



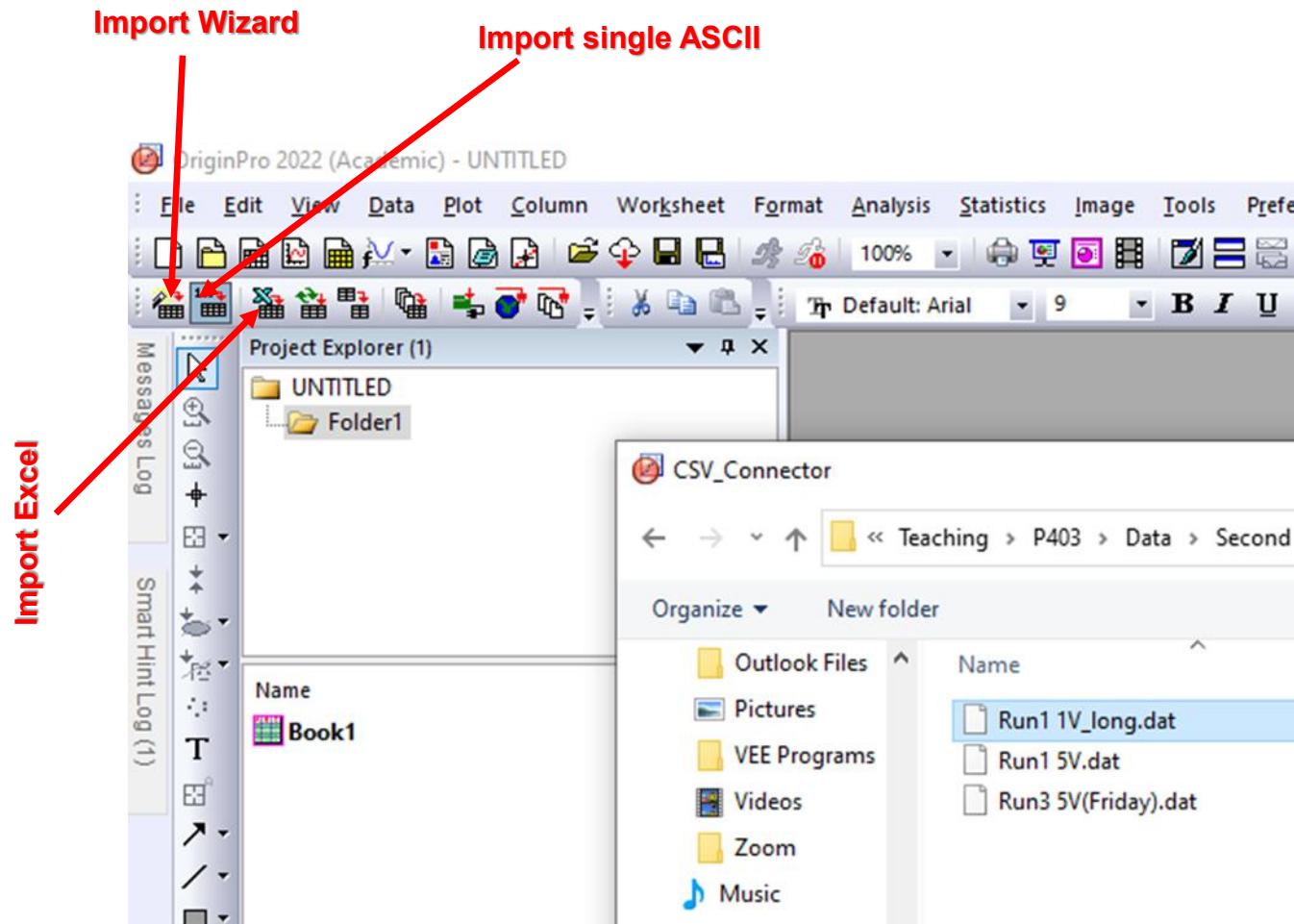
Origin is on all Physics 403 computers.

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

## Plot menu

SS..opju - E:\Teaching\P403\Spring 2023\Lectures\Origin\ - /Folder1/ - OriginPro 2023 (Academic)

File Edit View Data **Plot** Column Worksheet Format Analysis Statistics Image Tools Preferences Connectivity Window Help

Project Explorer (1) Messages Log Smart Hint Log

Run11Vlong - Run1 1V\_long.dat

|            | A(X)     | B(Y)    | C(Y)    | D(Y)    | E(Y)    |
|------------|----------|---------|---------|---------|---------|
| Long Name  | time (s) | Vdt     | T(K)    | P (mm)  | Tp (K)  |
| Units      |          |         |         |         |         |
| Comments   |          |         |         |         |         |
| F(x)=      |          |         |         |         |         |
| Sparklines |          |         |         |         |         |
| 1          | 0.07     | -1.6984 | 1.58361 | 2.36926 | 1.42113 |
| 2          | 0.27     | -1.6995 | 1.51669 | 2.5413  | 1.43442 |
| 3          | 0.41     | -1.6989 | 1.55345 | 2.36926 | 1.42113 |
| 4          | 0.55     | -1.6989 | 1.55345 | 2.44746 | 1.42726 |
| 5          | 0.69     | -1.6984 | 1.58361 | 2.44746 | 1.42726 |
| 6          | 0.82     | -1.6989 | 1.55345 | 2.44746 | 1.42726 |
| 7          | 0.96     | -1.6989 | 1.55345 | 2.44746 | 1.42726 |
| 8          | 1.1      | -1.6989 | 1.55345 | 2.44746 | 1.42726 |
| 9          | 1.24     | -1.6989 | 1.55345 | 2.5413  | 1.43442 |

Run1 1V\_long

# Graphical presentation of data: Basic Plot

The screenshot shows a software interface with a menu open for a selected data book. The menu includes options like 'Data Source...', 'Select...', 'Post Import Script...', 'Import', 'Import All Books', 'Auto Import' (which is currently set to 'None'), 'Unlock Imported Data', 'Disconnect Sheet', 'Remove Data Connector...', 'Remove Connectors from All Books...', 'Exclude Imported When Saving' (which is checked), 'Common Data Path (Undefined)...', and 'Duplicate Sheet with More Files...'. The 'Remove Connectors from All Books...' option is highlighted with a red arrow pointing to it from the text on the right.

11  
12  
13

Data Source...  
Select...  
Post Import Script...  
Import  
Import All Books  
Auto Import ▾  
None  
On Project Open  
On Change  
Remove Connectors from All Books...  
Exclude Imported When Saving  
Common Data Path (Undefined)...  
Duplicate Sheet with More Files...

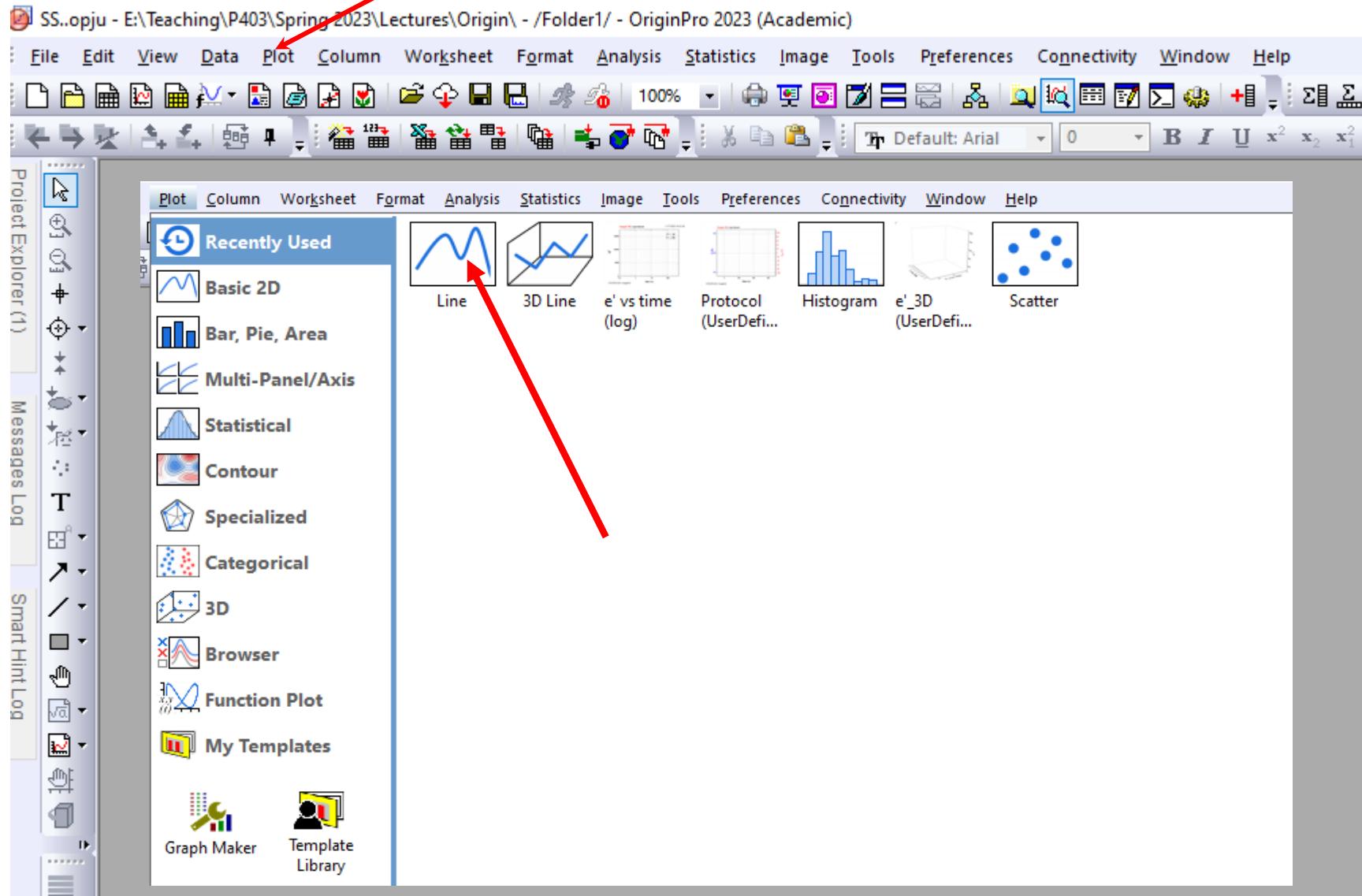
D(Y) E(Y) F(Y) G(Y)  
Hz Vac(V) Vdc(V) e'  
01:41:58  
d by Eugene  
SR830(8) Ip DMM(24)

Data connector - new option in 2025, 2026 versions

If you plan to use project on another computer, you need to remove the data connectors from all books

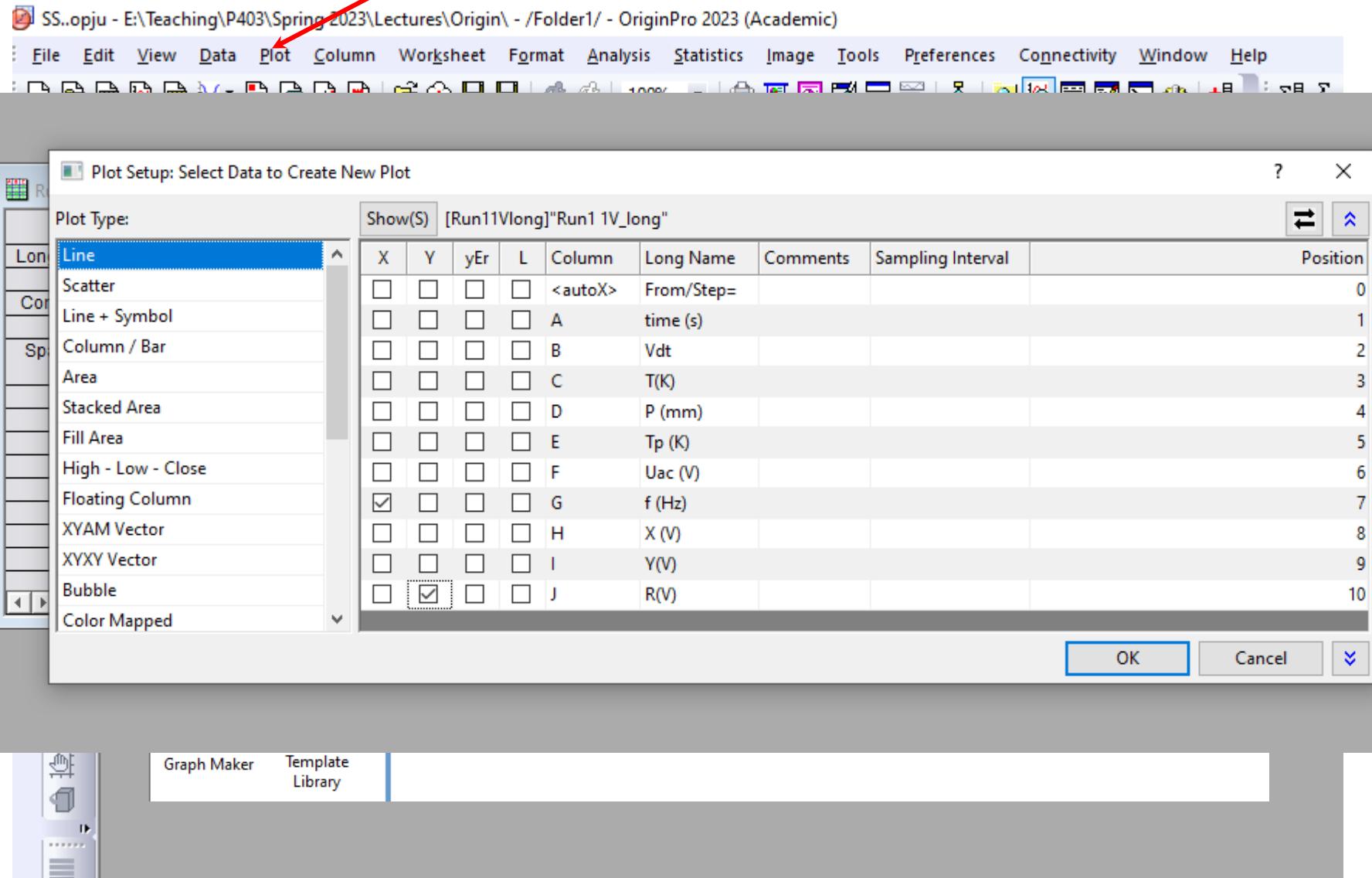
# Graphical presentation of data: Basic Plot

