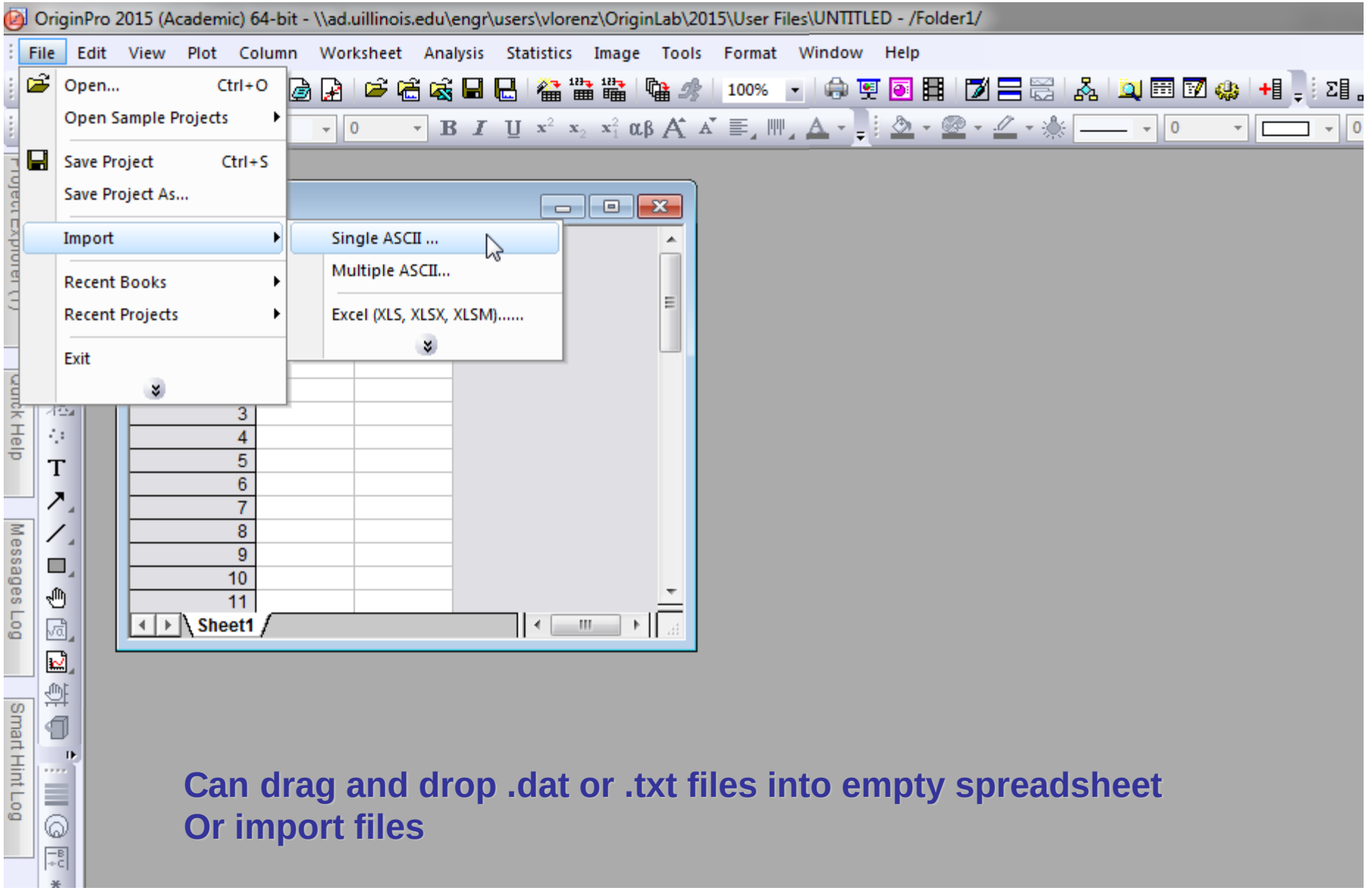
Scientific Graphing and Analysis Software

Origin is on all Physics 403 computers.
What it can do:

1. **Graphical presentation of data**
2. **Data analysis**
3. **Preparation of publication-quality figures**

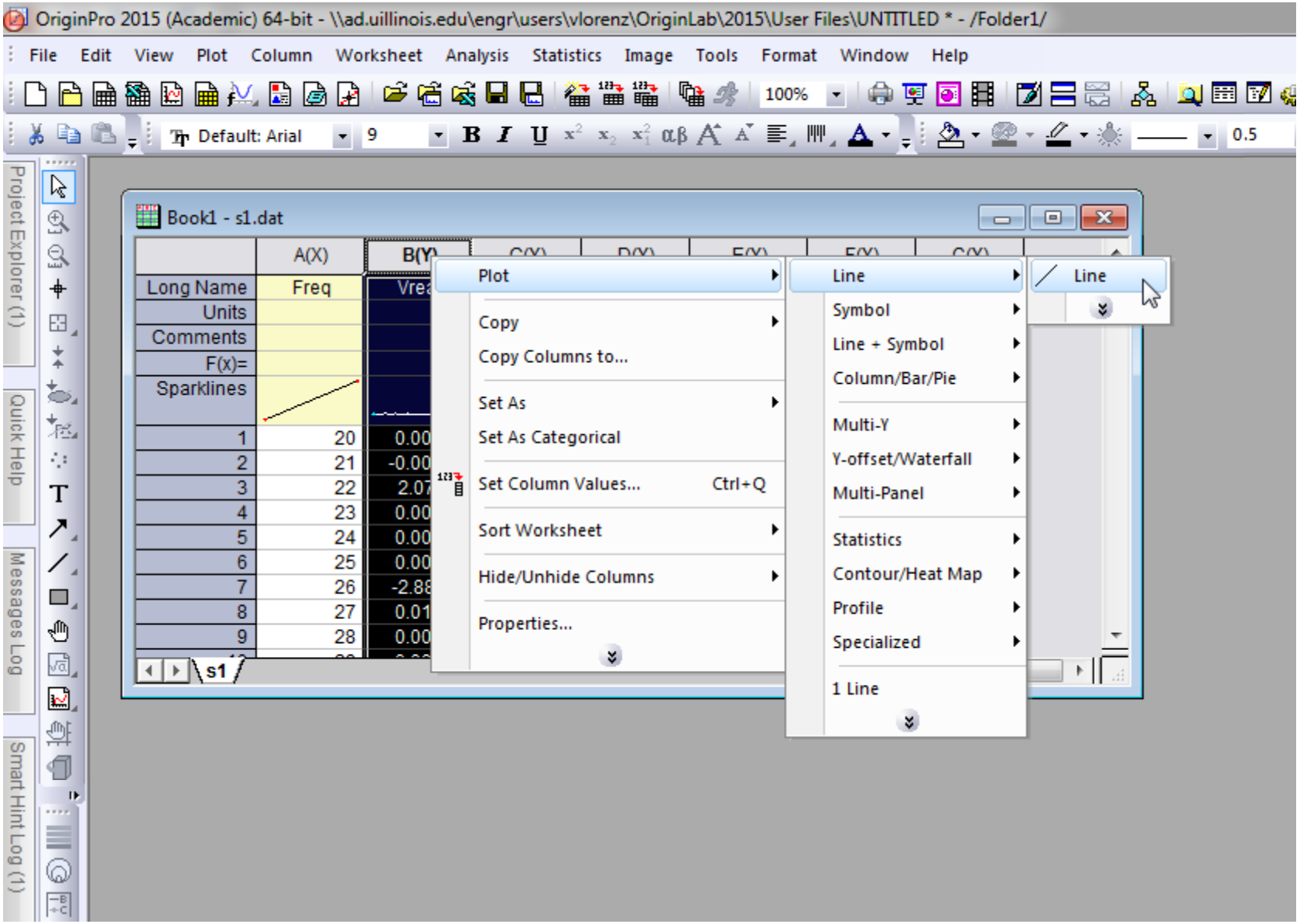
- **Specially designed for scientific graphics**
- **"Standard" Windows application, does not require knowledge of C++ or any other high level computer language**
- **Can write special functions or procedures using Origin programming tools**

Importing data

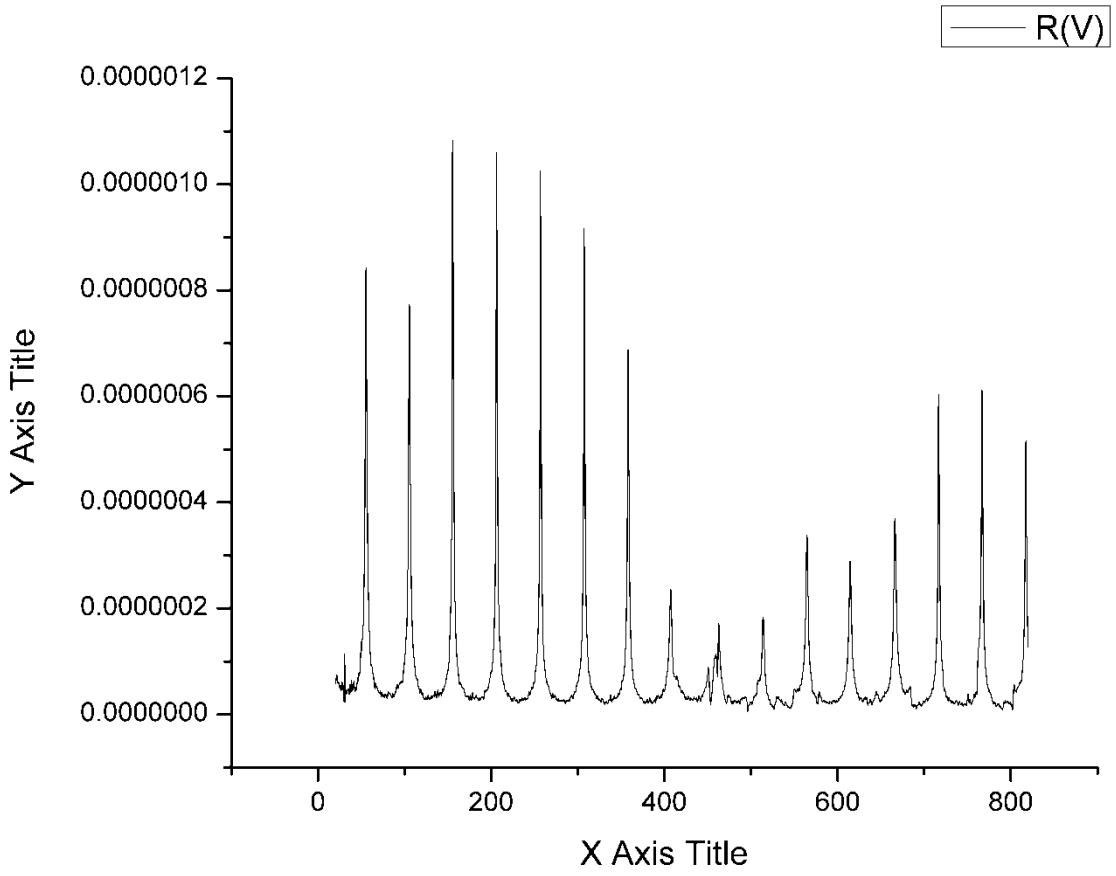


Can drag and drop .dat or .txt files into empty spreadsheet
Or import files

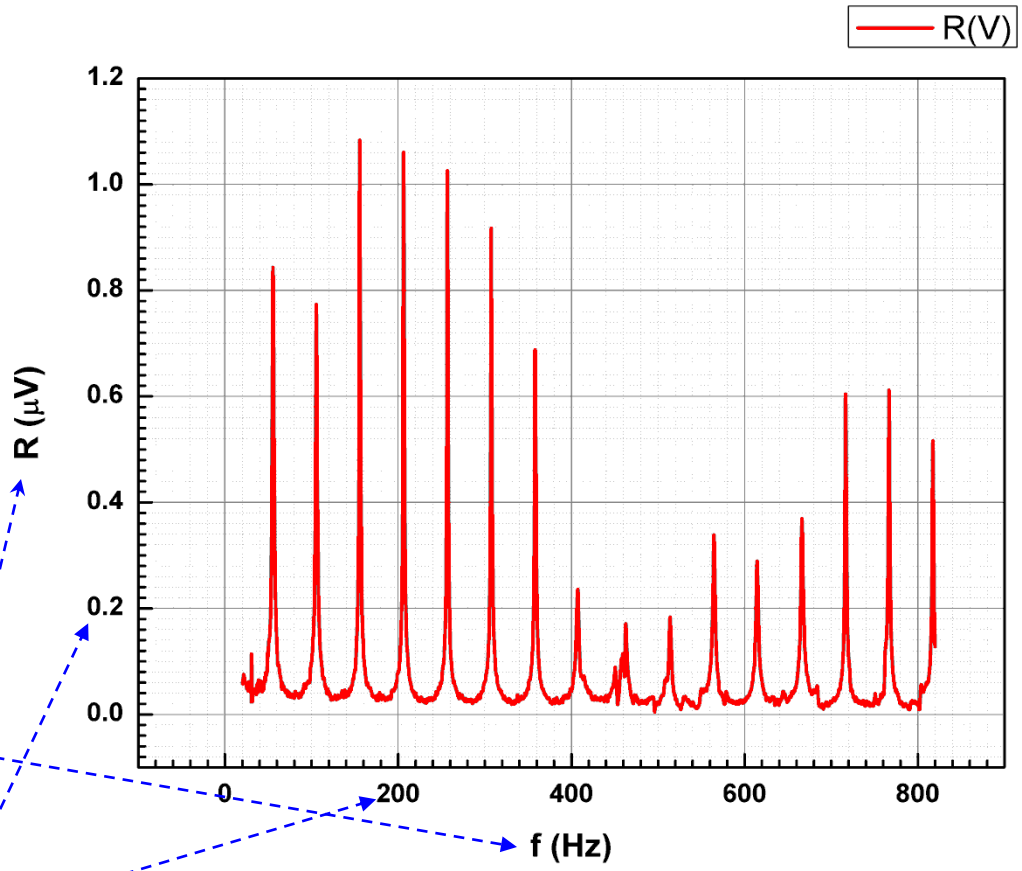
Graphical presentation of data: Basic Plot



