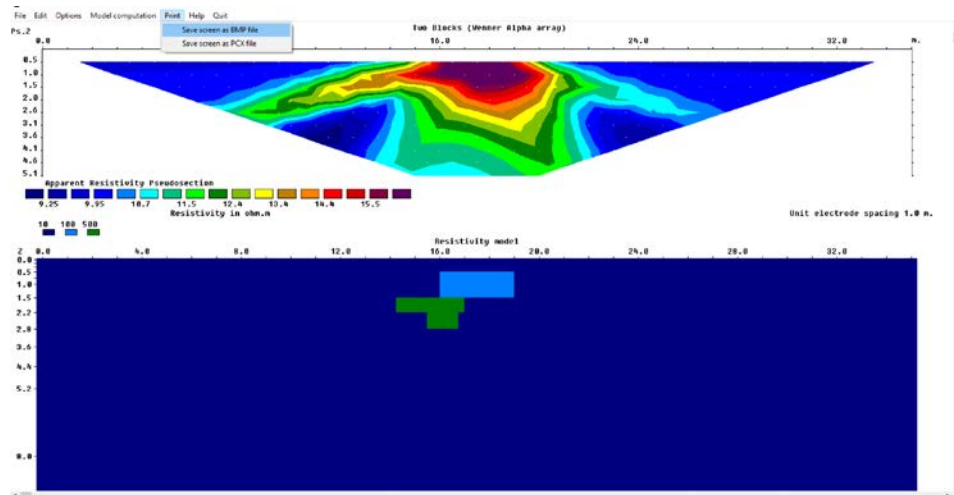
Run an electrical acquisition simulation on the model.



Check the result

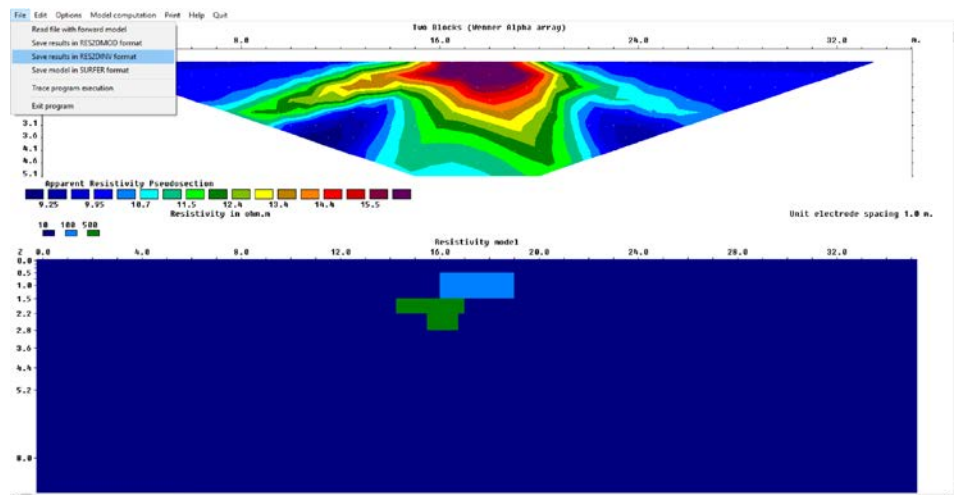


Save a screen dump in a POWERPOINT file (or save a BMP print) in order to compare images at the end of the processing.



Save the simulation results in RES2DINV format (without adding noise).