## Plot menu



# Graphical presentation of data: Basic Plot

## Plot menu



SS..opju - E:\Teaching\P403\Spring 2023\Lessons\Origin\ - /Folder1/ - OriginPro 2023 (Academic)

File Edit View Data **Plot** Column Worksheet Format Analysis Statistics Image Tools Preferences Connectivity Window Help

Plot Setup: Select Data to Create New Plot

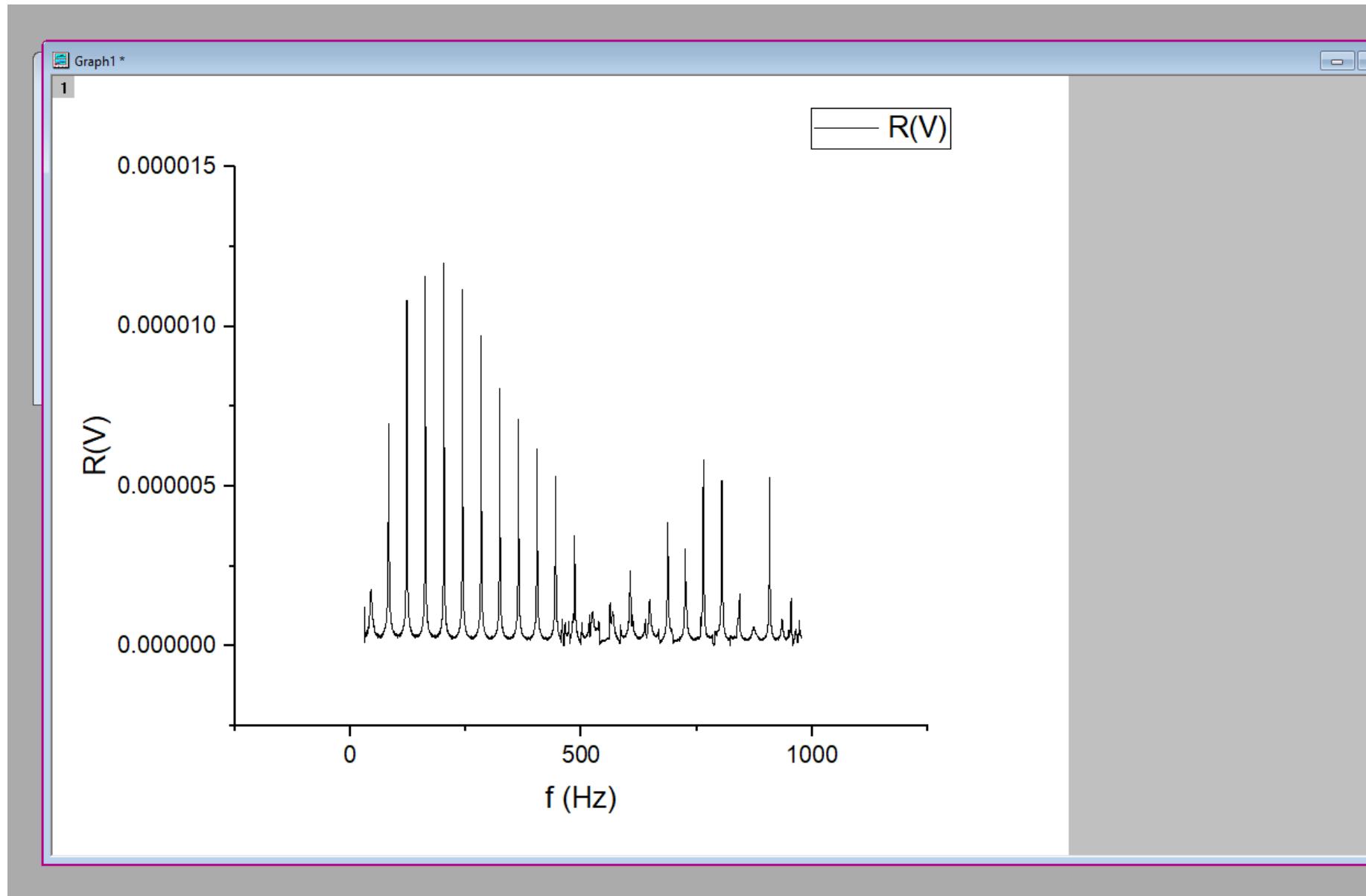
Plot Type: Line

|  | X                                   | Y                                   | yEr                      | L                        | Column  | Long Name  | Comments | Sampling Interval | Position |
|--|-------------------------------------|-------------------------------------|--------------------------|--------------------------|---------|------------|----------|-------------------|----------|
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <autoX> | From/Step= |          |                   | 0        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | A       | time (s)   |          |                   | 1        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | B       | Vdt        |          |                   | 2        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | C       | T(K)       |          |                   | 3        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | D       | P (mm)     |          |                   | 4        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | E       | Tp (K)     |          |                   | 5        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | F       | Uac (V)    |          |                   | 6        |
|  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | G       | f (Hz)     |          |                   | 7        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | H       | X (V)      |          |                   | 8        |
|  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | I       | Y(V)       |          |                   | 9        |
|  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | J       | R(V)       |          |                   | 10       |

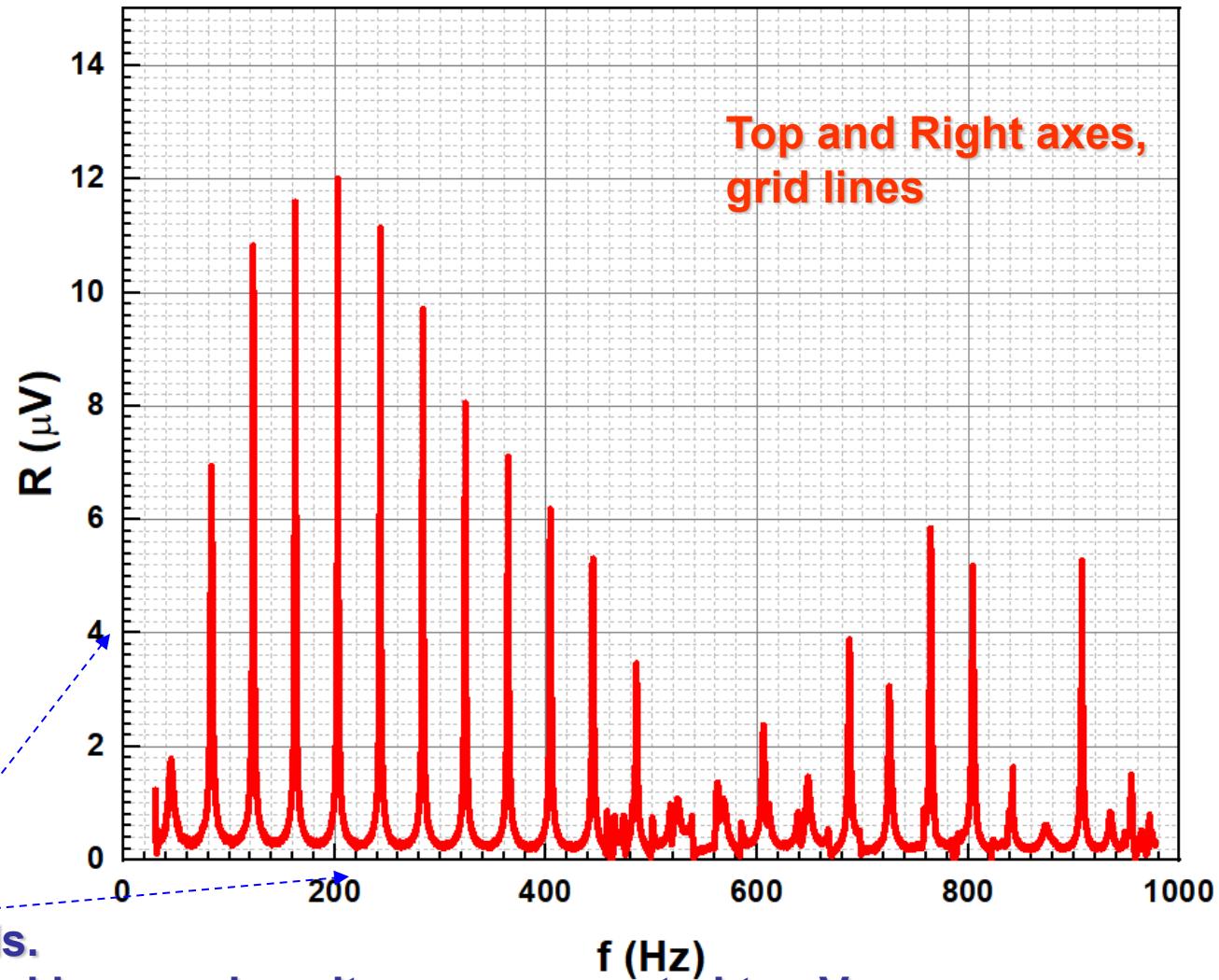
OK Cancel

Graph Maker Template Library

# Graphical presentation of data: Basic Plot



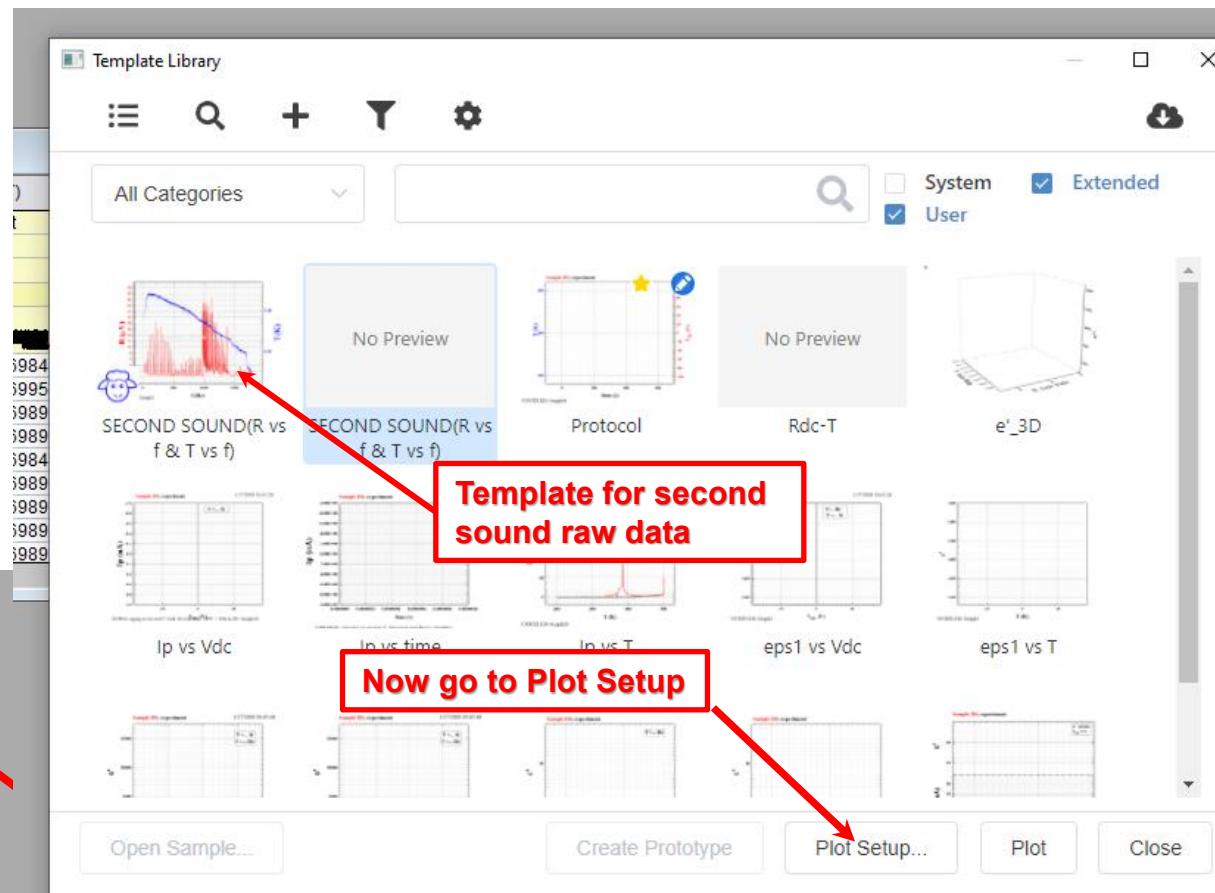
# Graphical presentation of data: Basic Plot



# Graphical presentation of data: Templates

Common > Origin templates >

| Name              | Date modified       |
|-------------------|---------------------|
| AC magnetic Lab   | 6/21/2013 1:18 AM   |
| Calibration       | 6/21/2013 1:18 AM   |
| Ferro             | 12/21/2025 12:21 PM |
| Ferro3            | 8/2/2024 1:53 PM    |
| Fluorescence      | 4/8/2020 3:33 PM    |
| Microwaves        | 6/21/2013 1:18 AM   |
| NMR               | 4/8/2020 7:42 PM    |
| Optical pumping   | 4/8/2020 7:44 PM    |
| Second sound      | 8/25/2023 11:45 AM  |
| Superconductivity | 4/8/2020 7:43 PM    |
| Tunneling         | 7/29/2020 9:44 AM   |



Templates Library



<< Start Menu (F1)

# Graphical presentation of data: Templates

Plot Setup: Select Data to Create New Plot

Plot Type: Line

Show(S) [Run11Vlong]"Run1 1V\_long"

| X                                   | Y                                   | yEr                      | L                        | Column  | Long Name  | Comments | Sampling Interval | Position |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|---------|------------|----------|-------------------|----------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <autoX> | From/Step= |          |                   | 0        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | A       | time (s)   |          |                   | 1        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | B       | Vdt        |          |                   | 2        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | C       | T(K)       |          |                   | 3        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | D       | P (mm)     |          |                   | 4        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | E       | Tp (K)     |          |                   | 5        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | F       | Uac (V)    |          |                   | 6        |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | G       | f (Hz)     |          |                   | 7        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | H       | X (V)      |          |                   | 8        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | I       | Y(V)       |          |                   | 9        |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | J       | R(V)       |          |                   | 10       |

Plot List: Drag entries in 1st column to reorder or to move between layers. Right click for other options.