Graphical presentation of data: Basic Plot



Graphical presentation of data: Basic Plot



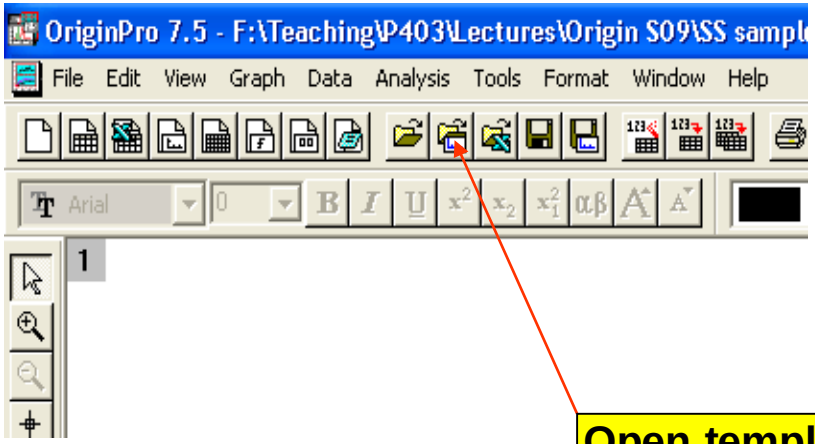
Top and Right axes, grid lines

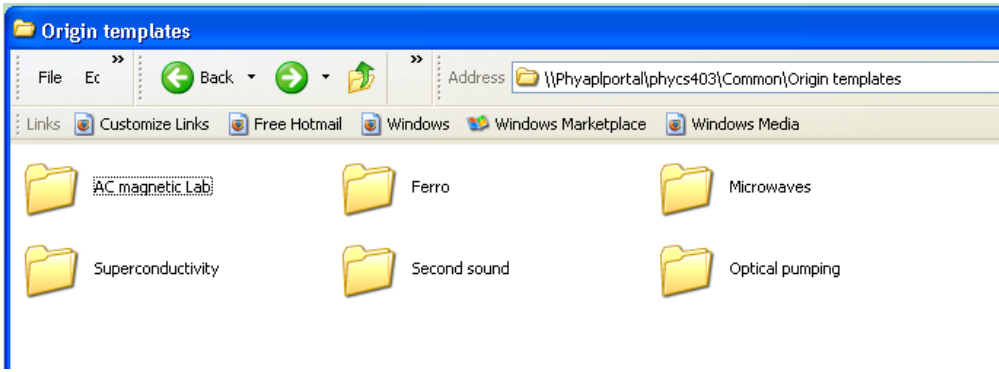
Axes titles

Bold tick labels.

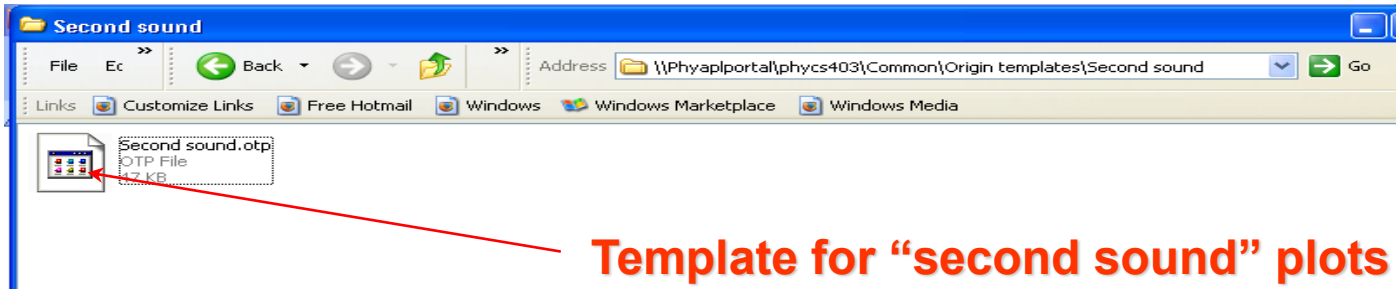
For a better-looking graph, volts were converted to μV

Graphical presentation of data: Templates



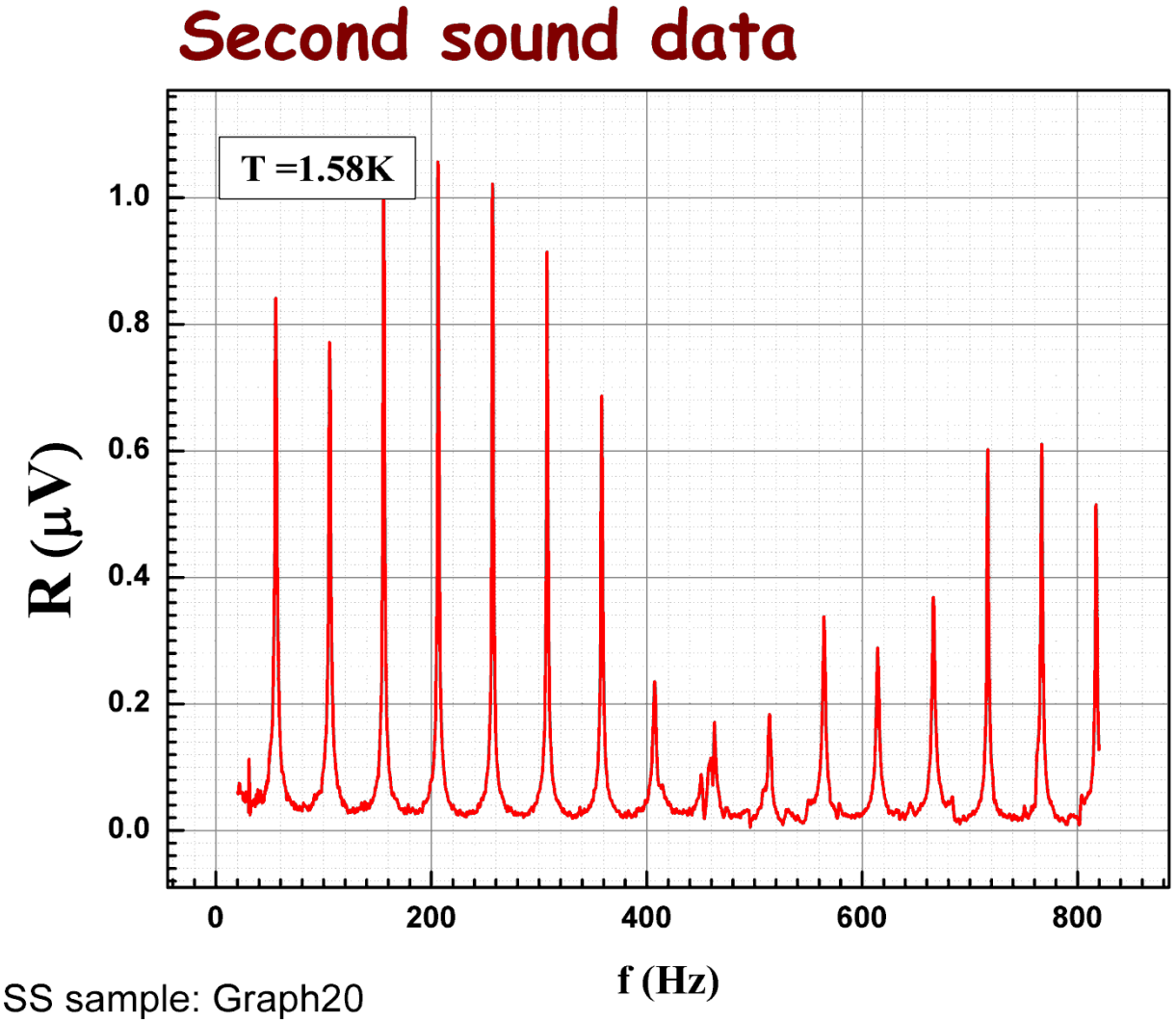


Open template



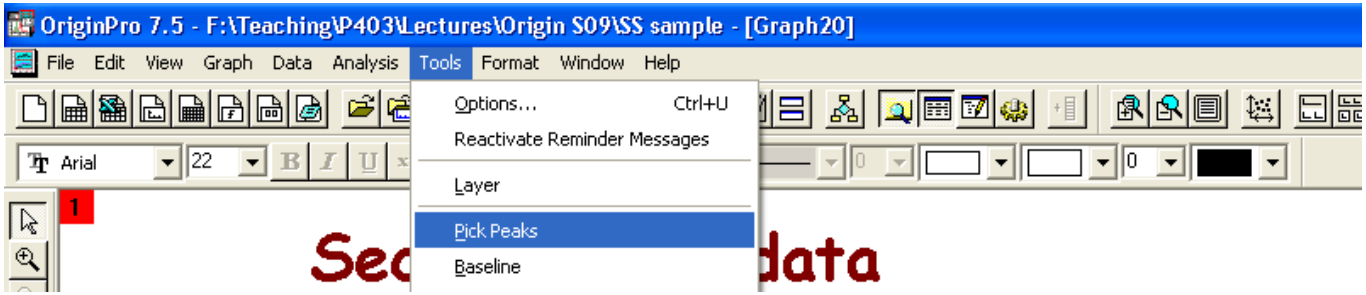
Template for “second sound” plots

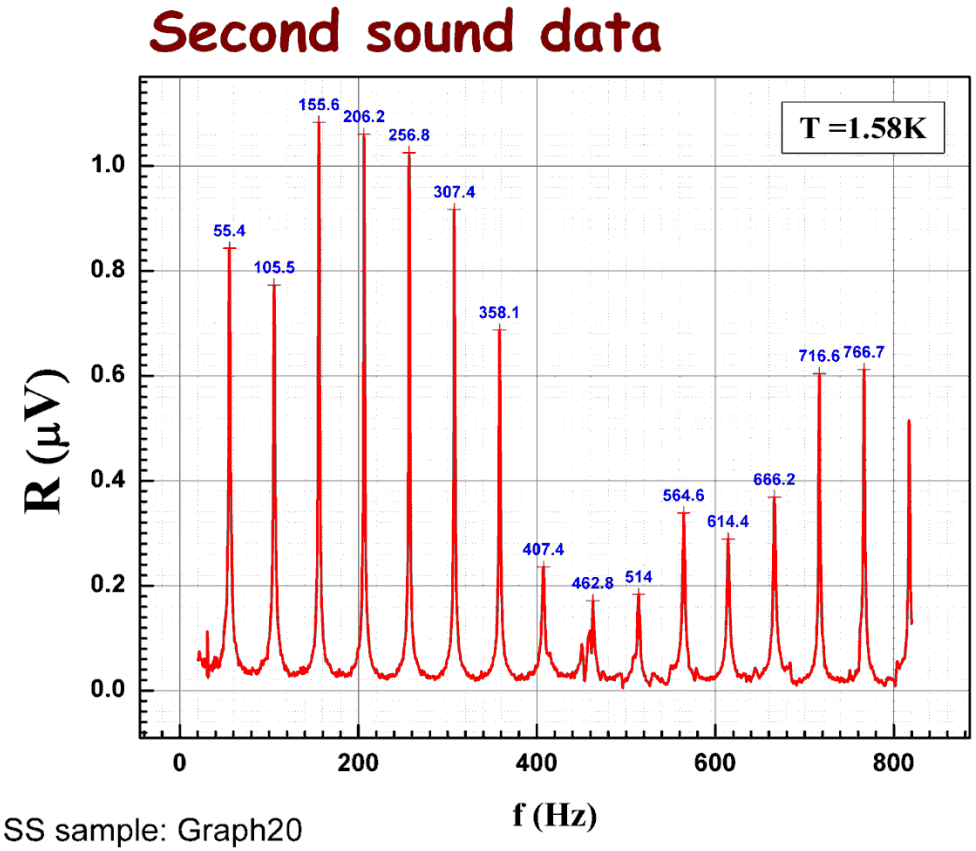
Graphical presentation of data: Templates