2

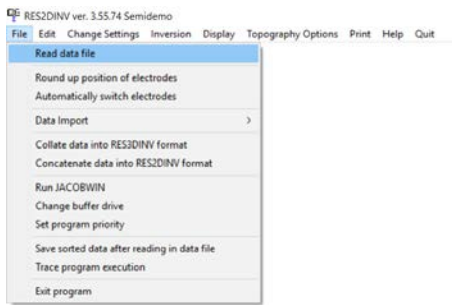


1.3. Resistivity inversion of an electrical acquisition

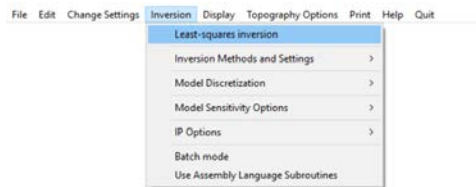
Use the SW RES2DINV (RESistivity 2D INVersion) to invert the true resistivity from the apparent resistivity in a pseudosection: we are using here our “simulated” acquisition

Enter the RES2DINV folder, start the SW by running RES2DINV.EXE

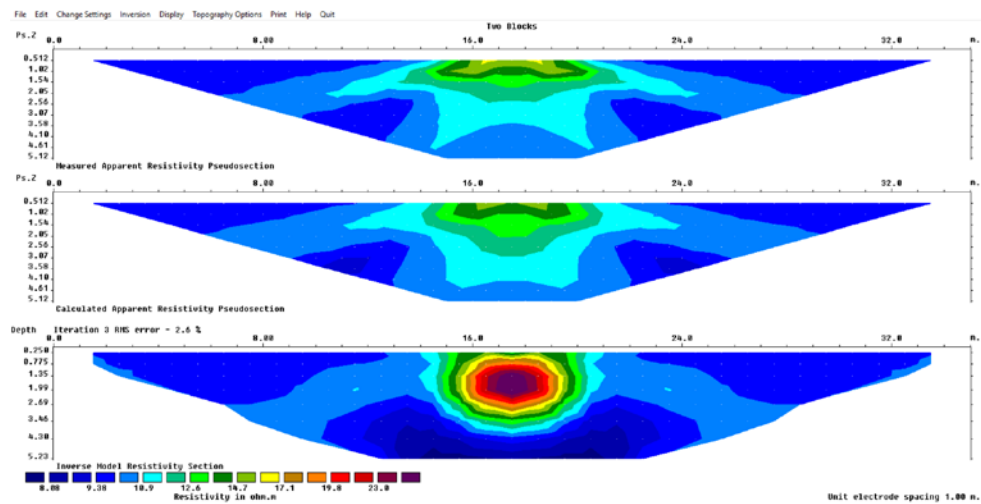
Load (FILE menu) the data generated in the previous section.



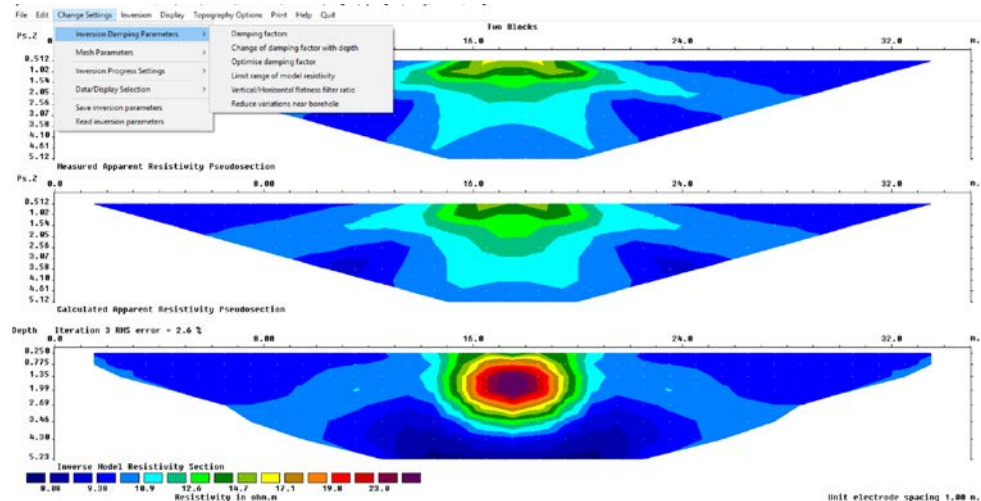
Run the “standard” inversion



Check the result, save a dump screen in the POWERPOINT presentation, compare with the starting model, put comments in the presentation.