Replace Add

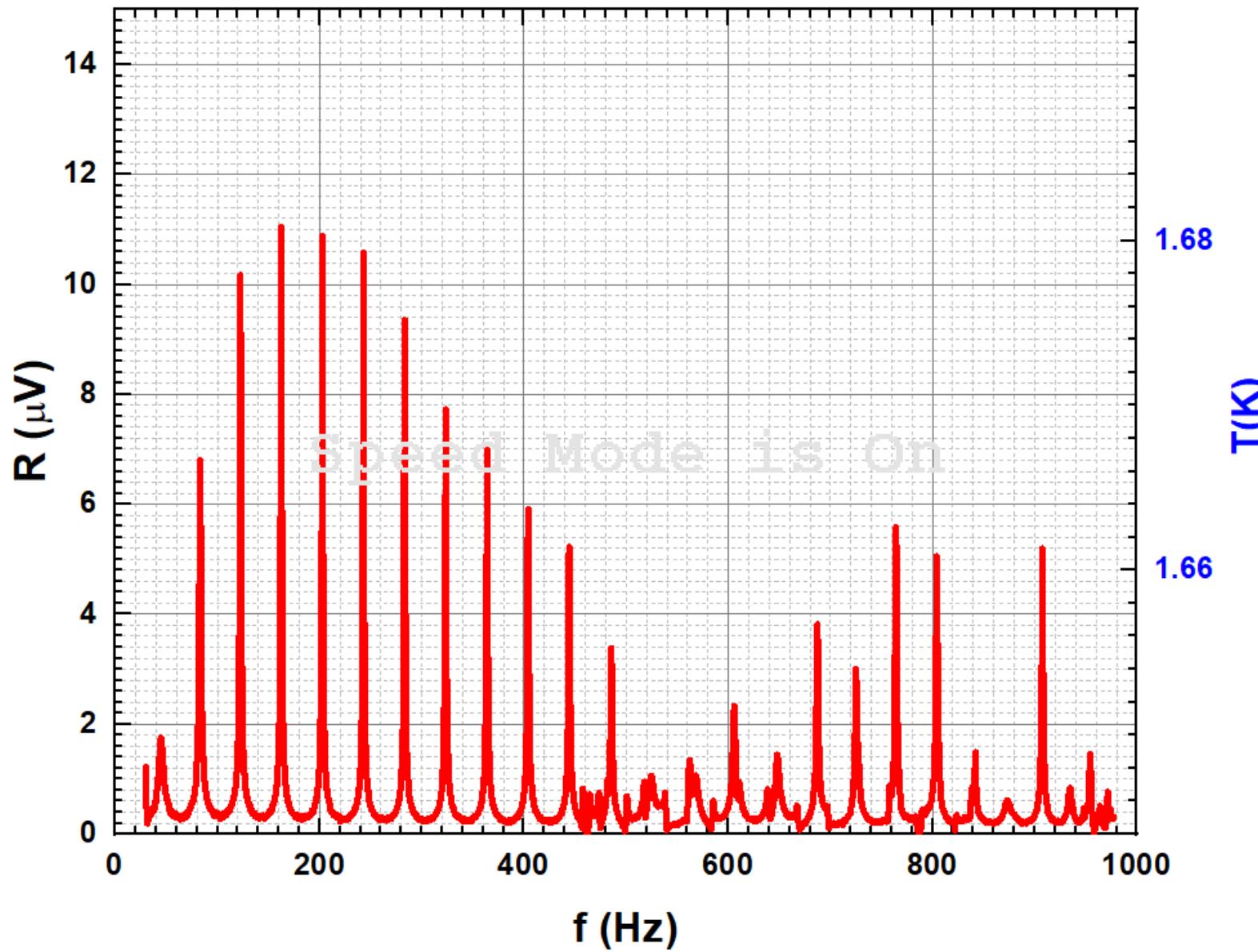
Plot Range Show Plot Type Legend

- Layer 1  Re 
  - Style Holder Line
  - Style Holder Line
  - Style Holder Line
  - Group
    - Style Holder Line
    - Style Holder Line
    - Style Holder Line
- Layer 2  Re

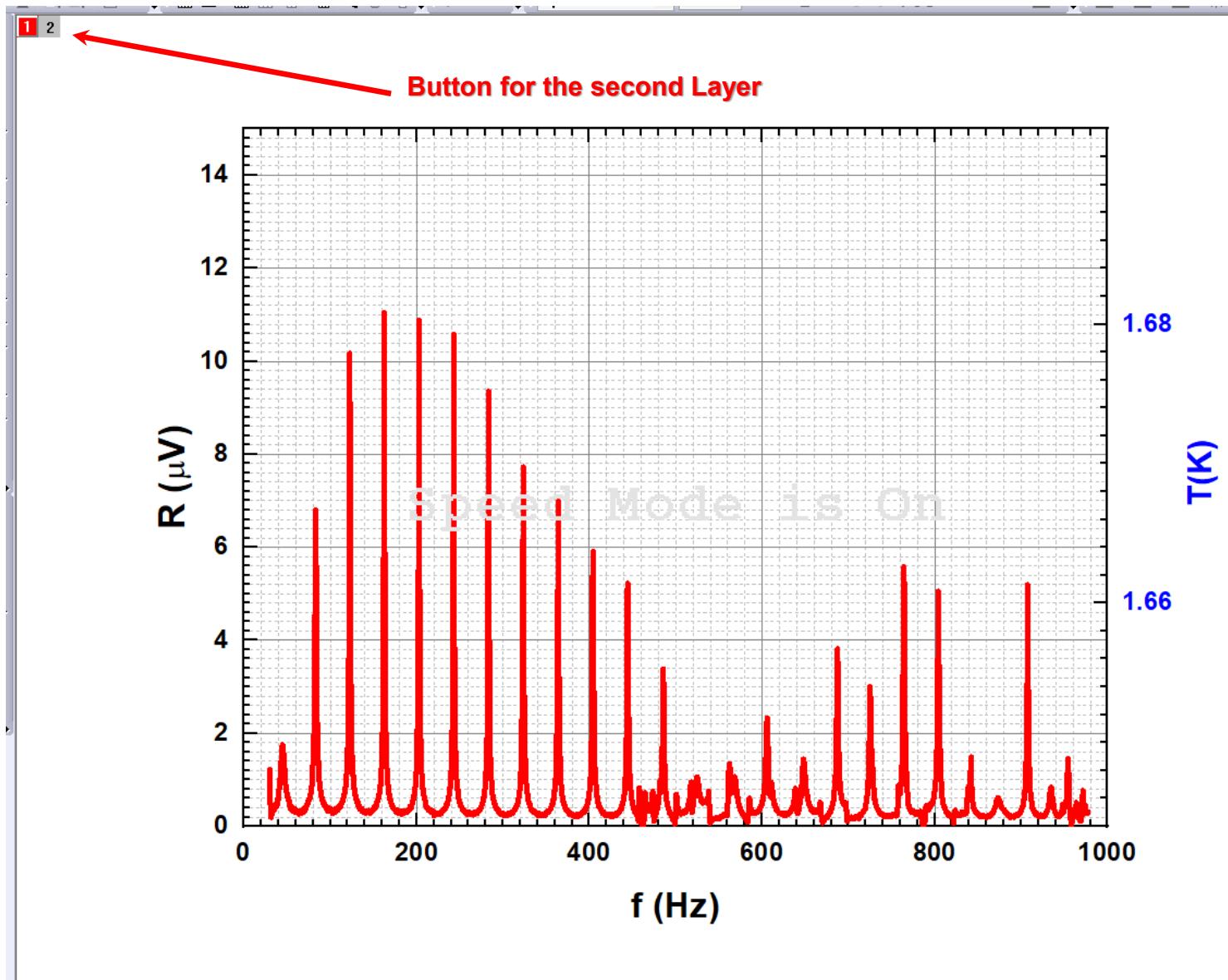
Preview OK Cancel Apply

Open Sample... Create Prototype

# Graphical presentation of data: Templates



# Graphical presentation of data: Extra Layer



1

2

Button for the second Layer

Plot Setup: Configure Data Plots in Layer

Plot Type: Line

Show(S) [Run11Vlong]"Run1 1V\_long"

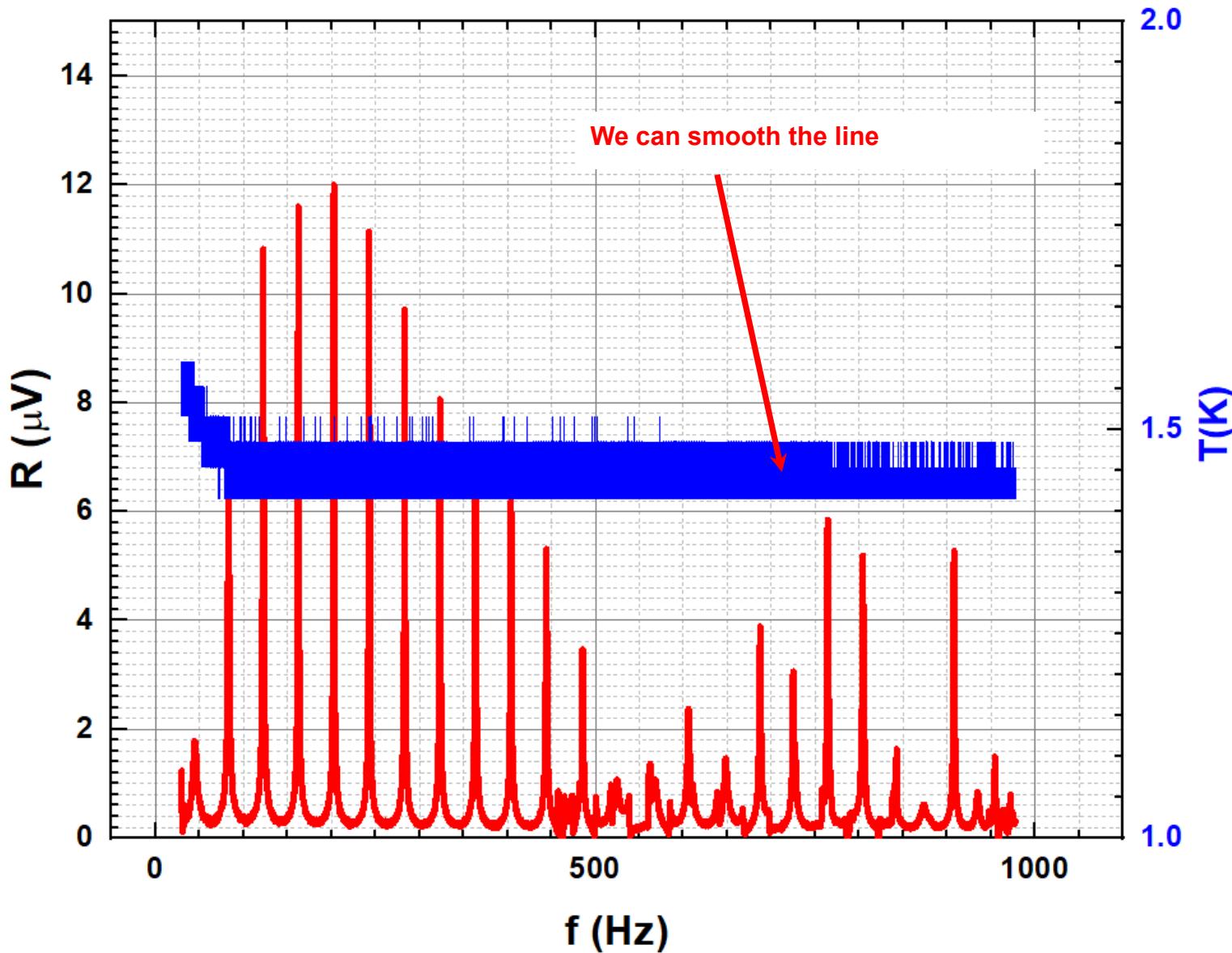
| X                                   | Y                                   | yEr                      | L                        | Column  | Long Name  | Comments | Sampling Interval | Position |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|---------|------------|----------|-------------------|----------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <autoX> | From/Step= |          |                   | 0        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | A       | time (s)   |          |                   | 1        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | B       | Vdt        |          |                   | 2        |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | C       | T(K)       |          |                   | 3        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | D       | P (mm)     |          |                   | 4        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | E       | Tp (K)     |          |                   | 5        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | F       | Uac (V)    |          |                   | 6        |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | G       | f (Hz)     |          |                   | 7        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | H       | X (V)      |          |                   | 8        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | I       | Y(V)       |          |                   | 9        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | J       | R(V)       |          |                   | 10       |

Plot List: Drag entries in 1st column to reorder or to move between layers. Right click for other options.

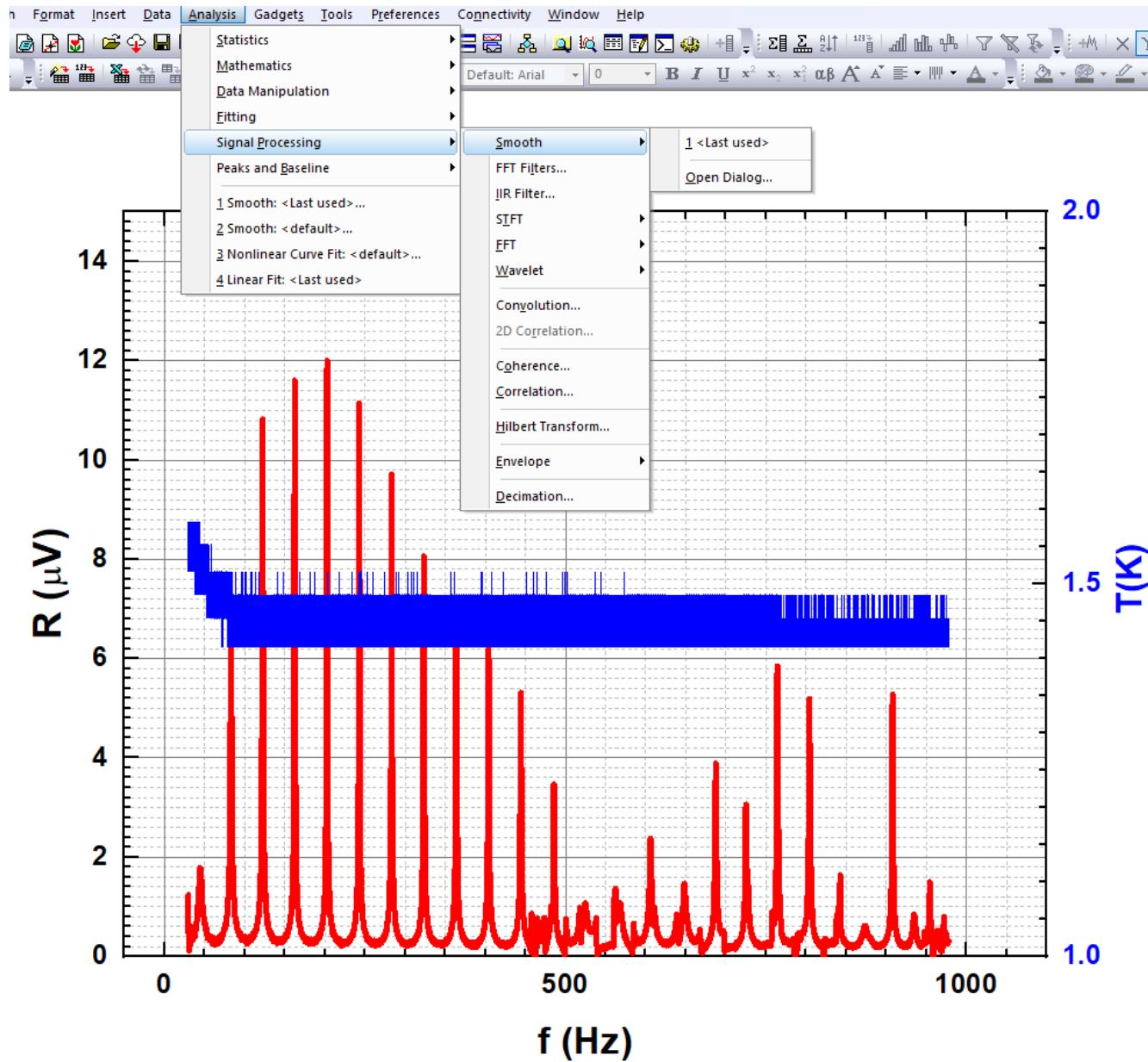
| Plot    | Range   | Show                                | Plot Type | Legend |
|---------|---|-------------------------------------|-----------|--------|
| Layer 1 | <input type="checkbox"/> Rescale <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/> | Line      | R(V)   |
| Layer 2 | <input checked="" type="checkbox"/> Rescale <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Line      | T(K)   |