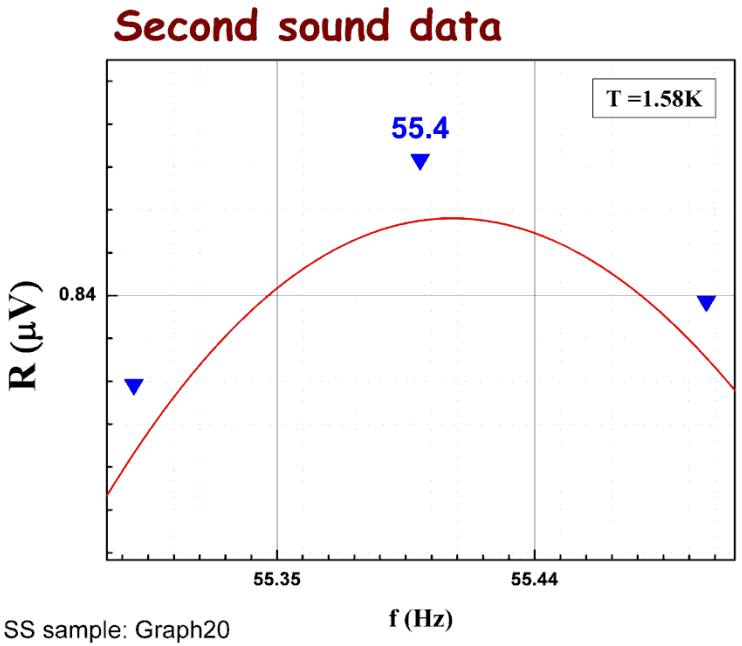
SS sample: Graph20

Graphical presentation of data: Fitting, etc.



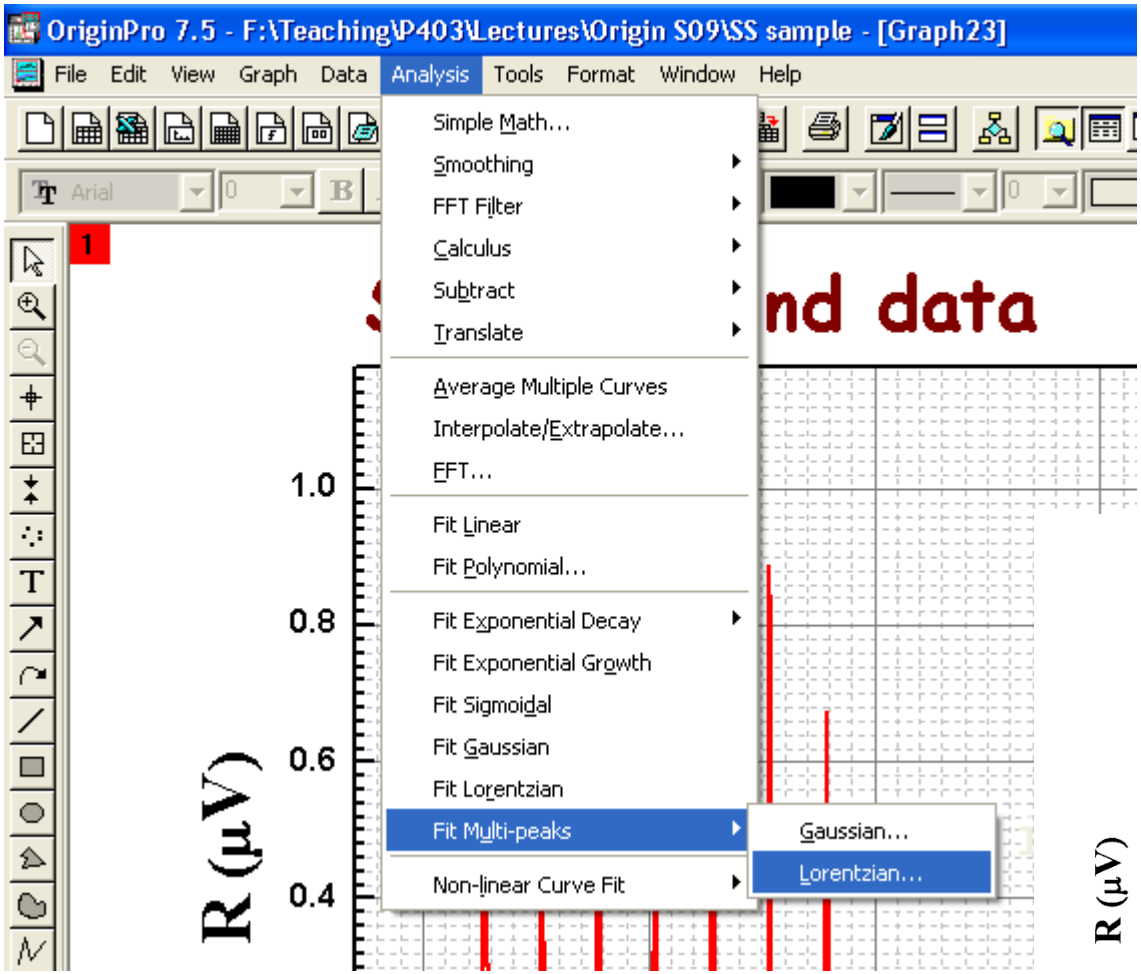


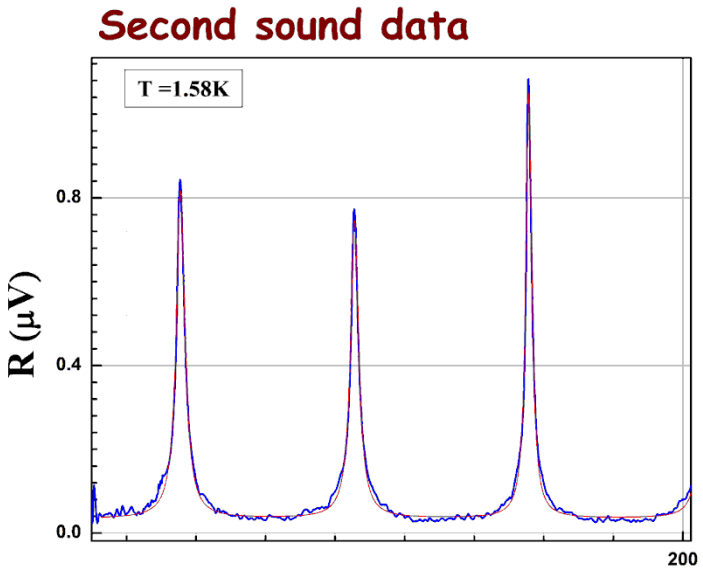
SS sample: Graph20



SS sample: Graph20

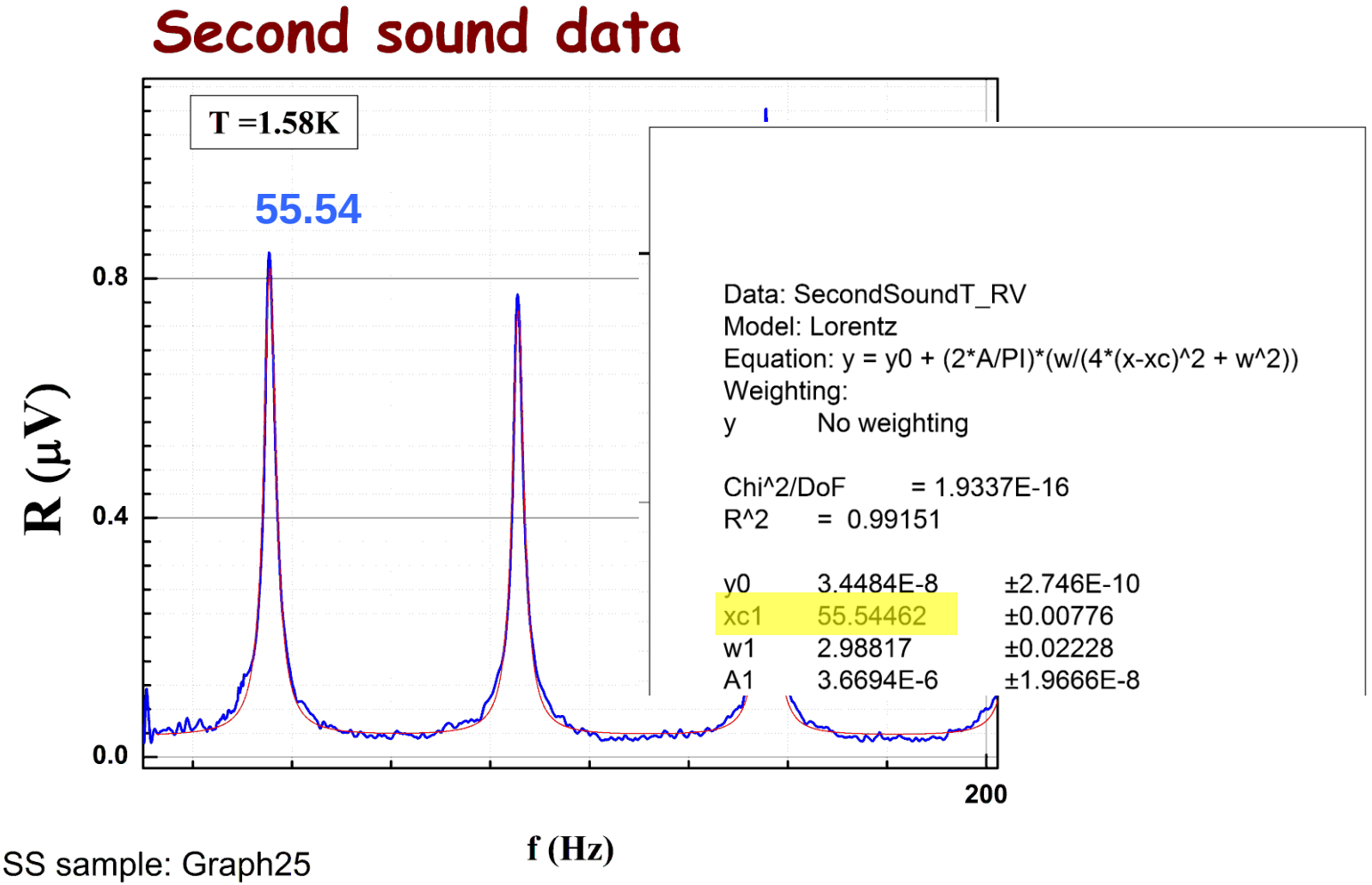
Graphical presentation of data: Fitting, etc.