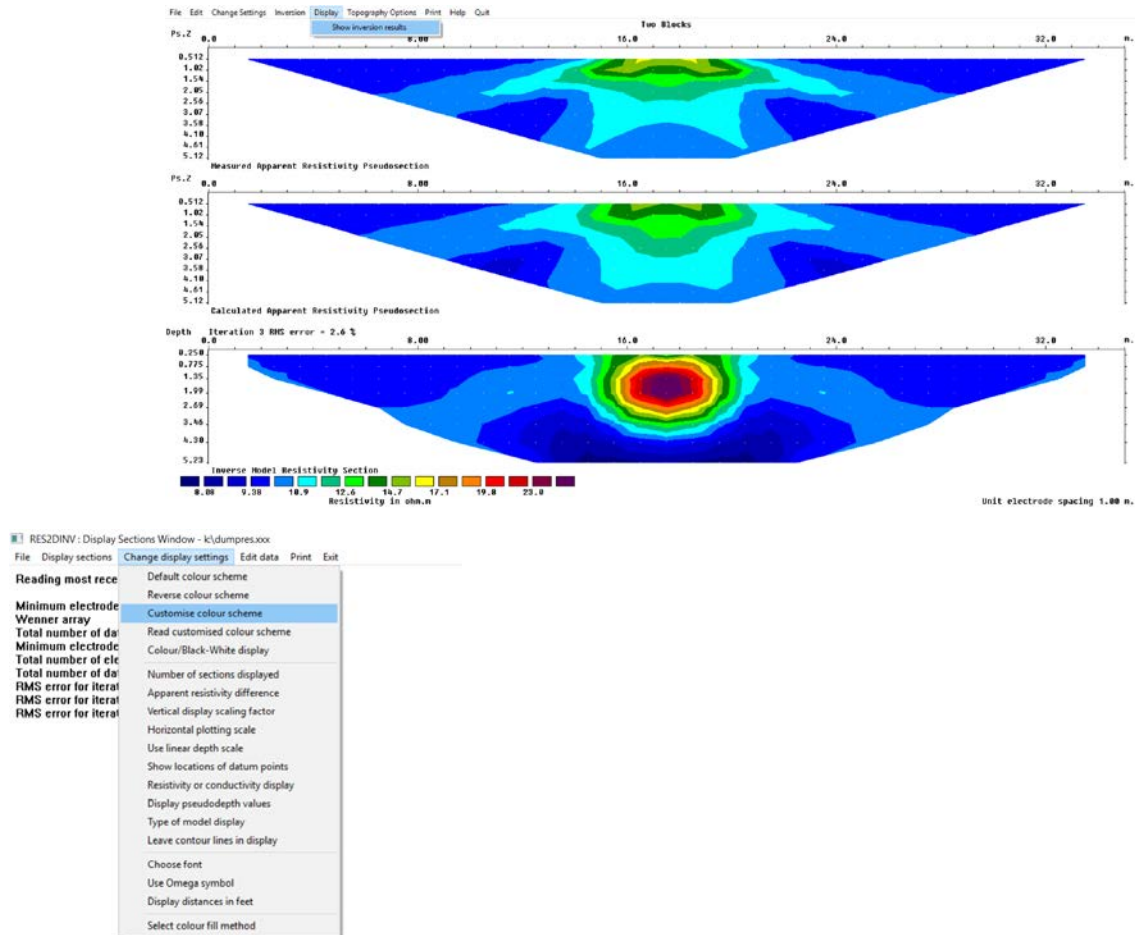


Perform other inversions by modifying the inversion settings.



Dump screen in presentation and comment.

Suggestion: try to use same color scale for all graphics. In res2dinv, after running the inversion, you have to enter the “DISPLAY” interface to set the colormap.



1.4. Deliverables

Bring at the exam the PPT presentation with model, inversion and some comments.