Preview OK Cancel Apply

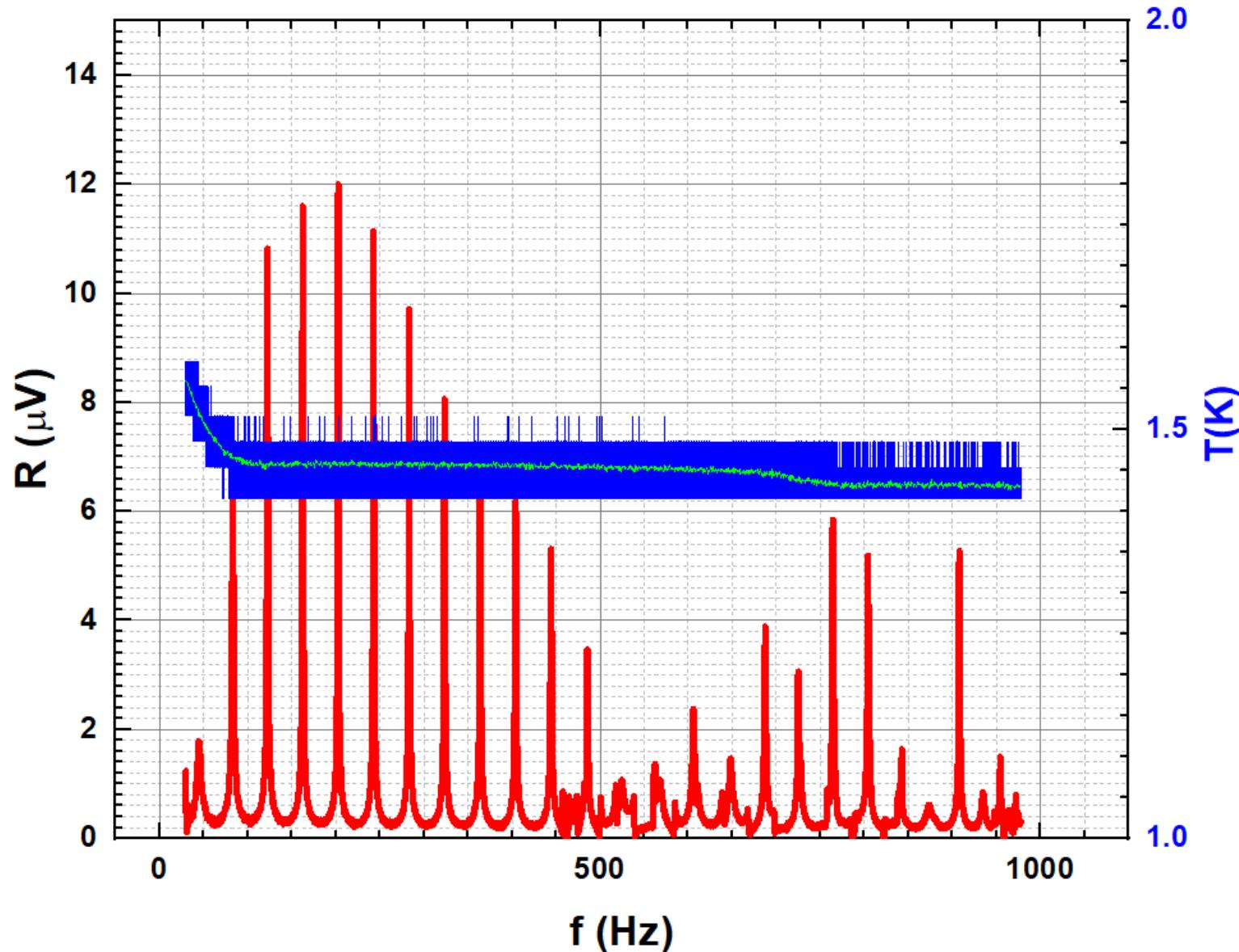
## Graphical presentation of data: Extra I aver



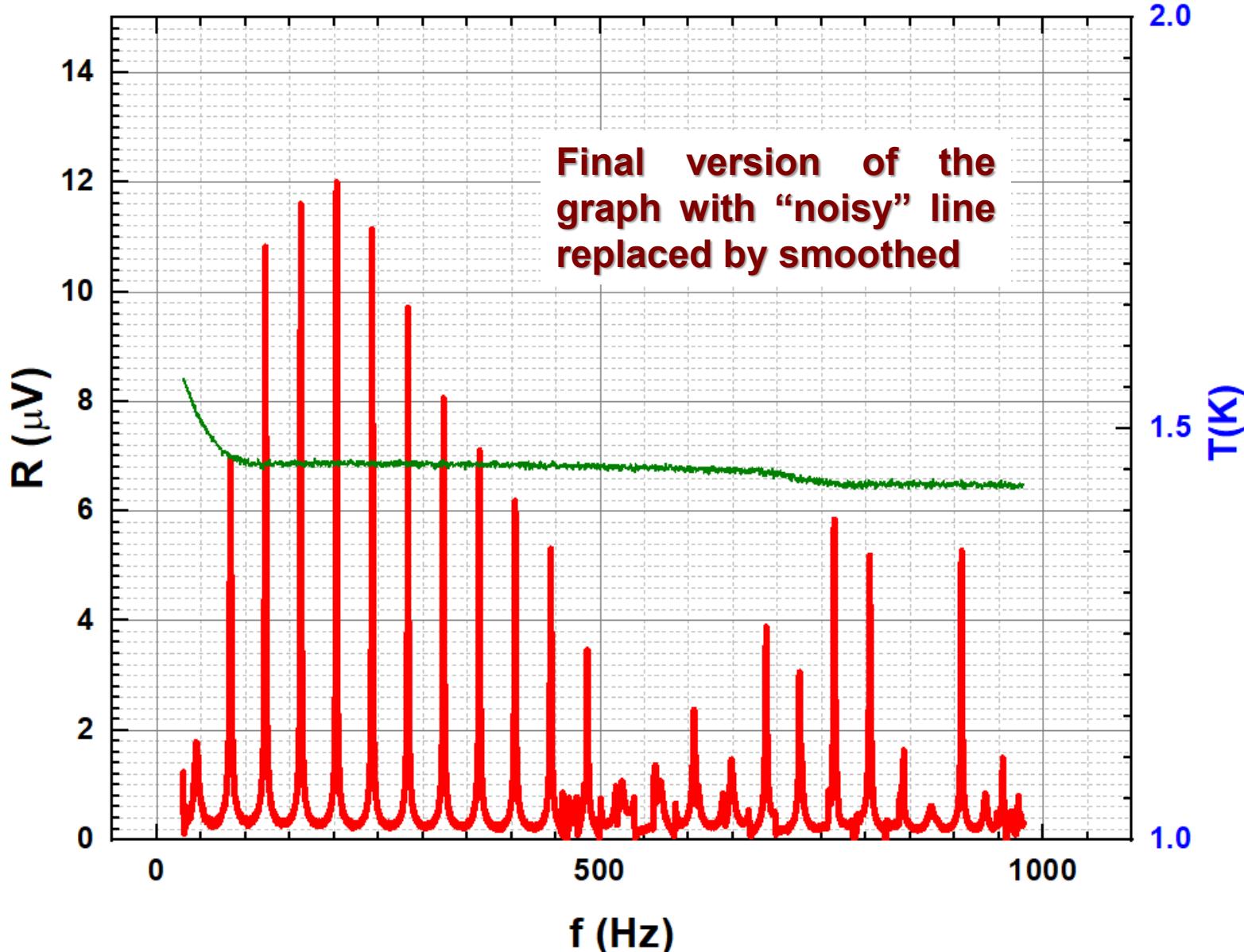
# Graphical presentation of data: Extra Layer

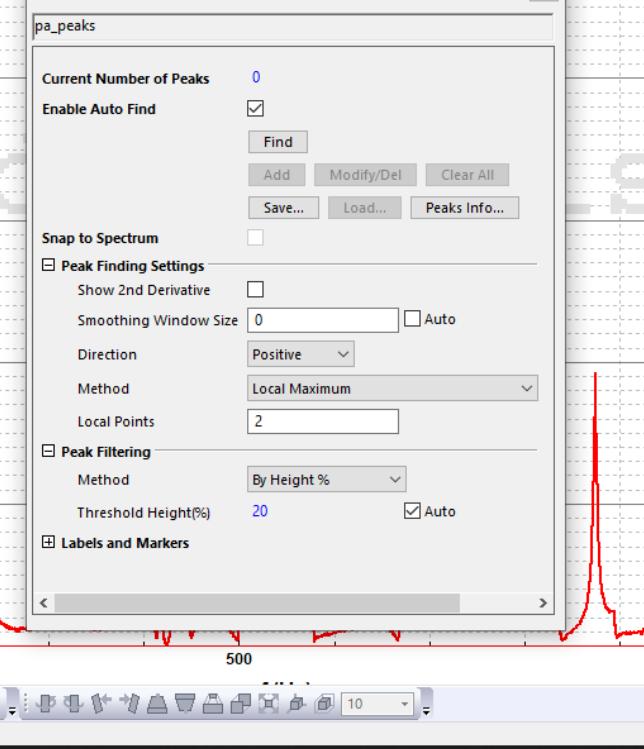
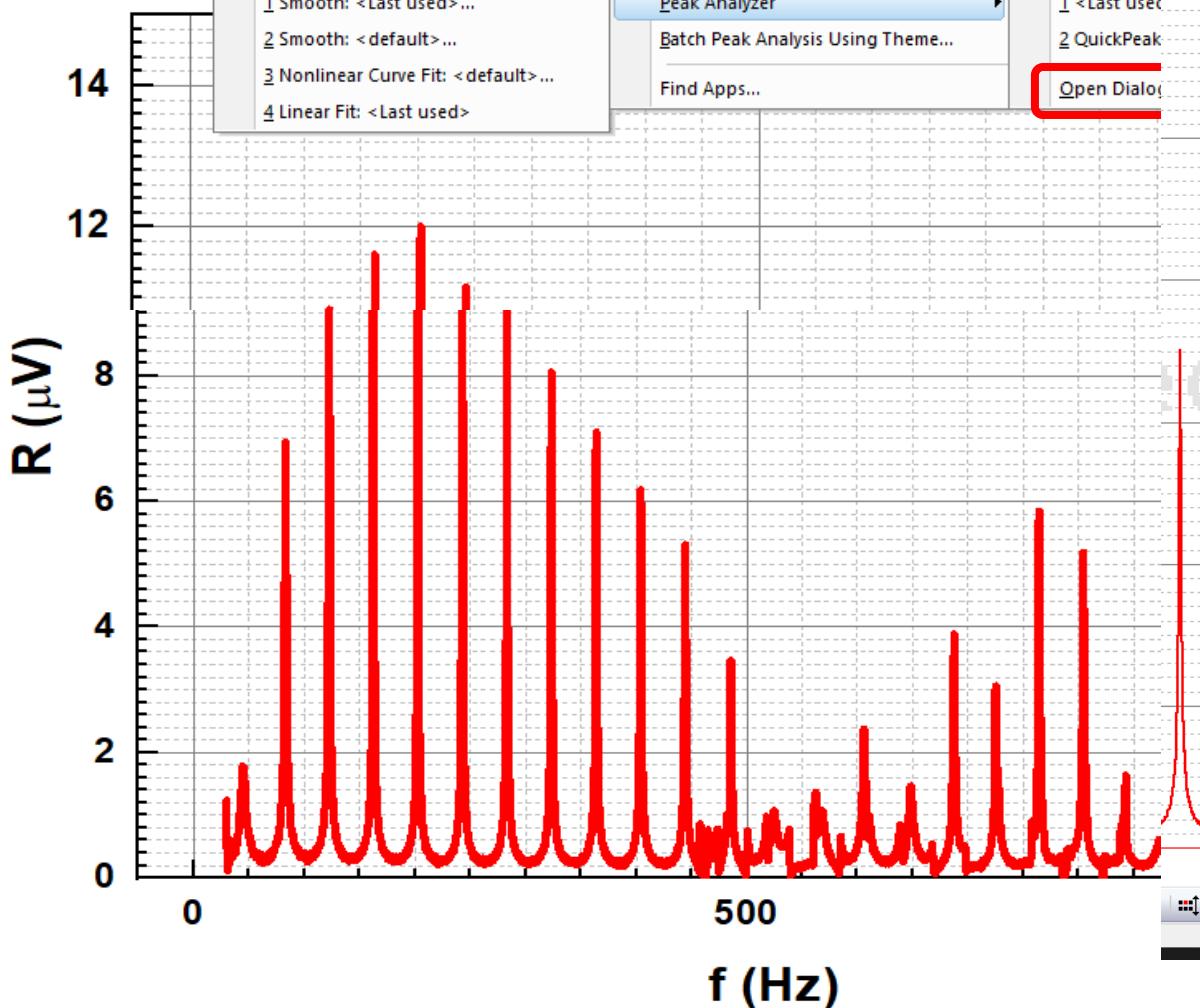
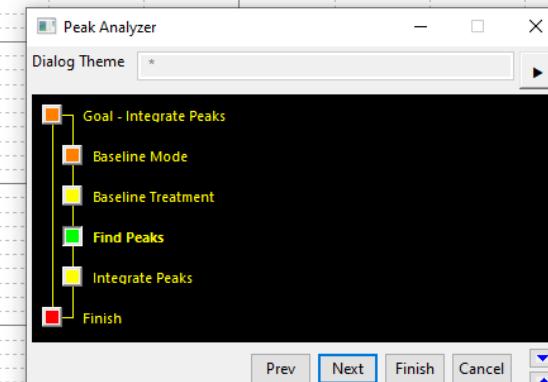
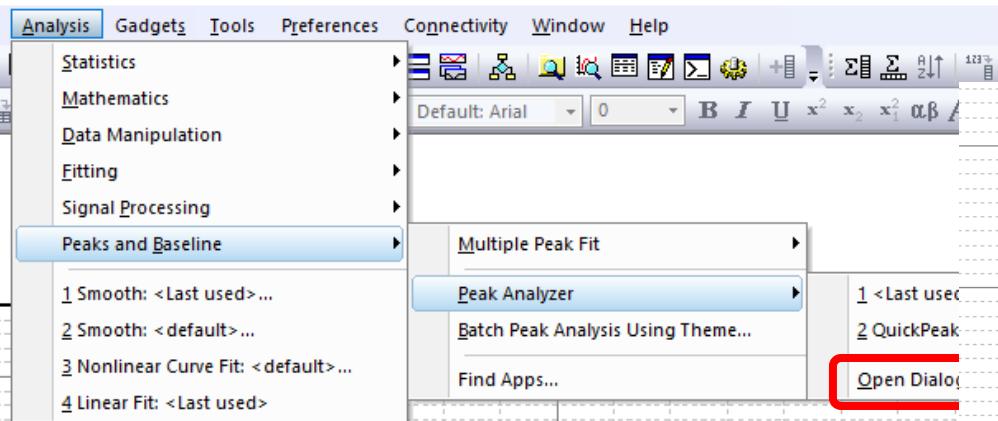