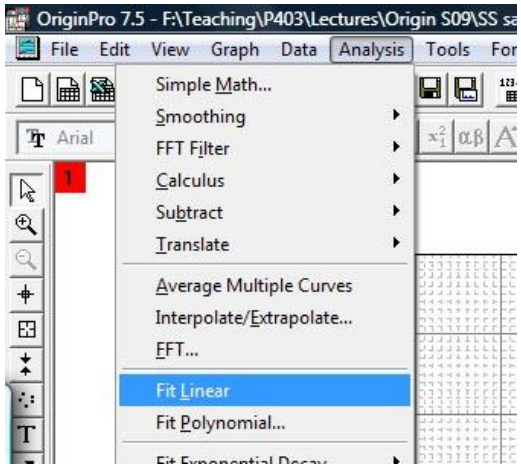
SS sample: Graph25

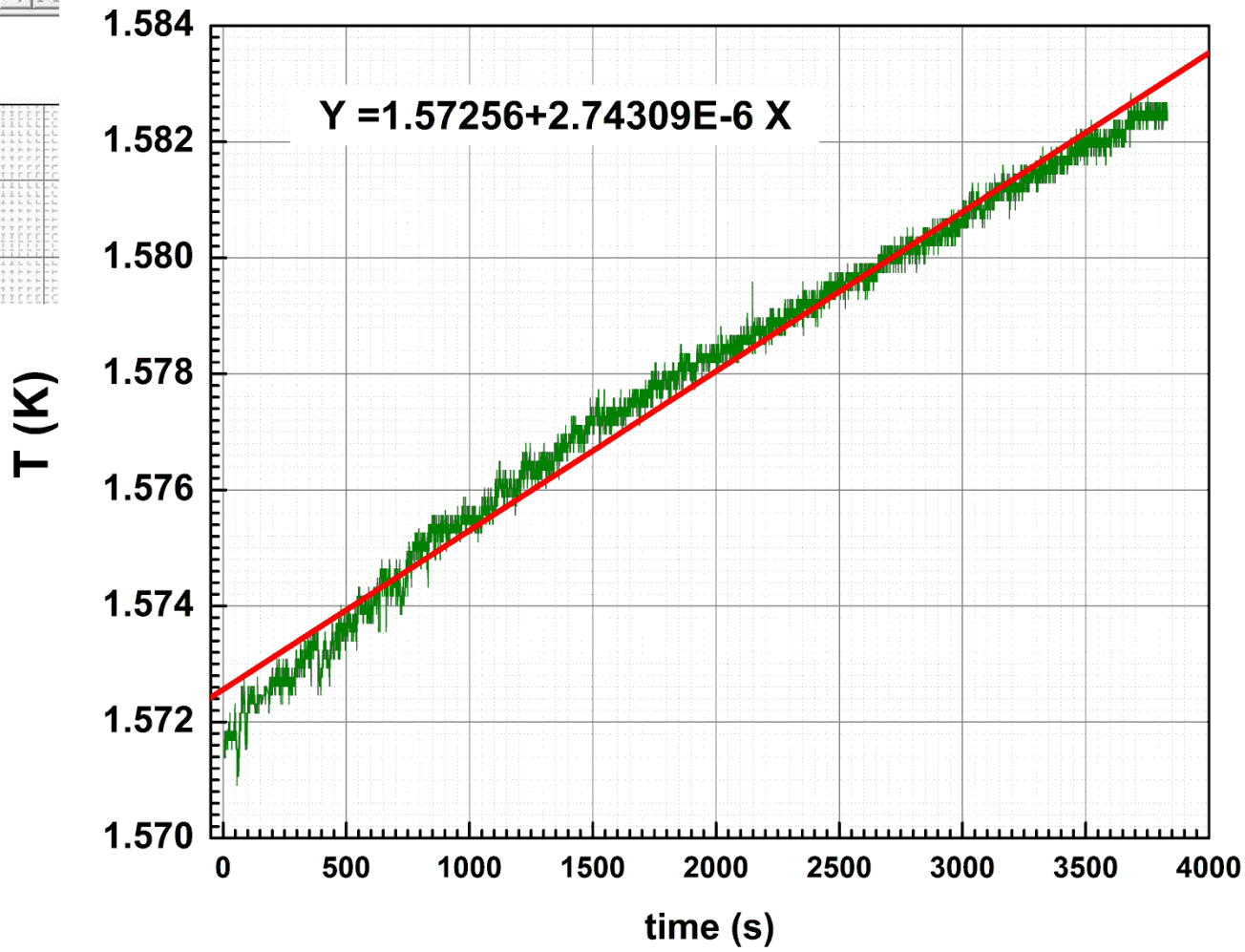
Graphical presentation of data: Fitting, etc.



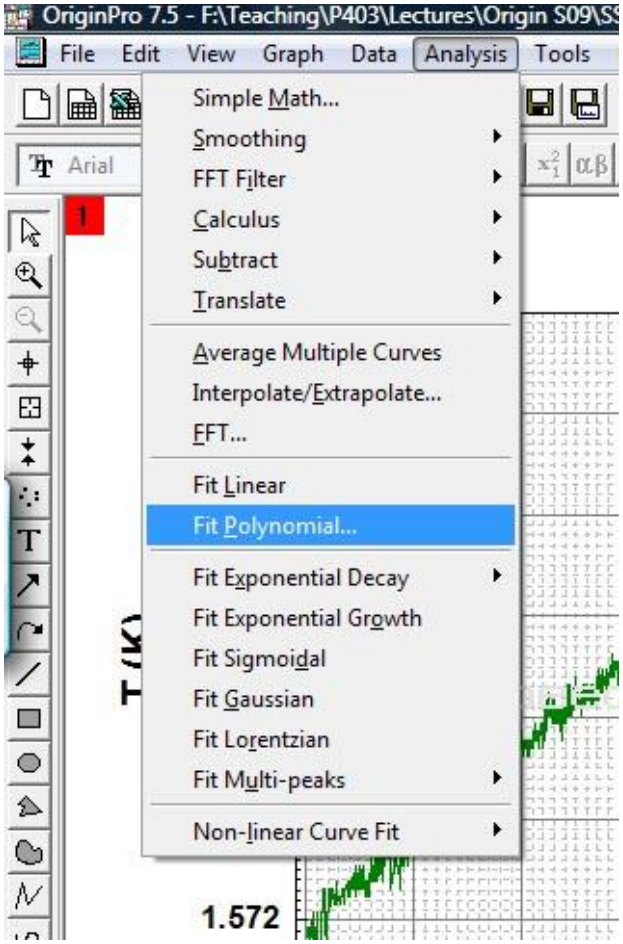
SS sample: Graph25

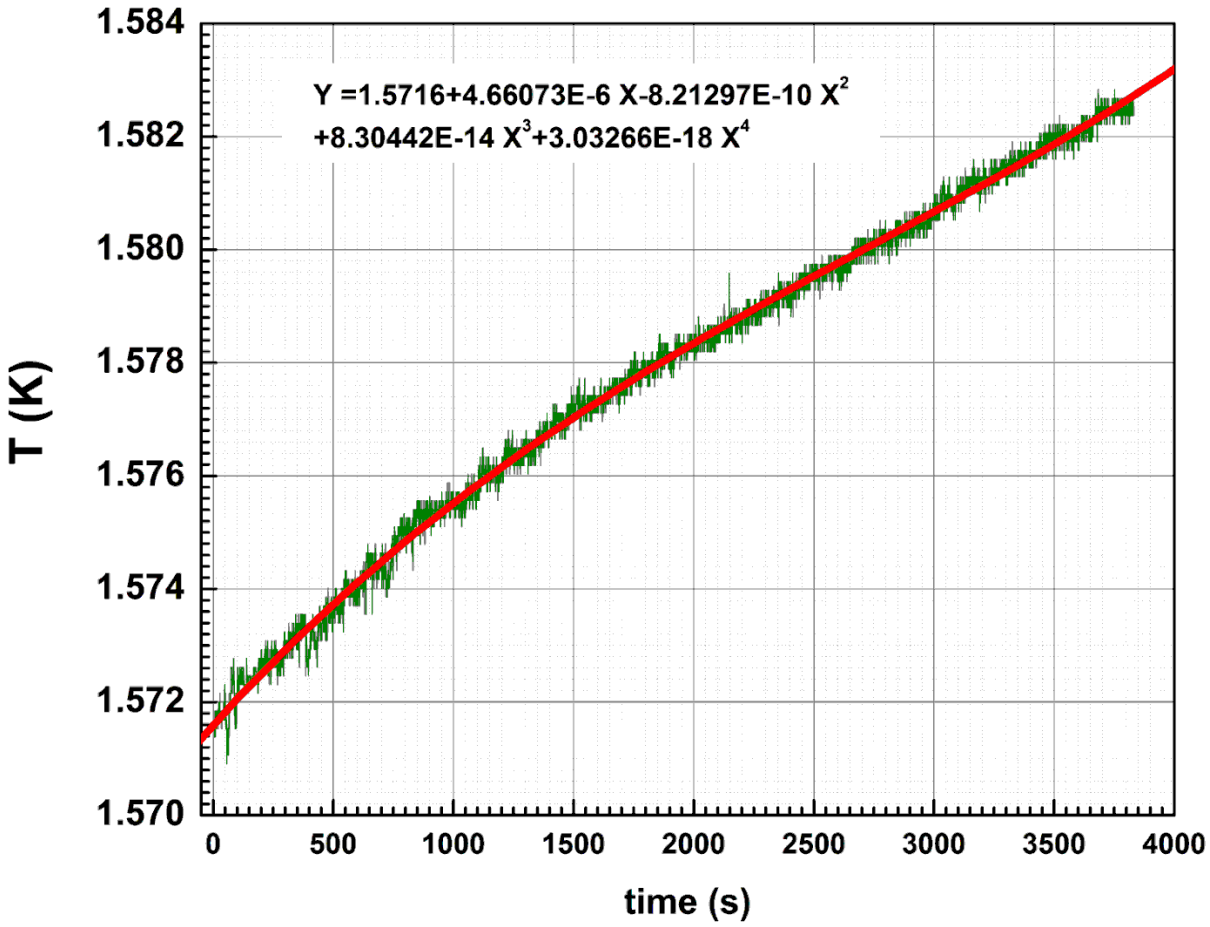
Graphical presentation of data: Fit Linear



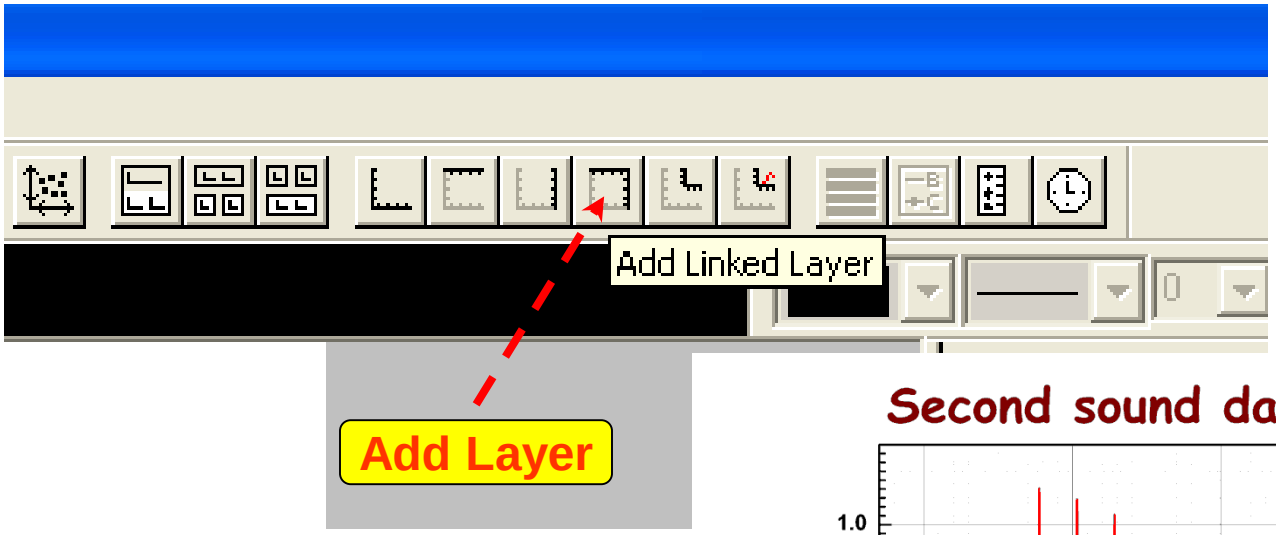


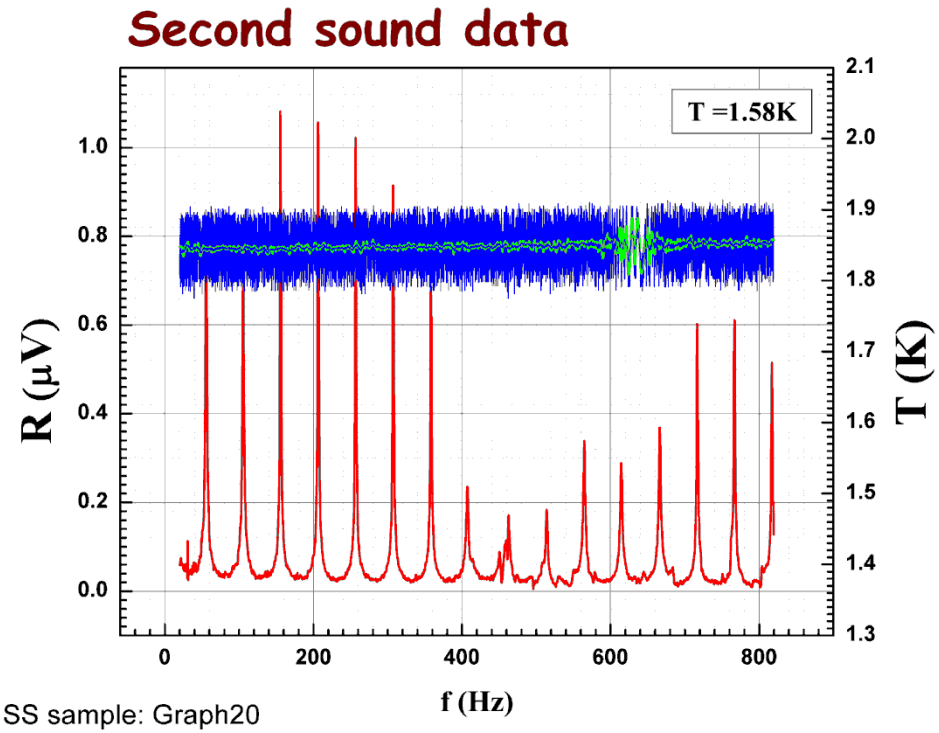
Graphical presentation of data: Fit Polynomial