# Graphical presentation of data: Extra Layer



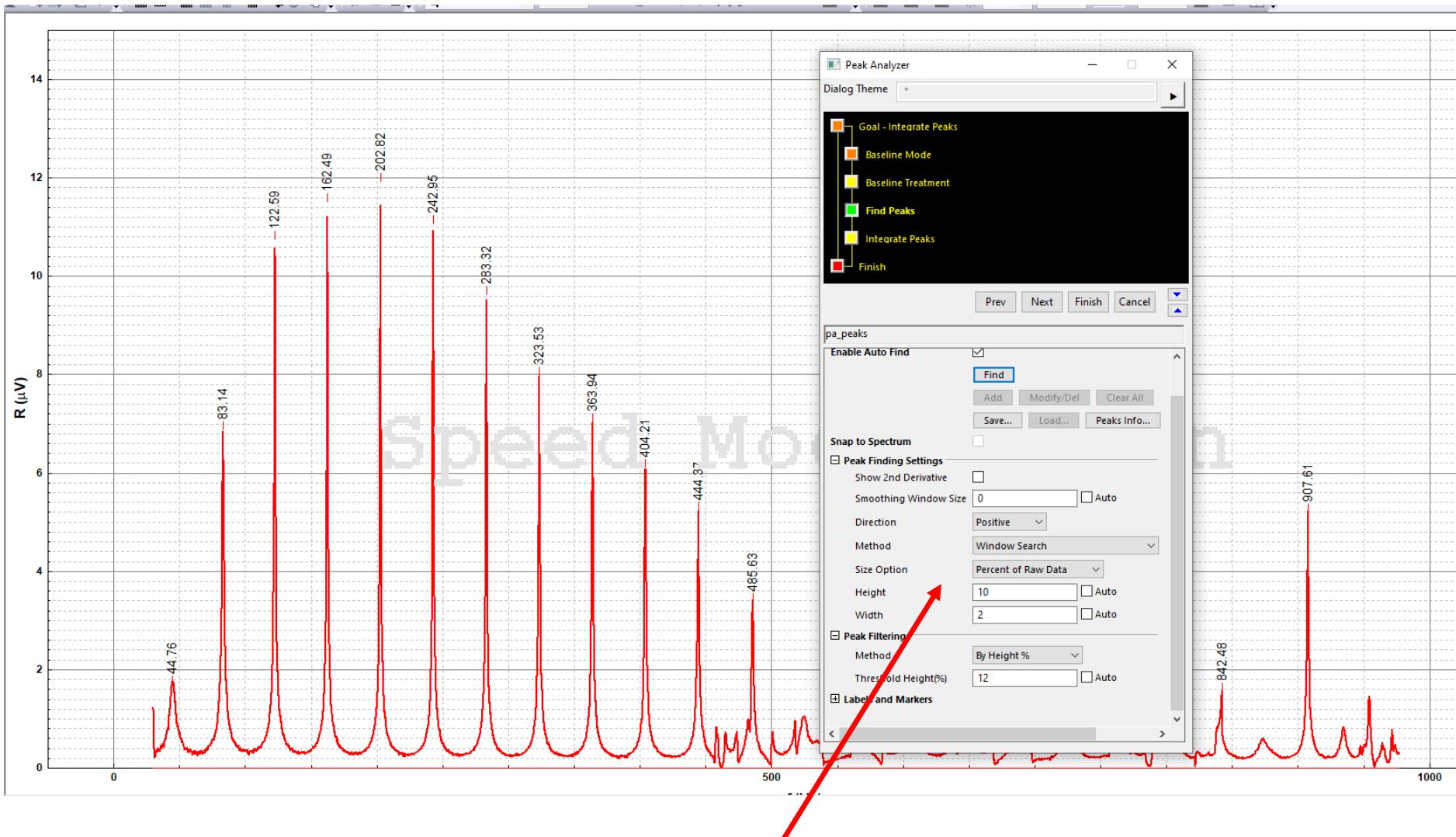
# Graphical presentation of data: Extra Layer





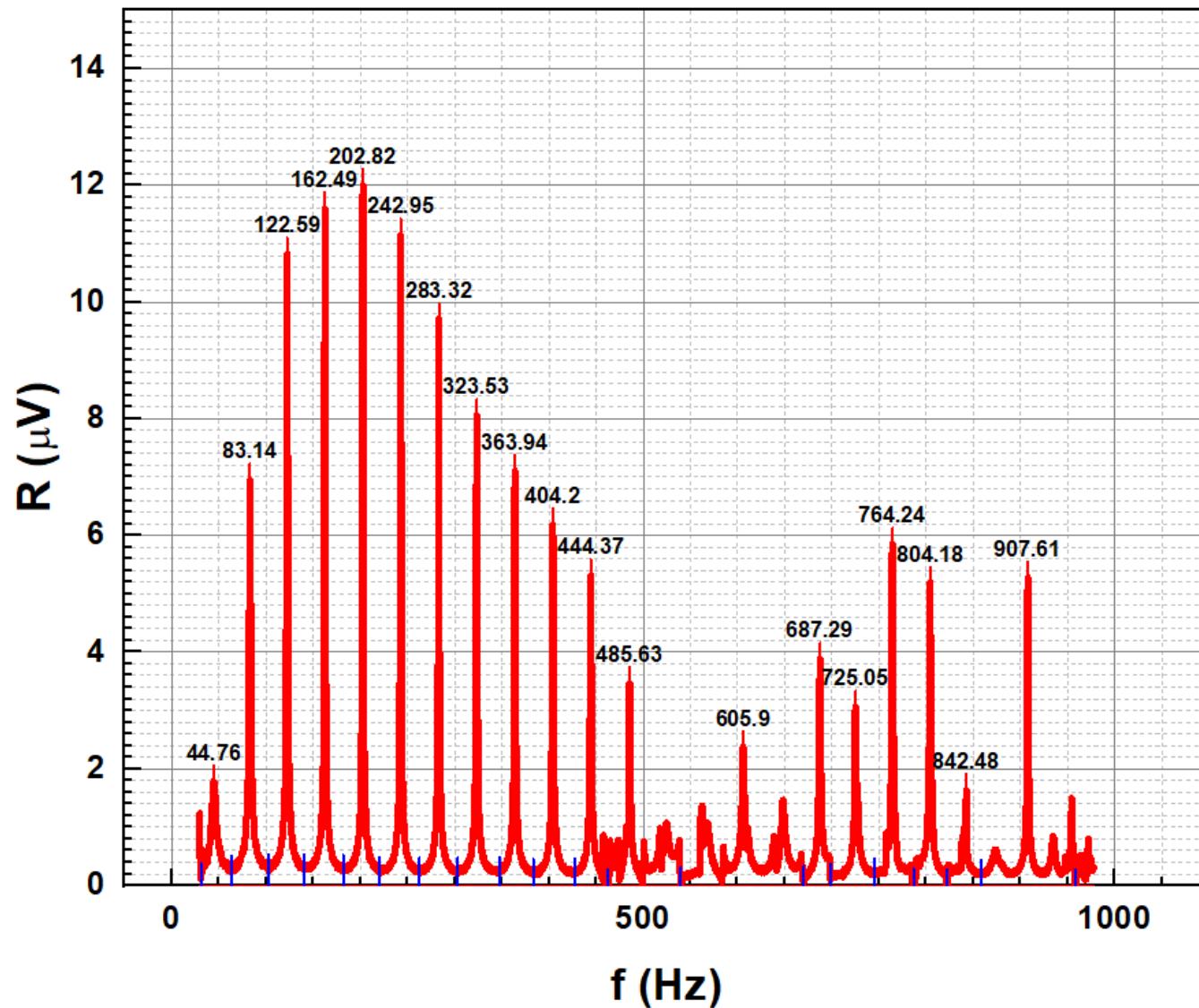
# peaks

# Graphical presentation of data: Finding peaks

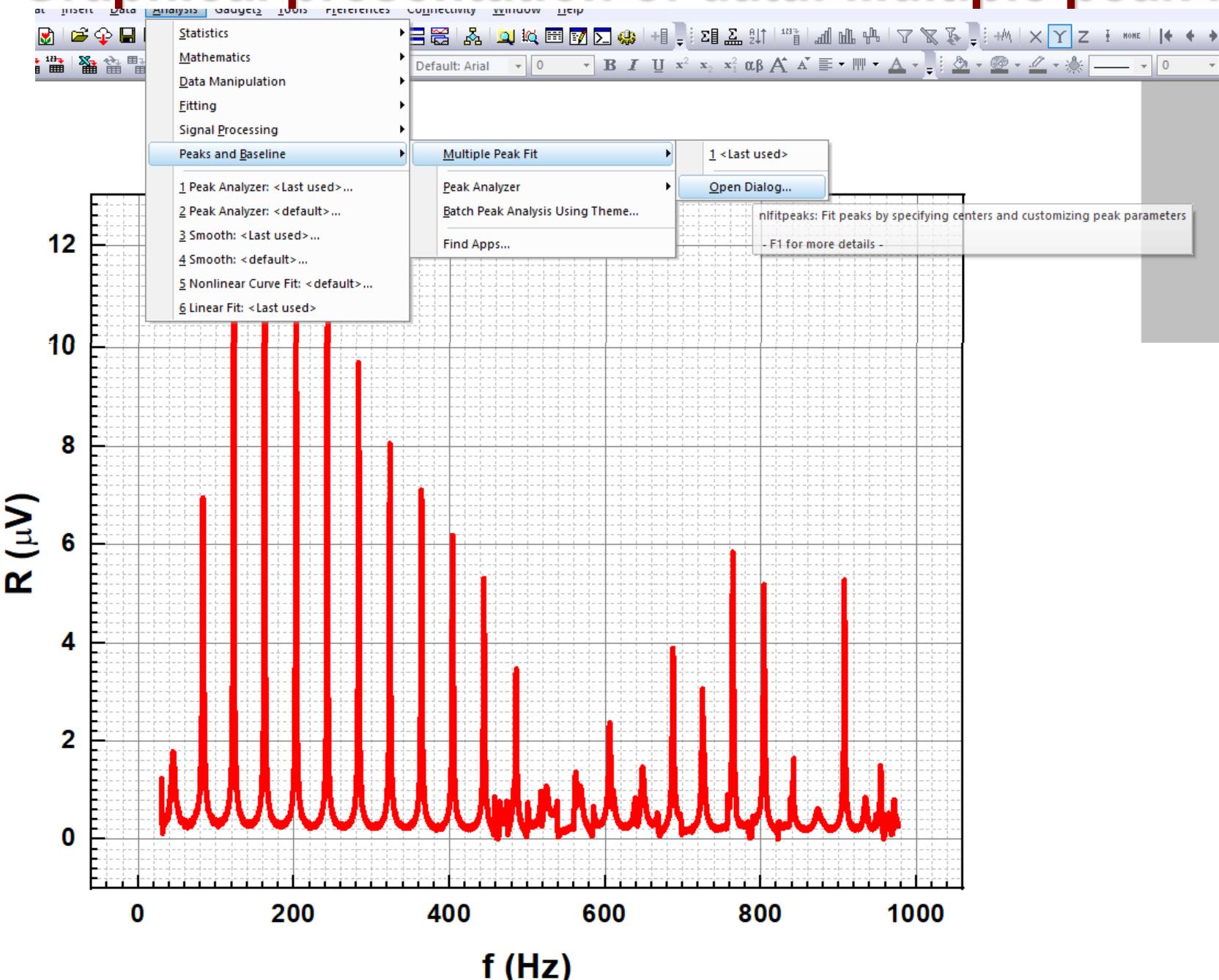


Choose the proper search parameters

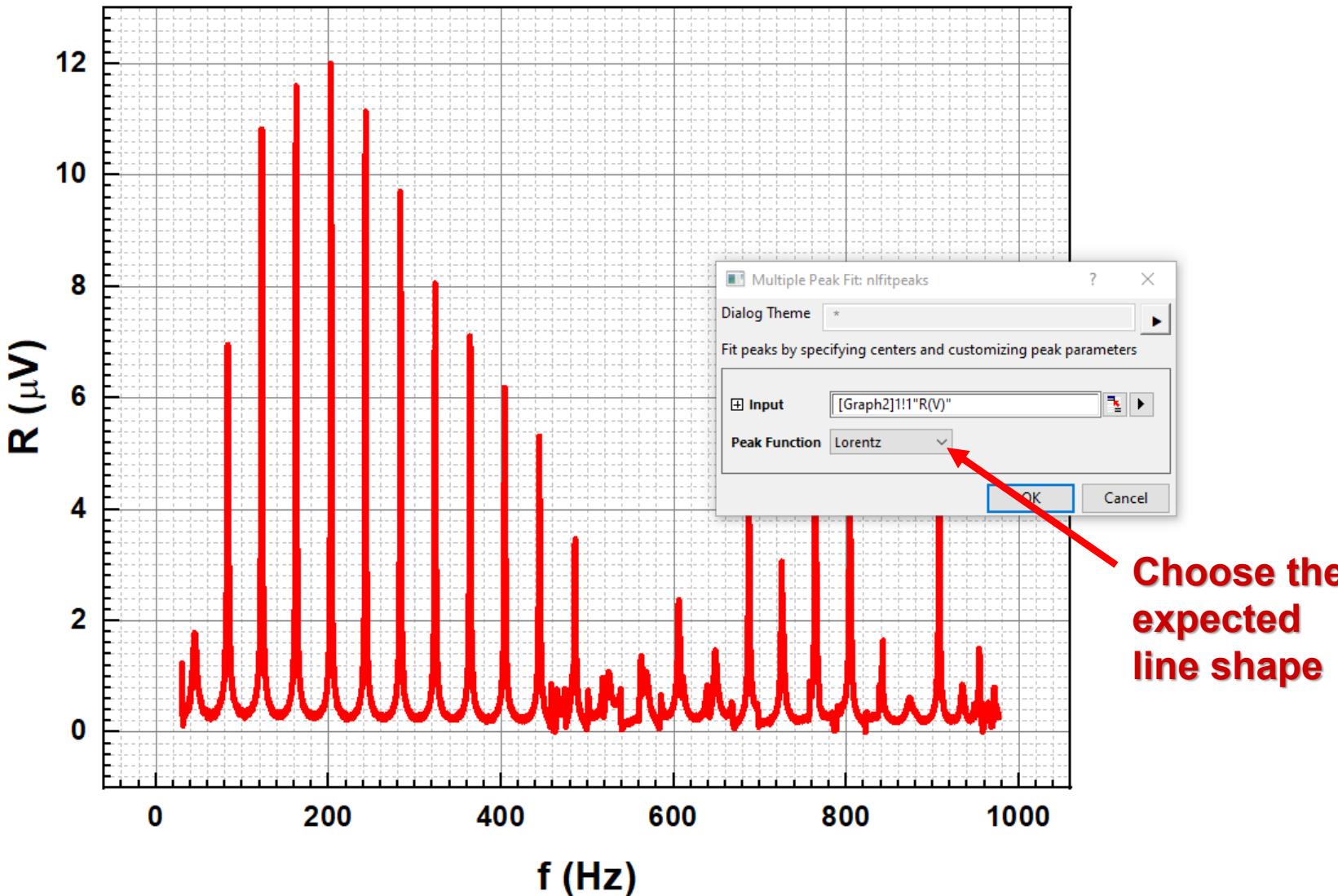
# Graphical presentation of data: Finding peaks



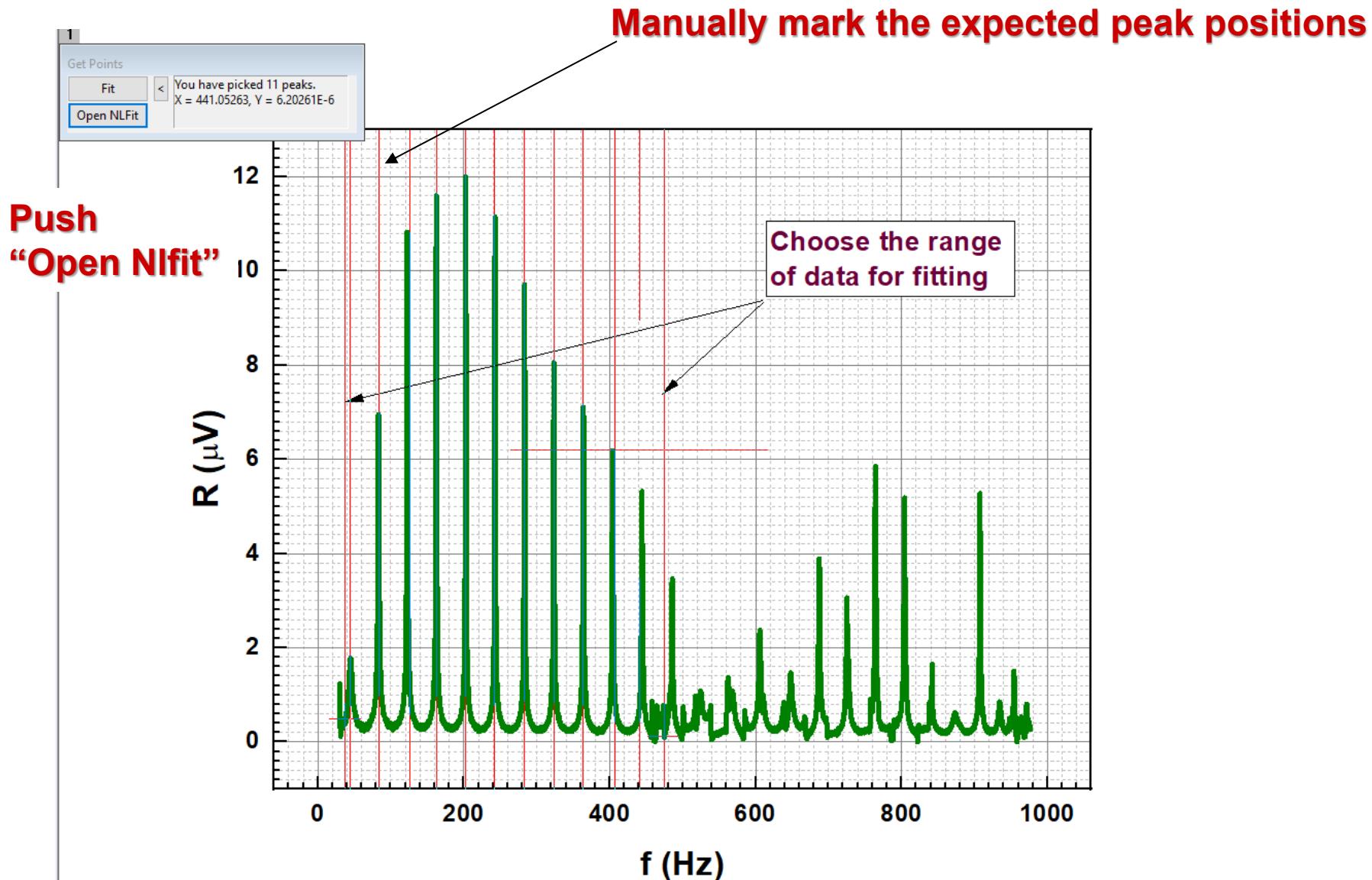
# Graphical presentation of data: Multiple peak Fit



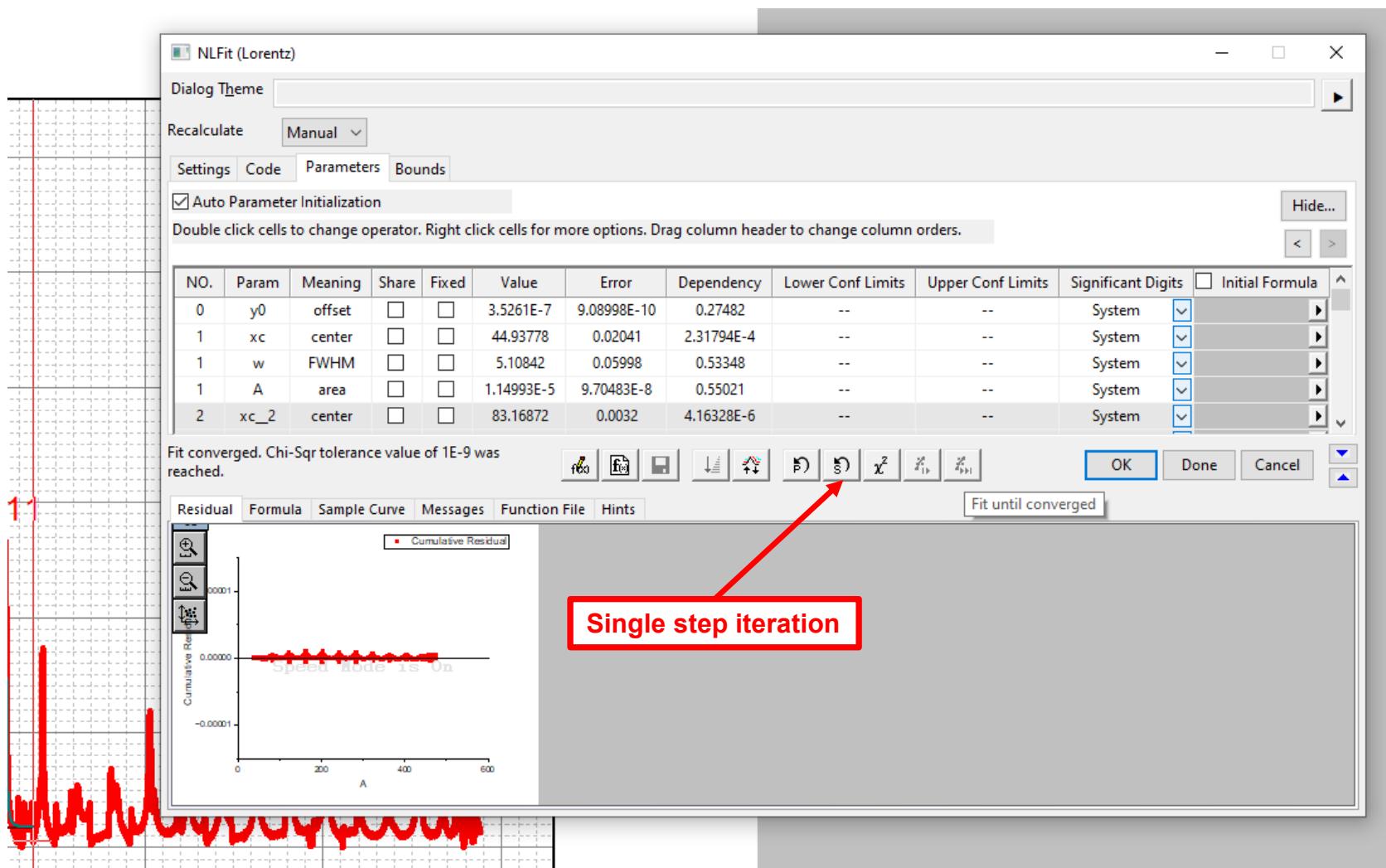
# Graphical presentation of data: Multiple peak Fit



# Graphical presentation of data: Multiple peak Fit

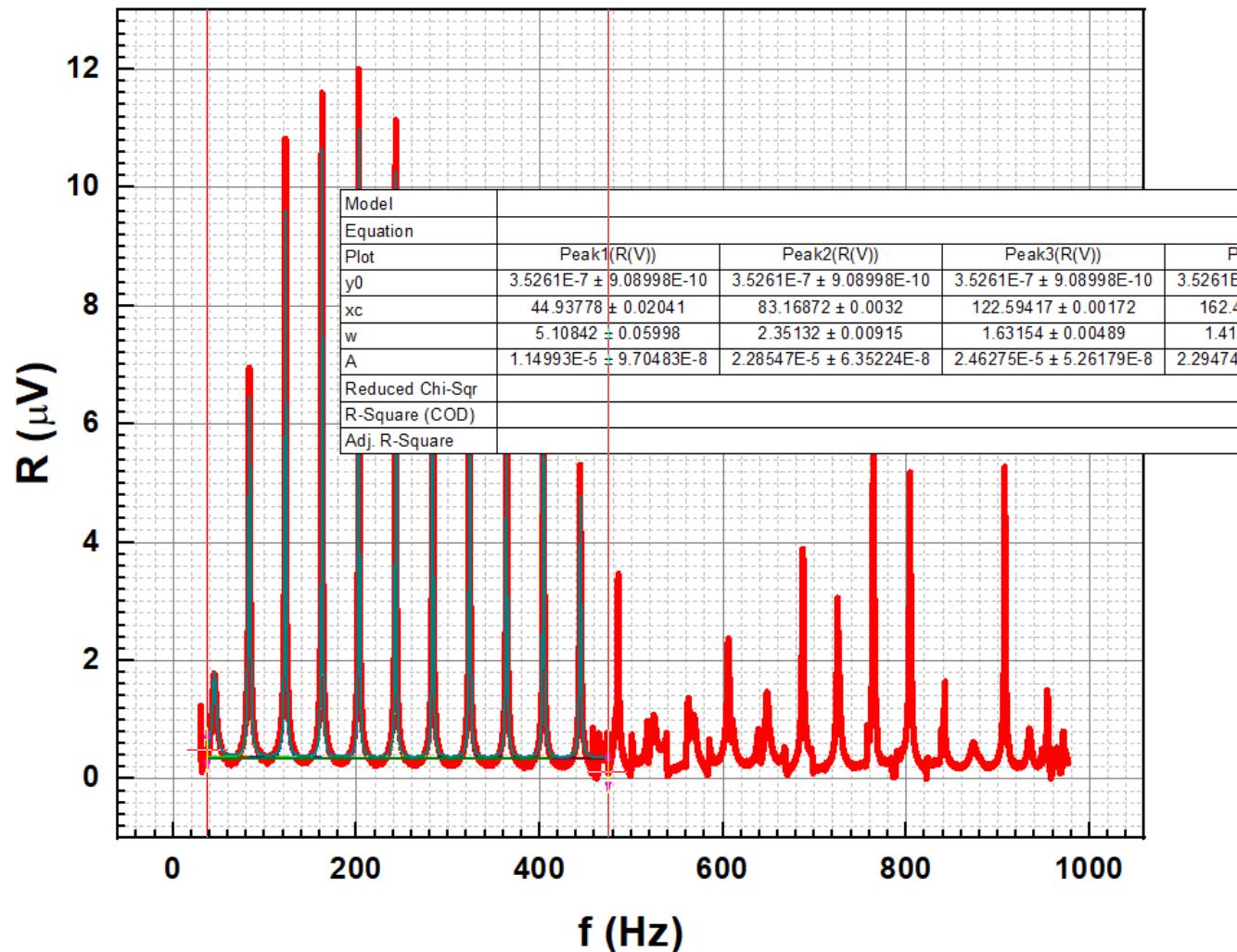


# Graphical presentation of data: Multiple peak Fit



Recommendation: start first with “**Single step iteration**” and next if fitting goes in proper direction push “**Fit until converged**”

# Graphical presentation of data: Multiple peak Fit



Finally, you will have the data plot with set of fitting lines plus the table with found parameters

# Graphical presentation of data: Multiple peak Fit

All fitting results could be found in added layer to data worksheet

100 : Fit converged. Chi-Sqr tolerance value of 1E-9 was reached.