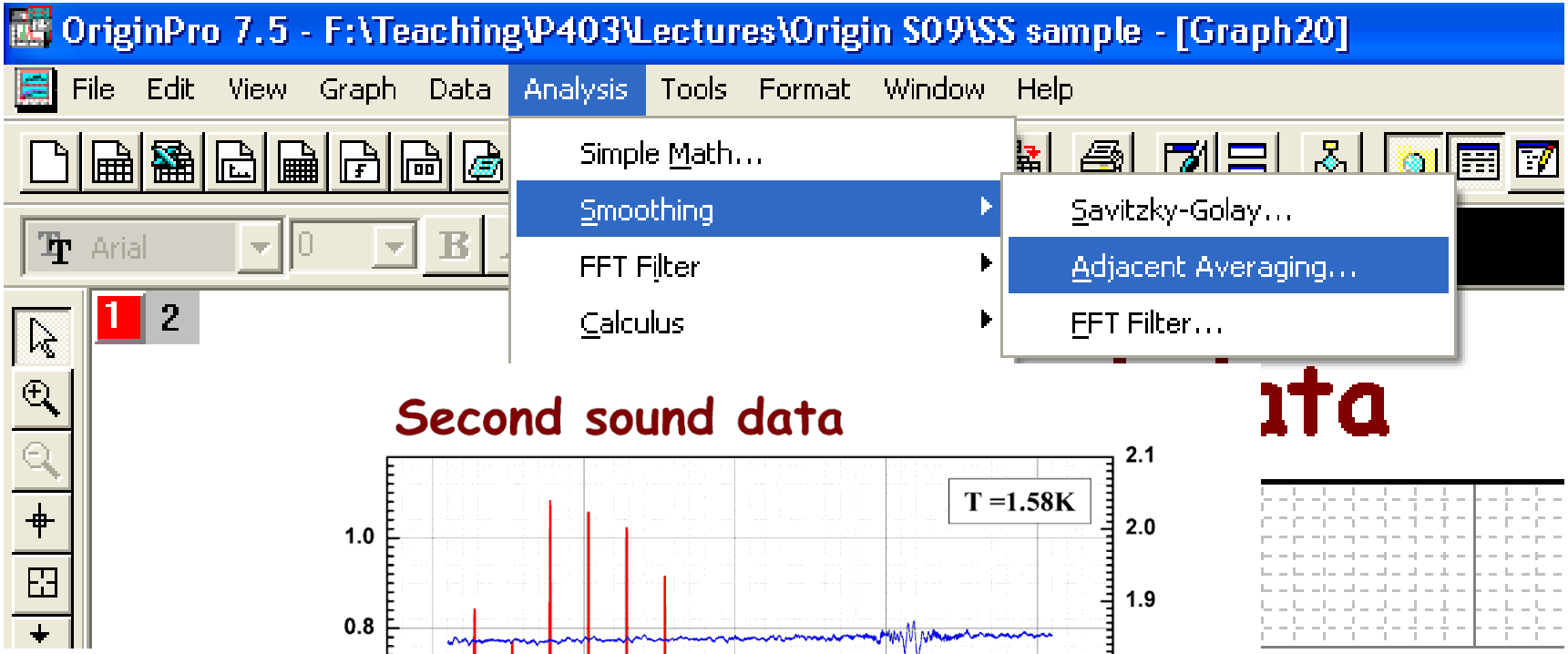
Graphical presentation of data: 2-layer graph

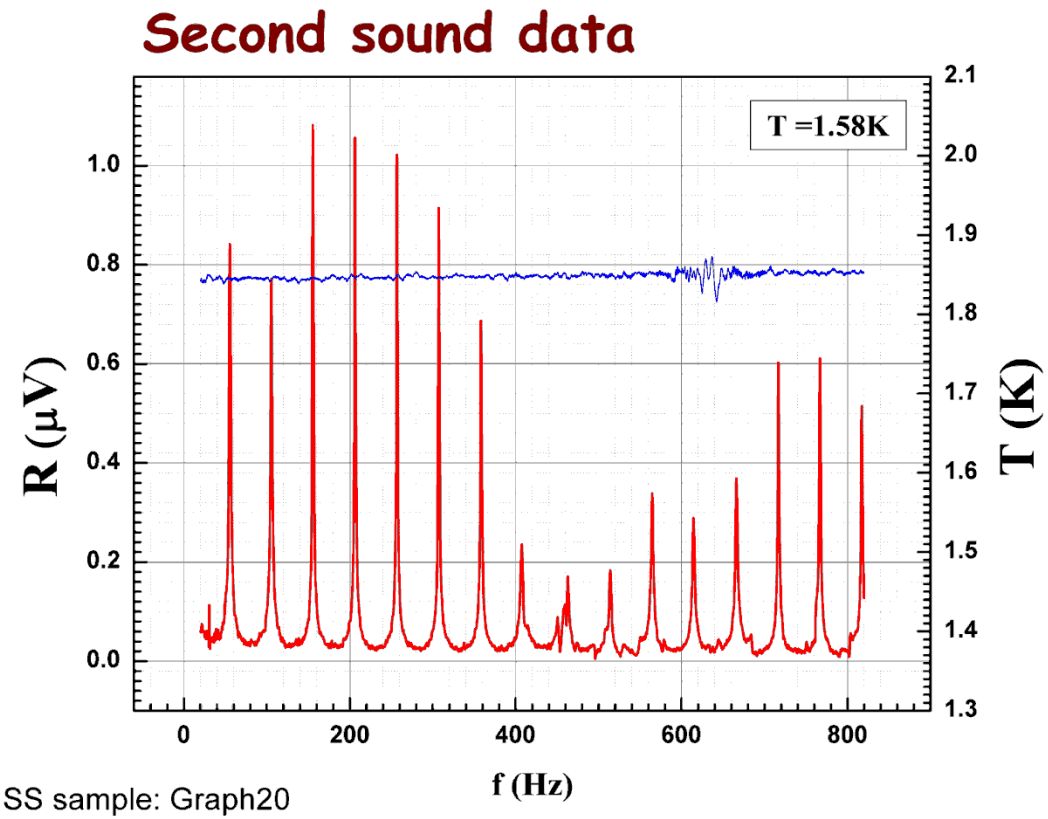




SS sample: Graph20

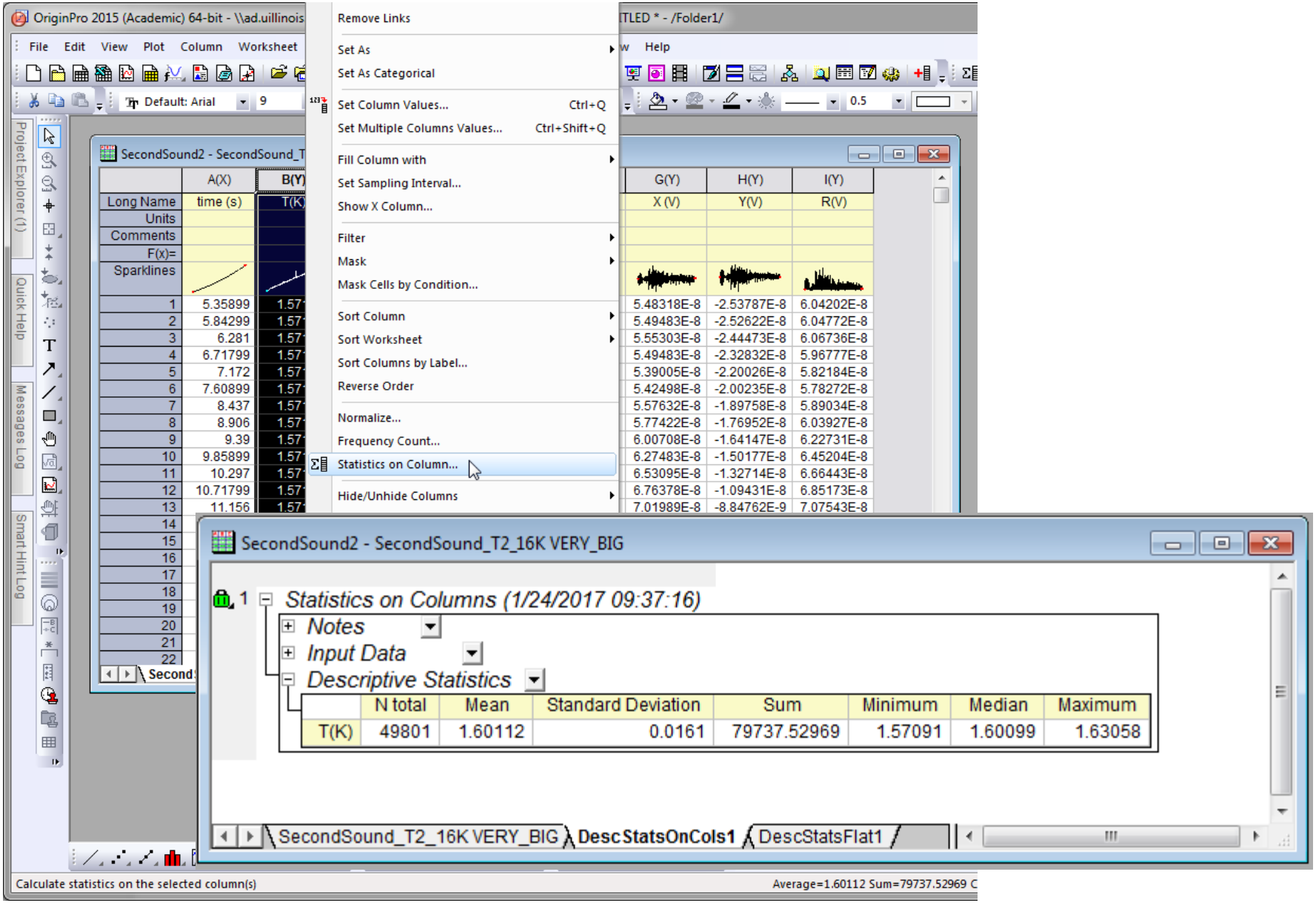
Graphical presentation of data: Smoothing