**Summary**

|              | y0        |                | xc        |                | w       |                | A          |                | H          |                | Statistics      |               |
|--------------|-----------|----------------|-----------|----------------|---------|----------------|------------|----------------|------------|----------------|-----------------|---------------|
|              | Value     | Standard Error | Value     | Standard Error | Value   | Standard Error | Value      | Standard Error | Value      | Standard Error | Reduced Chi-Sqr | Adj. R-Square |
| Peak1(R(V))  | 3.5261E-7 | 9.08998E-10    | 44.93778  | 0.02041        | 5.10842 | 0.05998        | 1.14993E-5 | 9.70483E-8     | 1.43306E-6 | 1.15019E-8     | 2.62144E-14     | 0.98415       |
| Peak2(R(V))  | 3.5261E-7 | 9.08998E-10    | 83.16872  | 0.0032         | 2.35132 | 0.00915        | 2.28547E-5 | 6.35224E-8     | 6.18792E-6 | 1.68499E-8     |                 |               |
| Peak3(R(V))  | 3.5261E-7 | 9.08998E-10    | 122.59417 | 0.00172        | 1.63155 | 0.00489        | 2.46275E-5 | 5.2618E-8      | 9.60952E-6 | 2.02275E-8     |                 |               |
| Peak4(R(V))  | 3.5261E-7 | 9.08998E-10    | 162.49202 | 0.0015         | 1.41975 | 0.00426        | 2.29474E-5 | 4.90025E-8     | 1.02897E-5 | 2.16838E-8     |                 |               |
| Peak5(R(V))  | 3.5261E-7 | 9.08998E-10    | 202.81031 | 0.00139        | 1.30551 | 0.00395        | 2.17874E-5 | 4.69447E-8     | 1.06244E-5 | 2.26126E-8     |                 |               |
| Peak6(R(V))  | 3.5261E-7 | 9.08998E-10    | 242.93645 | 0.0015         | 1.32379 | 0.00428        | 2.05619E-5 | 4.72812E-8     | 9.88834E-6 | 2.24559E-8     |                 |               |
| Peak7(R(V))  | 3.5261E-7 | 9.08998E-10    | 283.3134  | 0.0018         | 1.42423 | 0.00513        | 1.91415E-5 | 4.90864E-8     | 8.55609E-6 | 2.16497E-8     |                 |               |
| Peak8(R(V))  | 3.5261E-7 | 9.08998E-10    | 323.52904 | 0.00231        | 1.60858 | 0.00659        | 1.79125E-5 | 5.22522E-8     | 7.08916E-6 | 2.03714E-8     |                 |               |
| Peak9(R(V))  | 3.5261E-7 | 9.08998E-10    | 363.9371  | 0.0027         | 1.70221 | 0.00769        | 1.67149E-5 | 5.37935E-8     | 6.25132E-6 | 1.98032E-8     |                 |               |
| Peak10(R(V)) | 3.5261E-7 | 9.08998E-10    | 404.21923 | 0.0032         | 1.8129  | 0.00913        | 1.54766E-5 | 5.5566E-8      | 5.43479E-6 | 1.91892E-8     |                 |               |
| Peak11(R(V)) | 3.5261E-7 | 9.08998E-10    | 444.35606 | 0.00381        | 1.89097 | 0.01086        | 1.38639E-5 | 5.67808E-8     | 4.66745E-6 | 1.8789E-8      |                 |               |

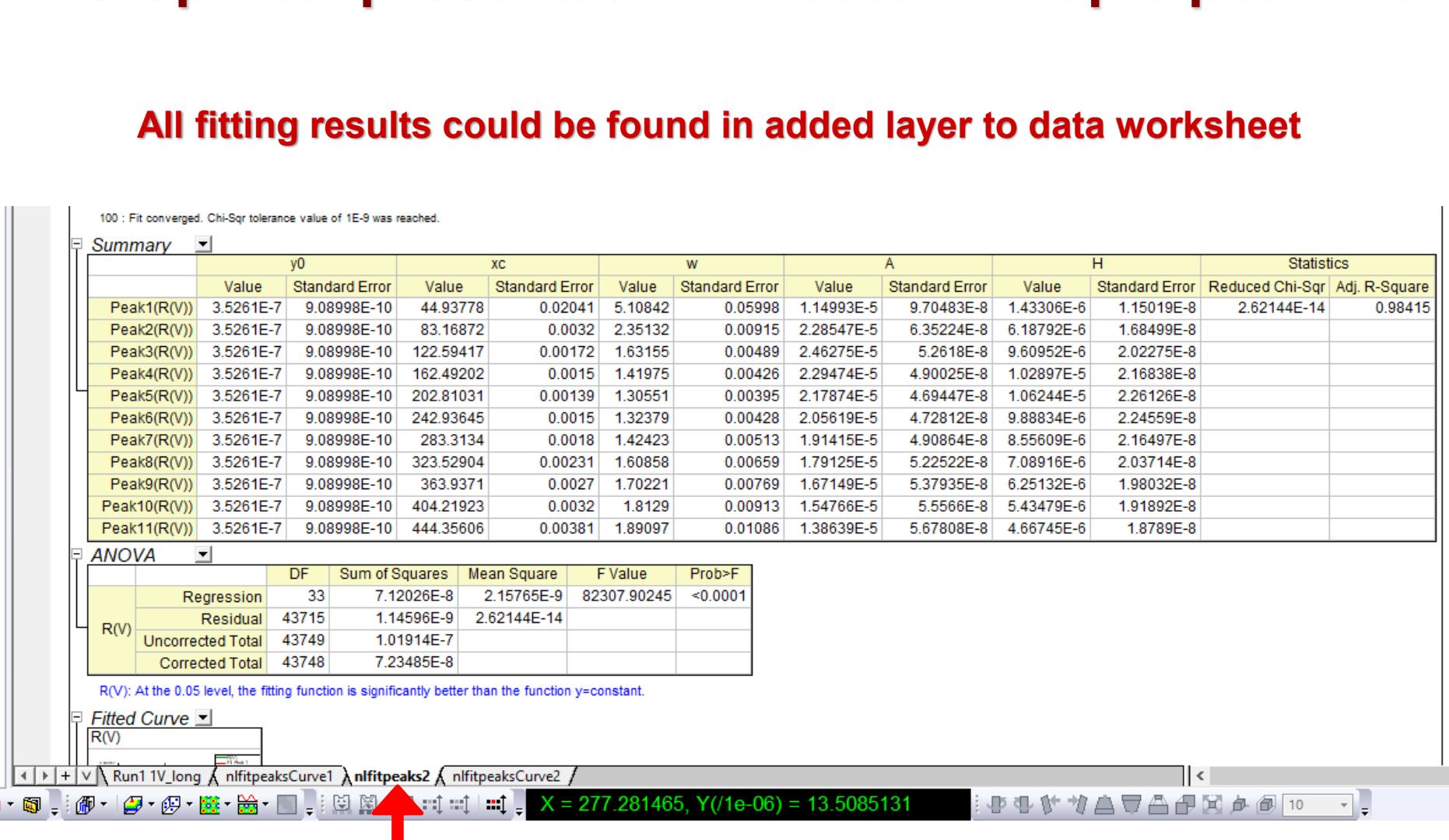
**ANOVA**

|      | DF                | Sum of Squares | Mean Square | F Value     | Prob>F              |
|------|-------------------|----------------|-------------|-------------|---------------------|
| R(V) | Regression        | 33             | 7.12026E-8  | 2.15765E-9  | 82307.90245 <0.0001 |
| R(V) | Residual          | 43715          | 1.14596E-9  | 2.62144E-14 |                     |
| R(V) | Uncorrected Total | 43749          | 1.01914E-7  |             |                     |
| R(V) | Corrected Total   | 43748          | 7.23485E-8  |             |                     |

R(V): At the 0.05 level, the fitting function is significantly better than the function y=constant.

**Fitted Curve**

R(V)