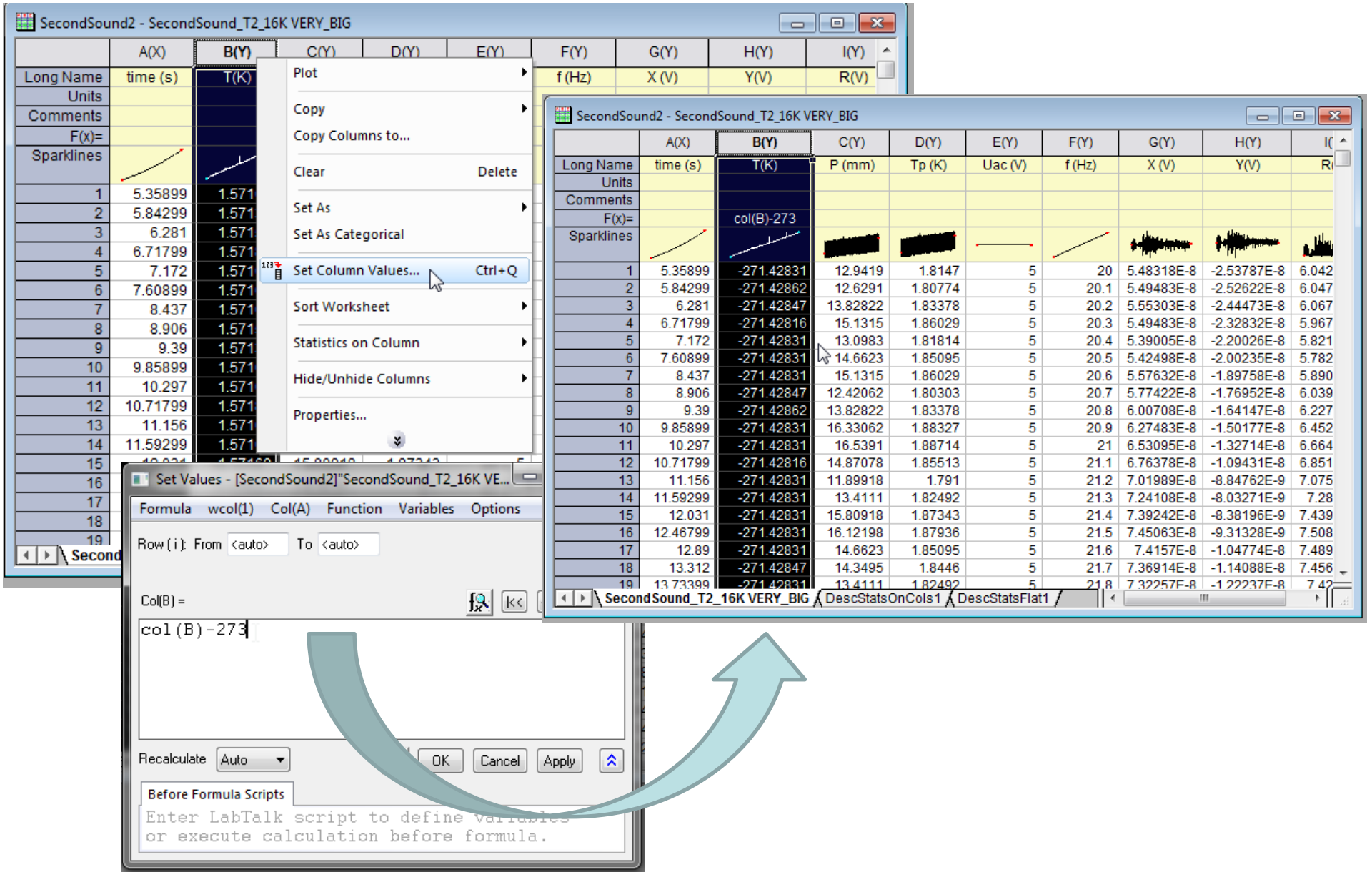


SS sample: Graph20

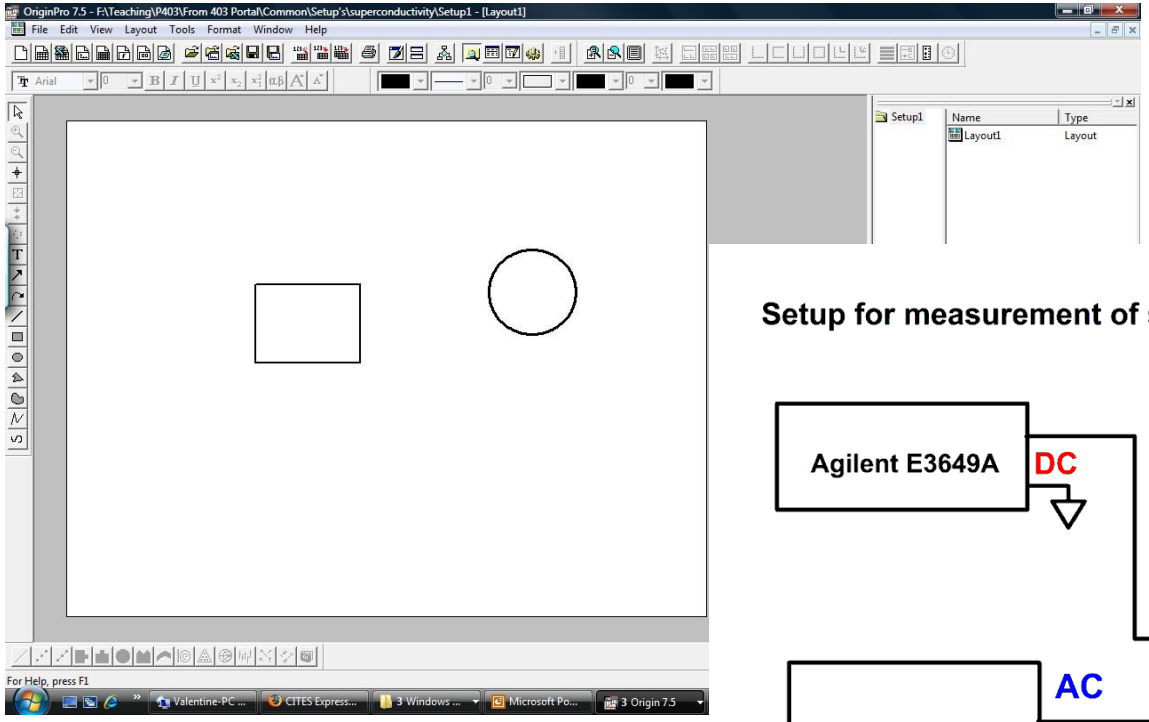
Working with data: Worksheets



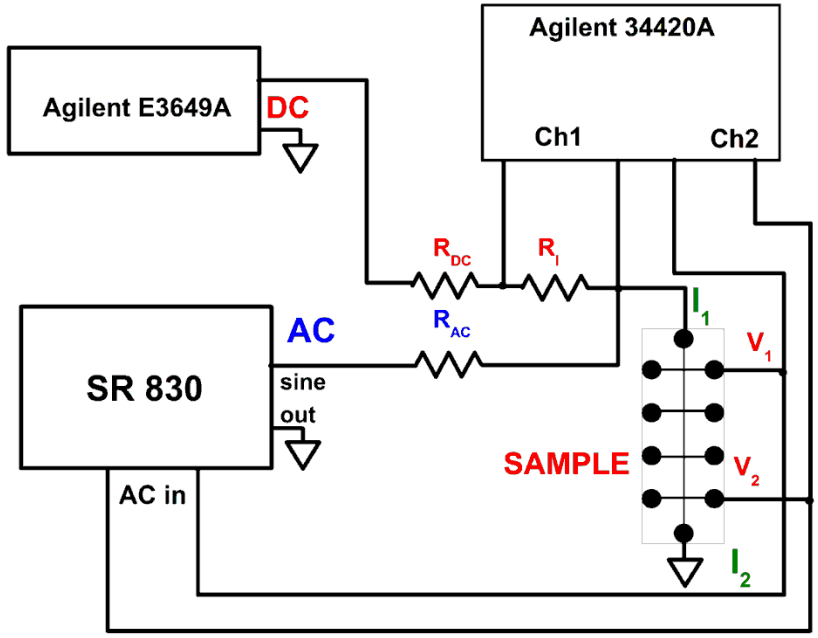
Working with data: Worksheets



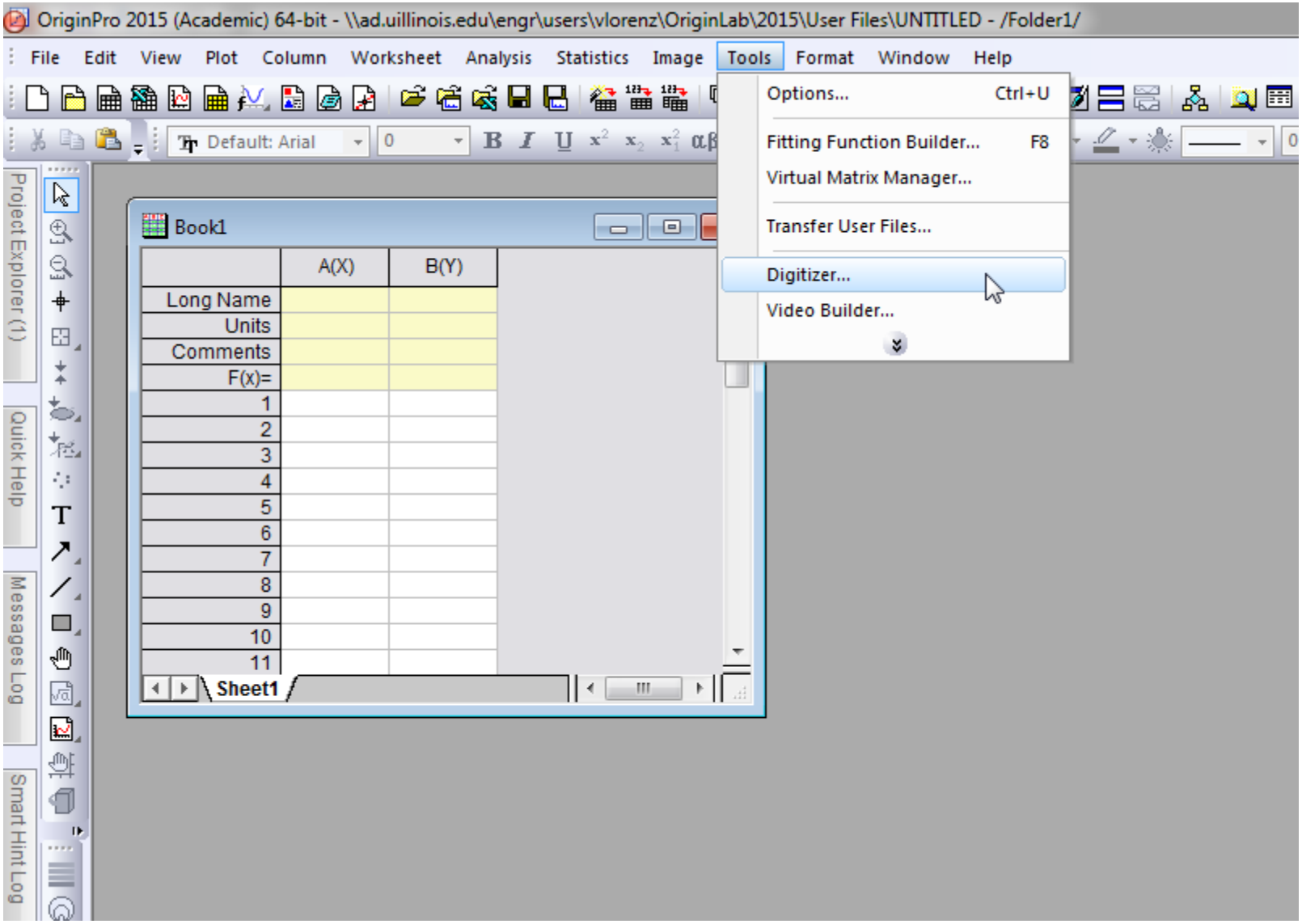
Layouts



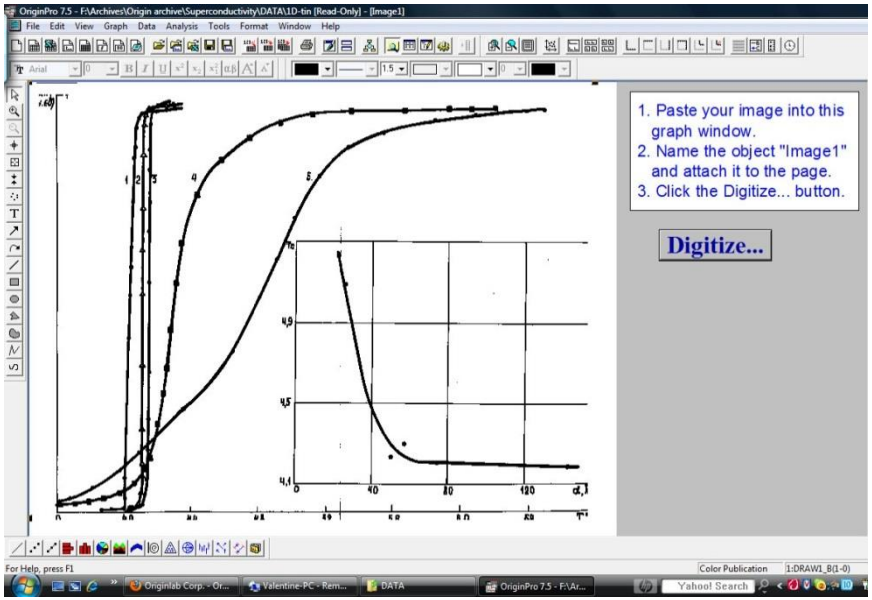
Setup for measurement of s/c properties

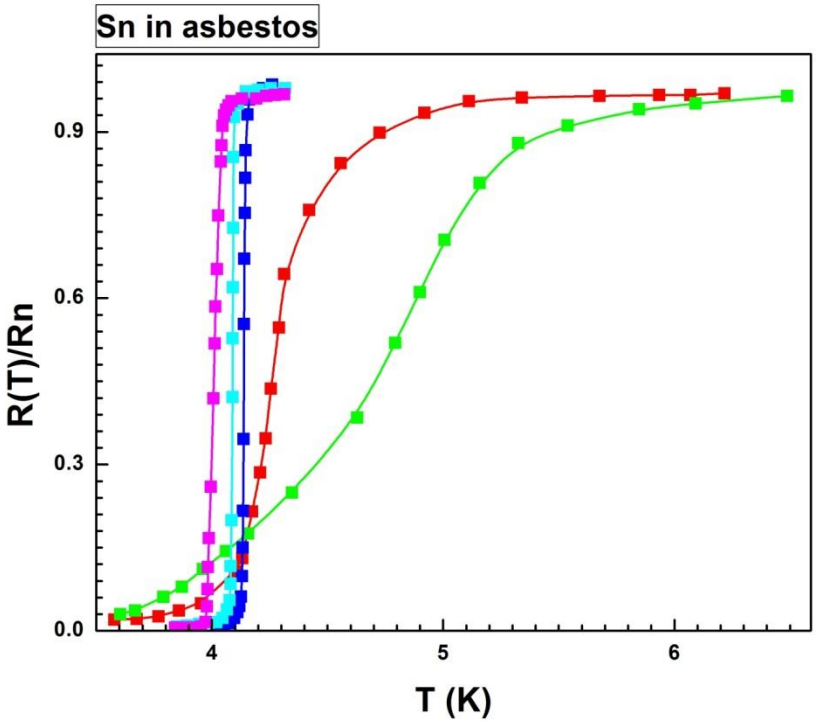


Custom tools



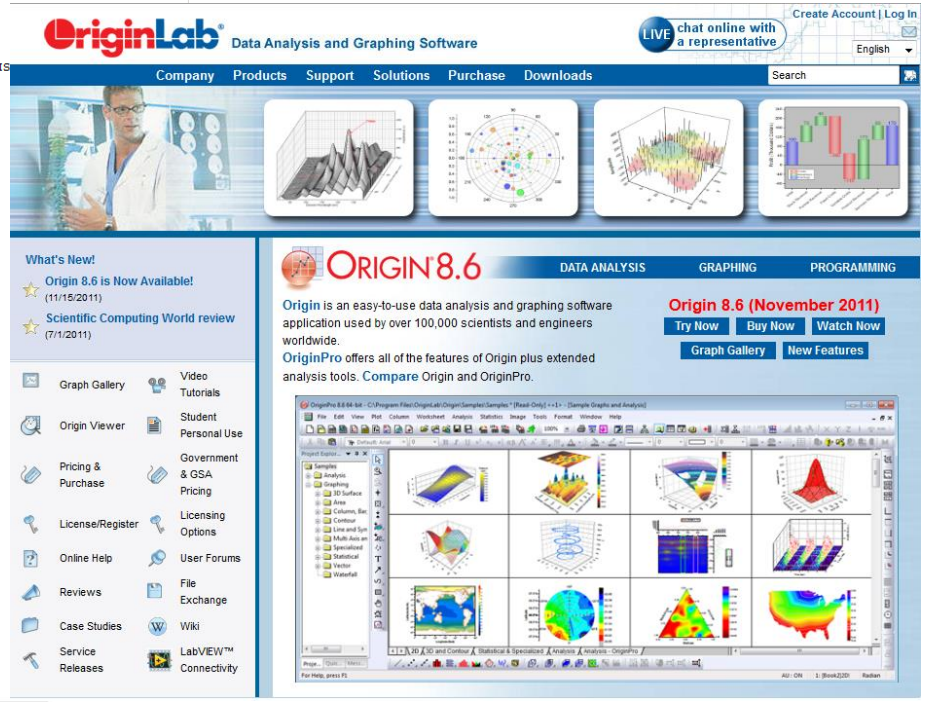
Using digitizer script





Origin at UIUC Webstore and OriginLab site.

https://webstore.illinois.edu

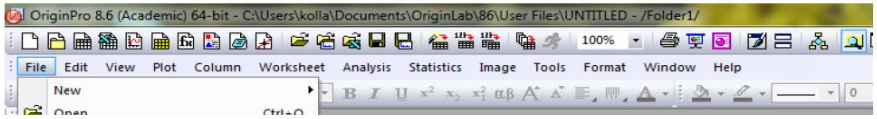


www.originlab.com

Origin manuals

Working with Origin 8.6.

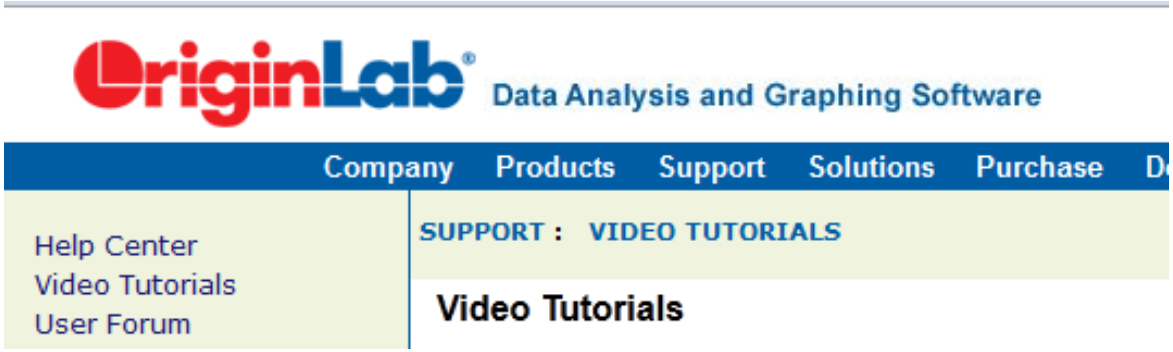
Step1. Importing data



A very short and simple manual covering only the main operations with Origin, and manuals from Origin are on the server (\\Phyaplportal\PHYCS403\Common\Origin manuals).

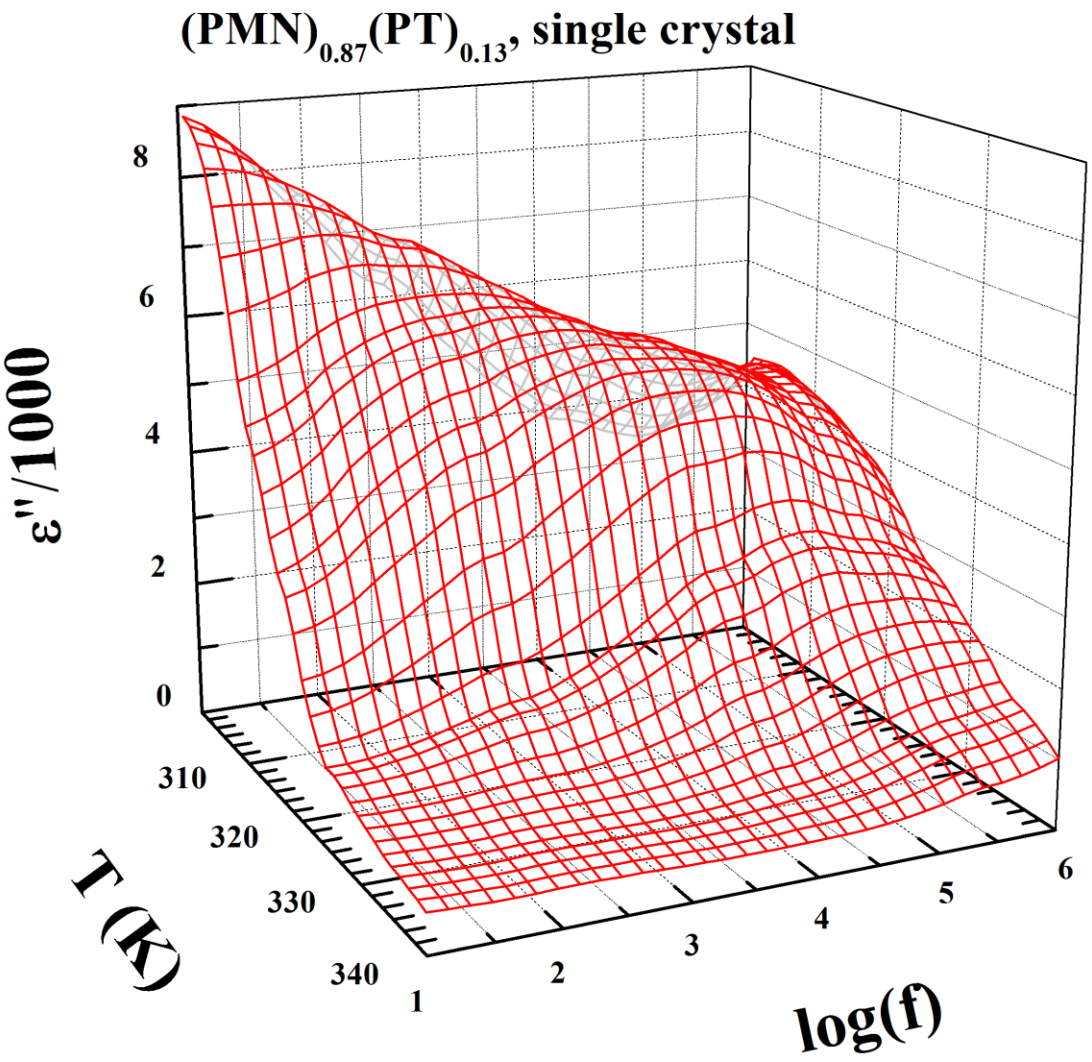
Do not forget about Origin Help

Video Tutorials on the company website



http://www.originlab.com/index.aspx?go=SUPPORT/VideoTutorials

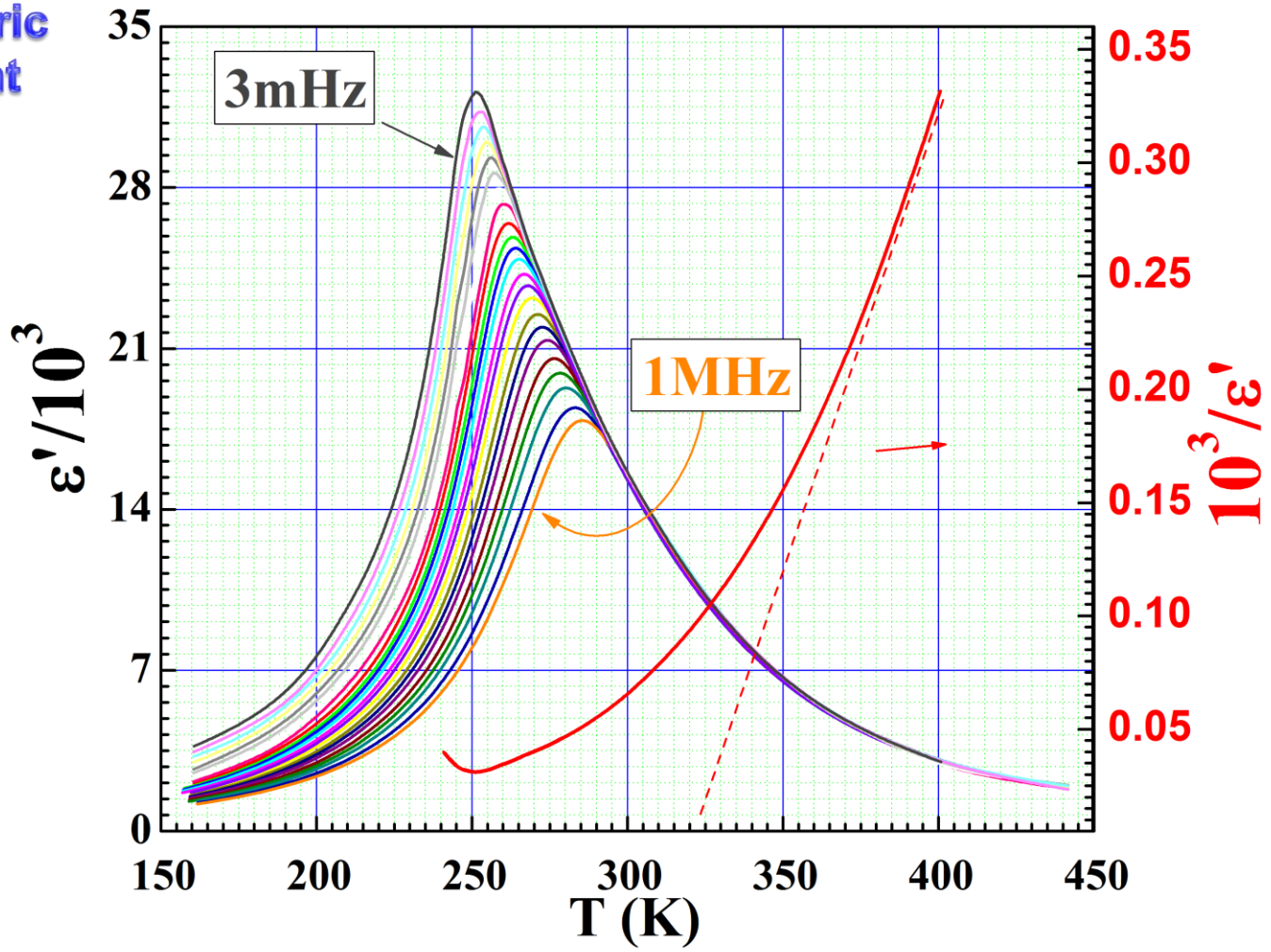
Example Origin graphs



Ferroelectric Experiment

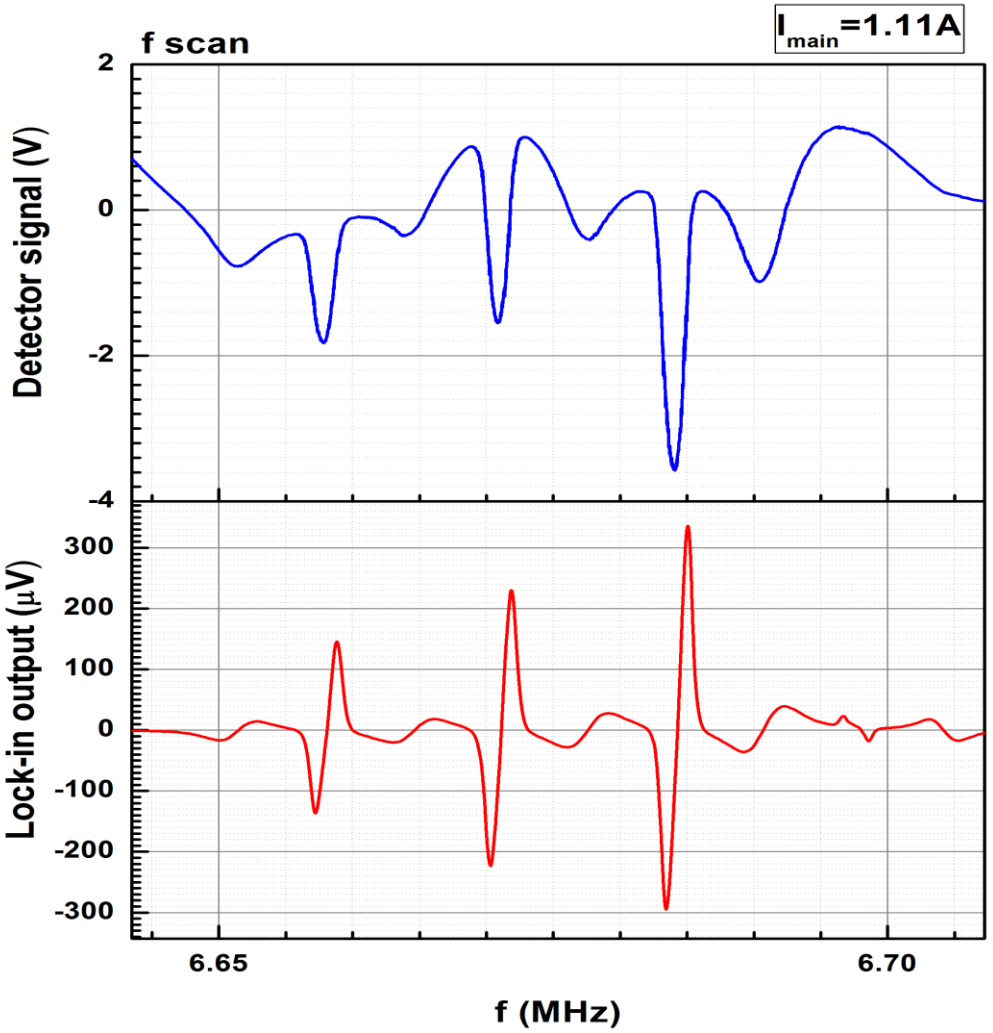
Example Origin graphs

Ferroelectric Experiment



Example Origin graphs

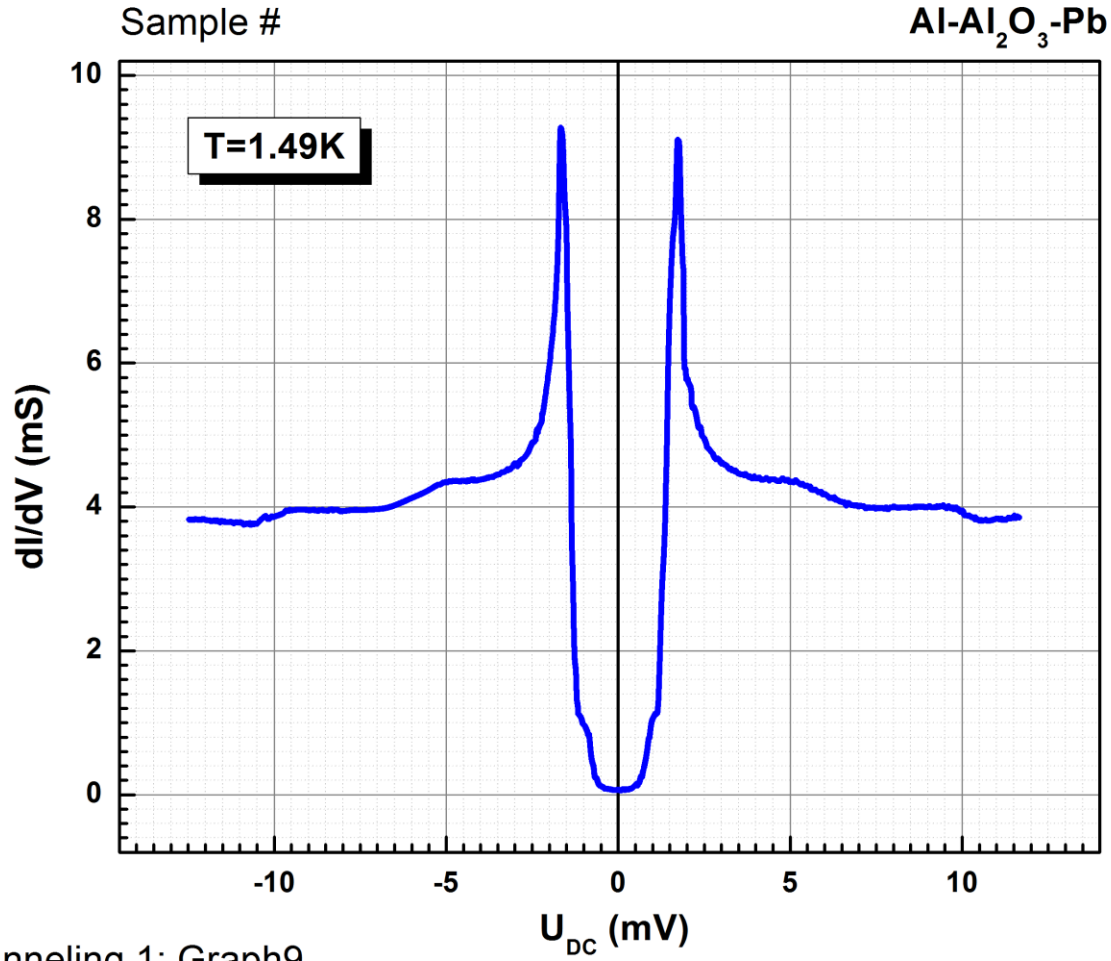
Optical pumping



Mapping 0.5-2.5A from March 1st 2012: Graph7

Example Origin graphs

Tunneling Experiment

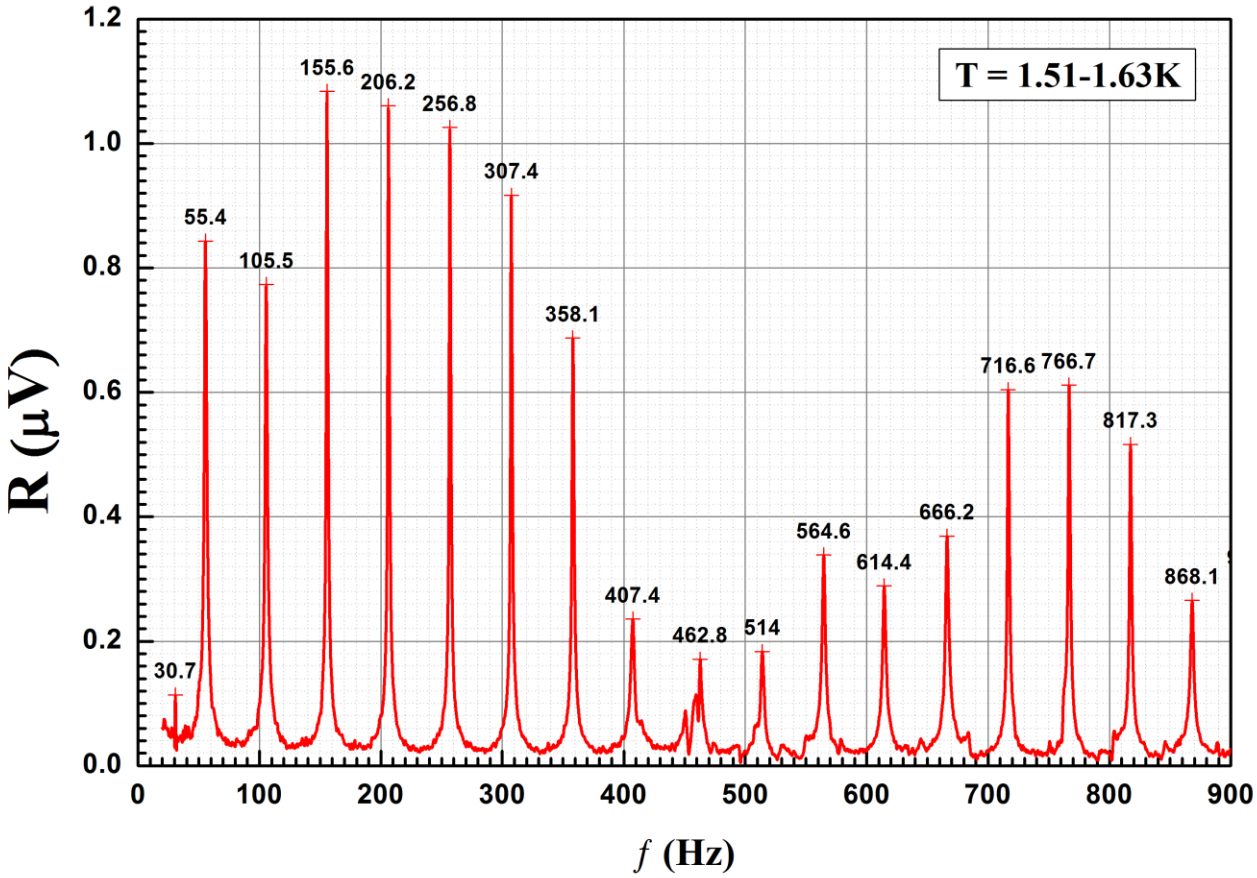


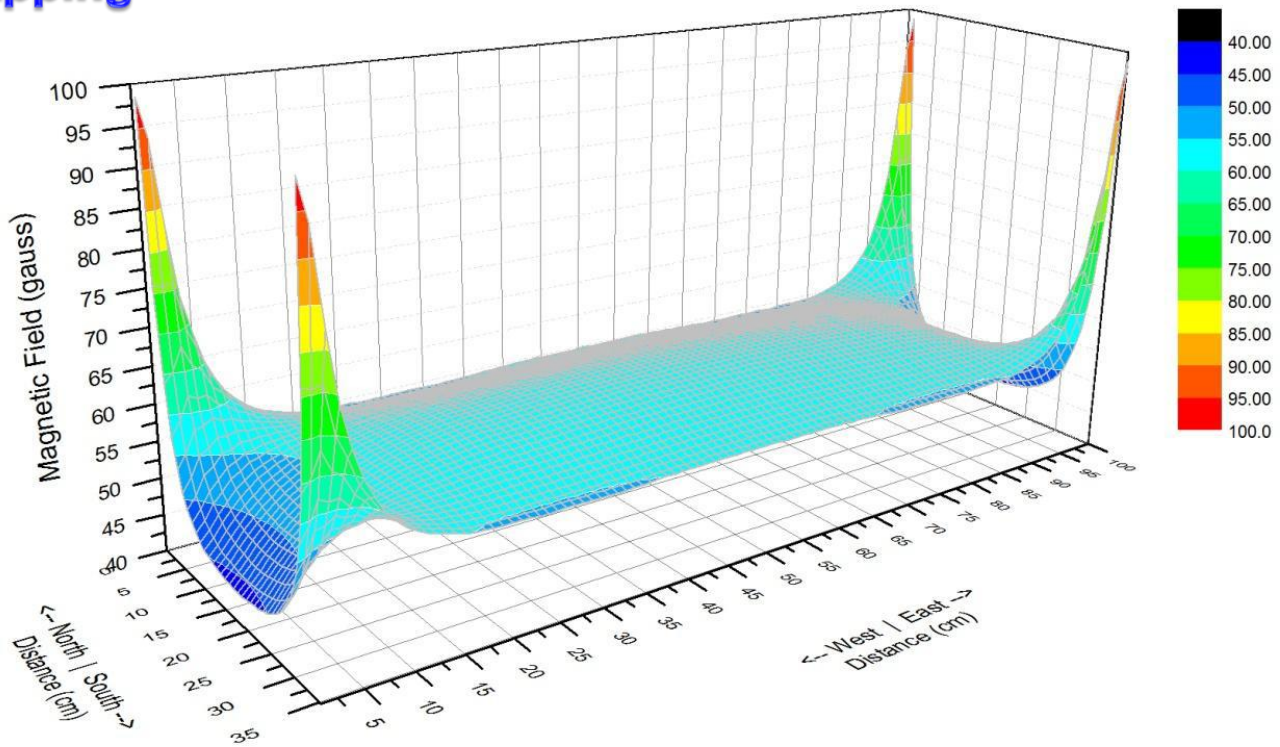
Tunneling 1: Graph9

Sample n2 run8 zoom temp 1.55K

Example Origin graphs

Second sound



Example Origin graphs

Magnet mapping