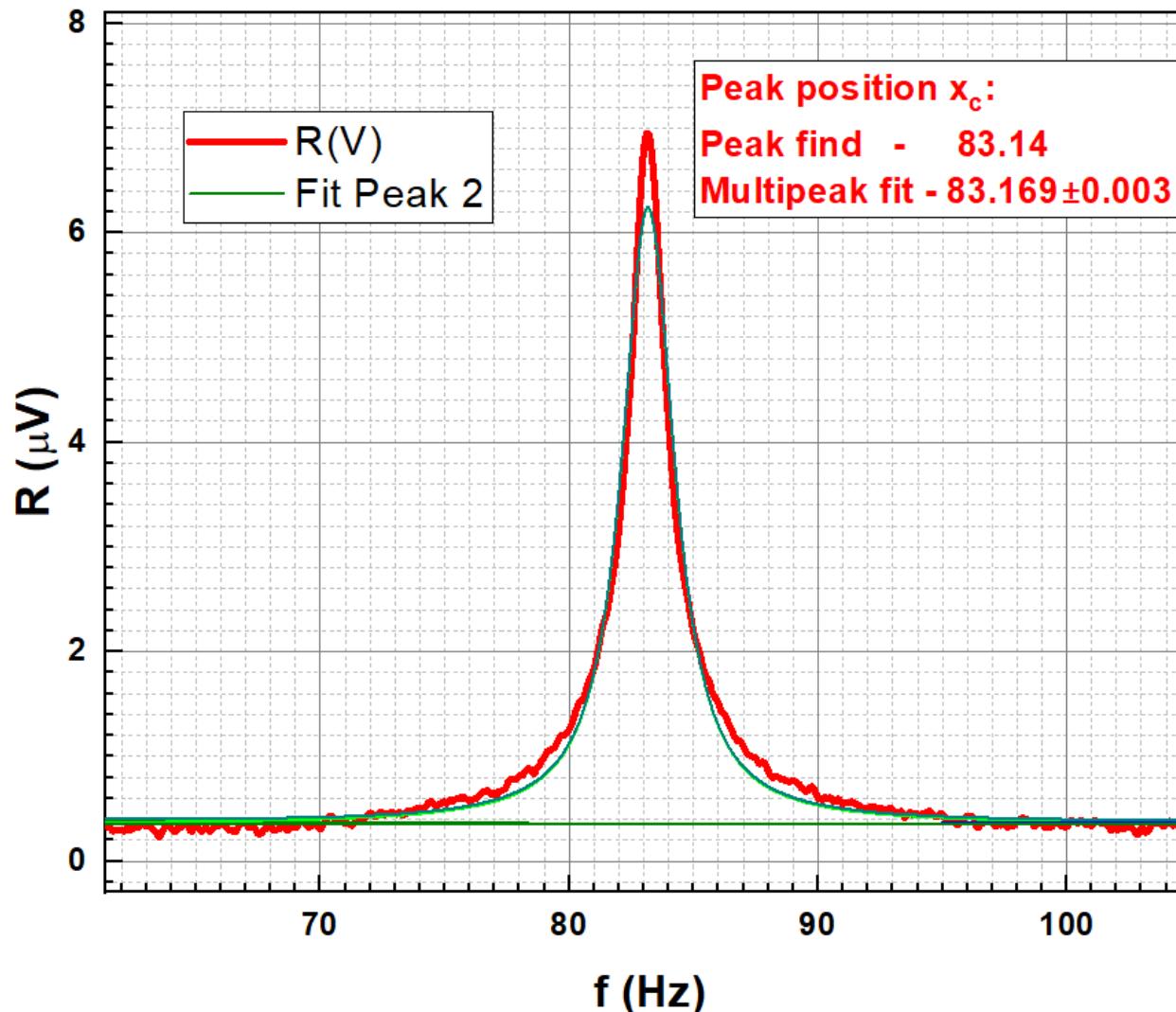
nlfitpeaks2

X = 277.281465, Y/(1e-06) = 13.5085131

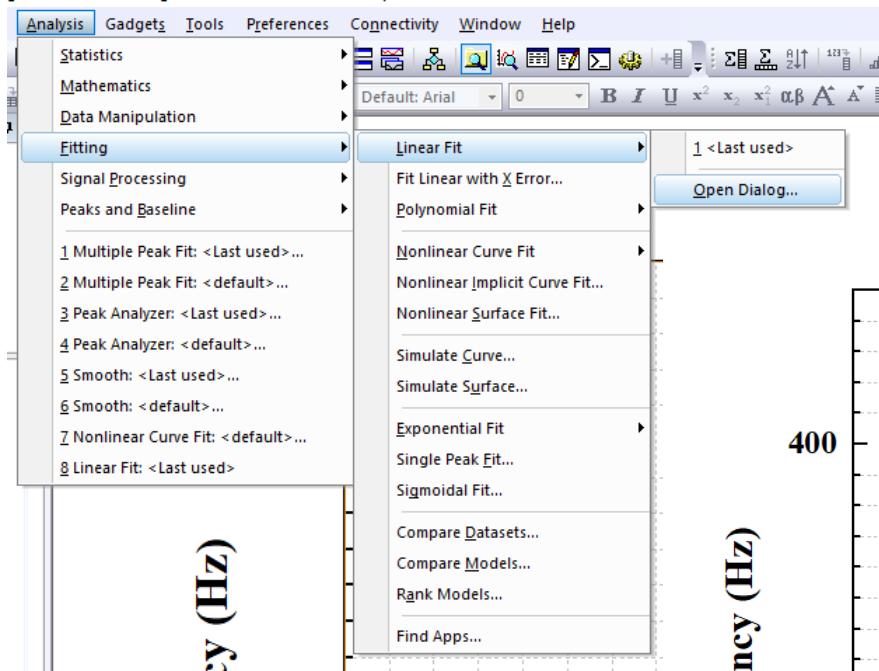
This layer contains all fitting results

# Graphical presentation of data: Multiple peak Fit

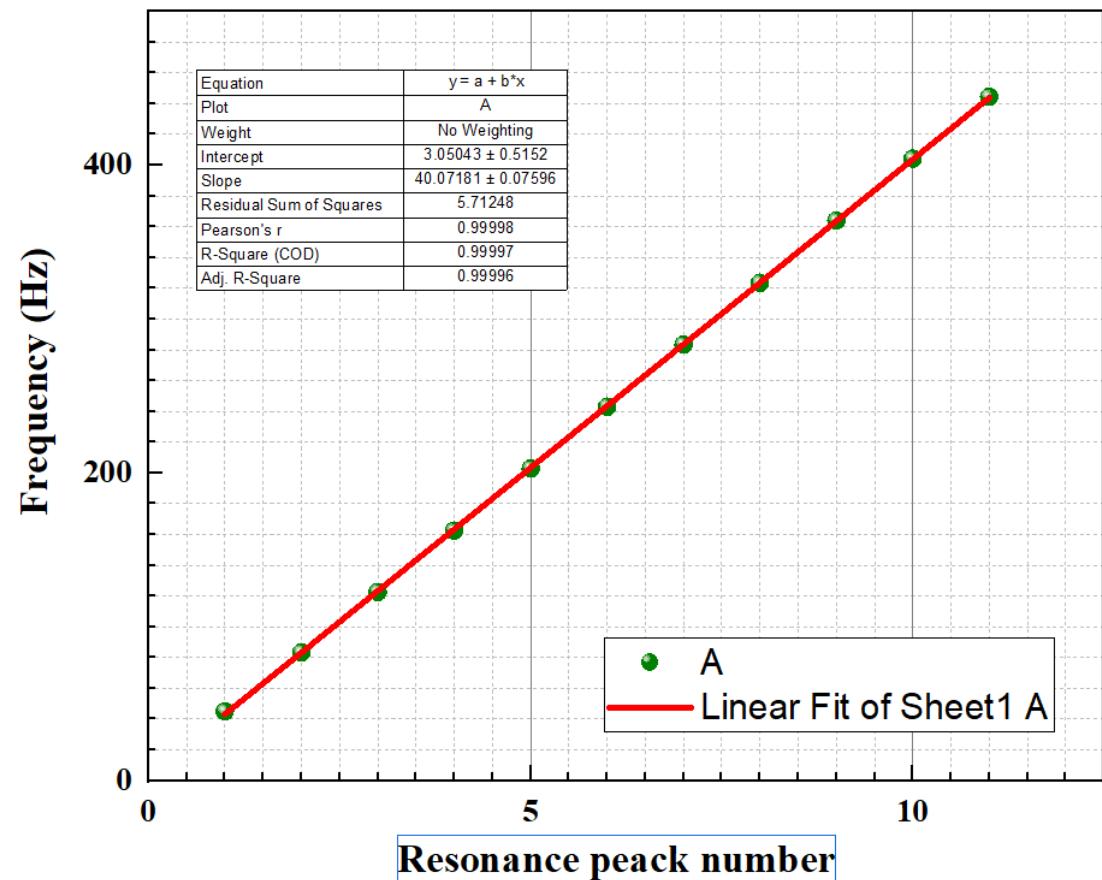
Comparing the results obtained by using  
“Peak find” and “Multipeak fit” procedures



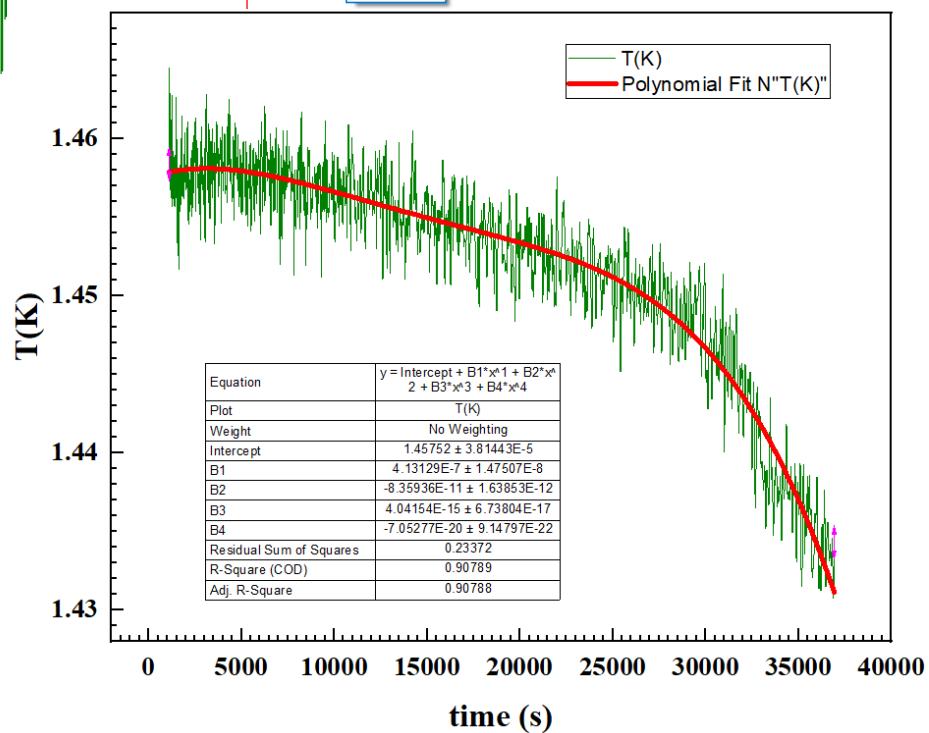
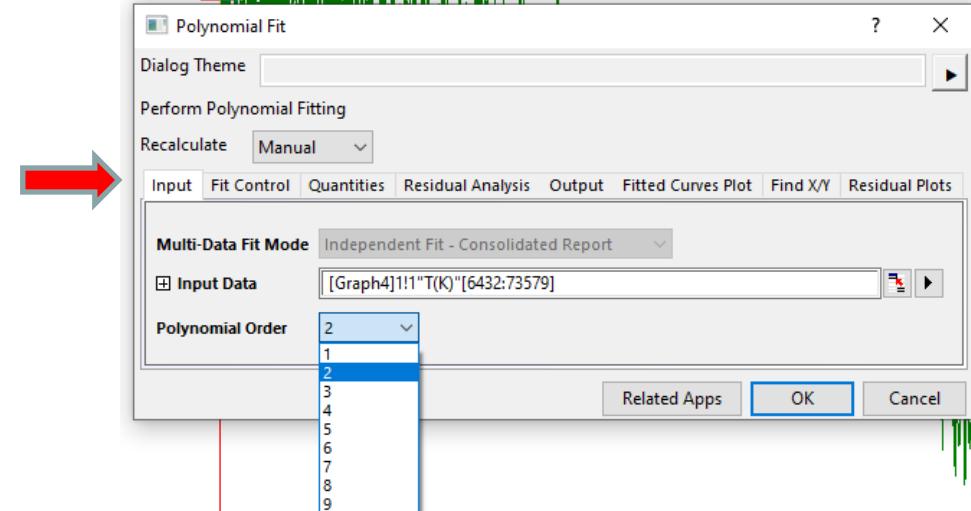
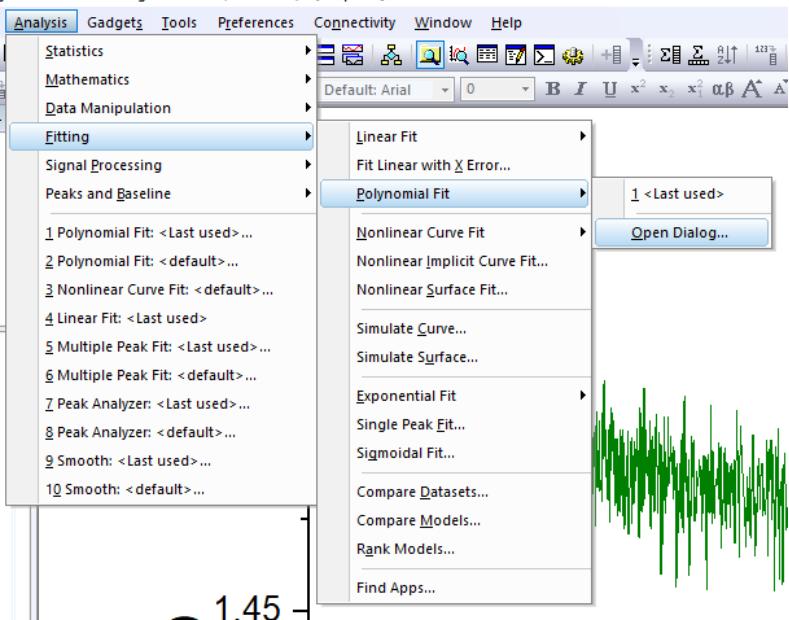
# Graphical presentation of data: Fit Linear



Example of linear fitting.  
Data from *Second sound*  
experiment



# Graphical presentation of data: Fit Polynomial



Graph showing the temperature variations during the taking data with results of polynomial fit

# Working with data: Worksheets. Statistics on Column

The screenshot shows a data analysis software interface with a table of data and various menu options.

**Table Data:**

|            | A(X1)    | B(Y1)   | C(Y1)   | D(Y1)   | E(Y1)   | F(Y1)   | G(Y1)  | H(Y1)   |
|------------|----------|---------|---------|---------|---------|---------|--------|---------|
| Long Name  | time (s) | Vdt     | T(K)    | P (mm)  | Tp (K)  | Uac (V) | f (Hz) | X (V)   |
| Units      |          |         |         |         |         |         |        |         |
| Comments   |          |         |         |         |         |         |        |         |
| F(x)=      |          |         |         |         |         |         |        |         |
| Sparklines |          |         |         |         |         |         |        |         |
| Method     |          |         |         |         |         |         |        |         |
| 1          | 0.07     | -1.6984 | 1       |         |         |         |        |         |
| 2          | 0.27     | -1.6995 | 1       |         |         |         |        |         |
| 3          | 0.41     | -1.6989 | 1       |         |         |         |        |         |
| 4          | 0.55     | -1.6989 | 1       |         |         |         |        |         |
| 5          | 0.69     | -1.6984 | 1       |         |         |         |        |         |
| 6          | 0.82     | -1.6989 | 1       |         |         |         |        |         |
| 7          | 0.96     | -1.6989 | 1       |         |         |         |        |         |
| 8          | 1.1      | -1.6989 | 1       |         |         |         |        |         |
| 9          | 1.24     | -1.6989 | 1       |         |         |         |        |         |
| 10         | 1.38     | -1.6984 | 1       |         |         |         |        |         |
| 11         | 1.52     | -1.6989 | 1       |         |         |         |        |         |
| 12         | 1.66     | -1.6984 | 1       |         |         |         |        |         |
| 13         | 1.79     | -1.6989 | 1       |         |         |         |        |         |
| 14         | 1.93     | -1.6989 | 1       |         |         |         |        |         |
| 15         | 2.07     | -1.6989 | 1       |         |         |         |        |         |
| 16         | 2.21     | -1.6989 | 1       |         |         |         |        |         |
| 17         | 2.34     | -1.6984 | 1       |         |         |         |        |         |
| 18         | 2.48     | -1.6984 | 1       |         |         |         |        |         |
| 19         | 2.62     | -1.6989 | 1       |         |         |         |        |         |
| 20         | 2.76     | -1.6989 | 1       |         |         |         |        |         |
| 21         | 2.9      | -1.6989 | 1       |         |         |         |        |         |
| 22         | 3.04     | -1.6989 | 1       |         |         |         |        |         |
| 23         | 3.18     | -1.6989 | 1       |         |         |         |        |         |
| 24         | 3.32     | -1.6989 | 1       |         |         |         |        |         |
| 25         | 3.46     | -1.6984 | 1       |         |         |         |        |         |
| 26         | 3.59     | -1.6989 | 1       |         |         |         |        |         |
| 27         | 3.73     | -1.6989 | 1       |         |         |         |        |         |
| 28         | 3.87     | -1.6984 | 1       |         |         |         |        |         |
| 29         | 4.01     | -1.6984 | 1       |         |         |         |        |         |
| 30         | 4.15     | -1.6984 | 1       |         |         |         |        |         |
| 31         | 4.28     | -1.6984 | 1       |         |         |         |        |         |
| 32         | 4.43     | -1.6984 | 1.58361 | 2.44746 | 1.42726 | 1       | 30.32  | 3.16651 |
| 33         | 4.57     | 1.60000 | 1.55245 | 2.20104 | 1.11104 | 1       | 30.22  | 2.20277 |

**Context Menu (T(K)):**

- Plot
- Cut (Ctrl+X)
- Copy (Ctrl+C)
- Copy Columns to...
- Paste (Ctrl+V)
- Insert
- Delete
- Clear
- Delete

**Statistics on Columns (1/25/2023 14:52:11) Dialog:**

|      | N total | Mean    | Standard Deviation | Sum          | Minimum | Median  | Maximum |
|------|---------|---------|--------------------|--------------|---------|---------|---------|
| T(K) | 94340   | 1.45169 | 0.02566            | 136952.32874 | 1.41557 | 1.45404 | 1.58361 |

**Ribbon Menu:**

- Statistics on Column
- Hide/Unhide Columns
- Move Columns
- Format Cells...
- Conditional Formatting
- Properties...

**Upward Arrow:** A large blue arrow pointing upwards from the ribbon menu area towards the statistics dialog.

The results could find here

FitPolynomial3 DescStatsOnCols1

10

# Working with data: Worksheets. “Set Column Values”

The screenshot shows the LabVIEW software interface with two windows open. The left window is titled "SecondSound2 - SecondSound\_T2\_16K VERY\_BIG" and displays a worksheet with columns A(X), B(Y), C(Y), D(Y), E(Y), F(Y), G(Y), H(Y), and I(Y). The B(Y) column is currently selected. A context menu is open over the B(Y) column, with the "Set Column Values..." option highlighted. The right window is also titled "SecondSound2 - SecondSound\_T2\_16K VERY\_BIG" and shows a larger worksheet with more columns: A(X), B(Y), C(Y), D(Y), E(Y), F(Y), G(Y), H(Y), I(Y), and R(V). The B(Y) column in this window also has a context menu open, with the "Set Column Values..." option also highlighted. A large blue curved arrow points from the "Set Column Values..." option in the left window's menu to the "Set Column Values..." option in the right window's menu, indicating a recursive or similar function.

SecondSound2 - SecondSound\_T2\_16K VERY\_BIG

|            | A(X)     | B(Y)  | C(Y) | D(Y) | E(Y) | F(Y)   | G(Y)  | H(Y) | I(Y) |
|------------|----------|-------|------|------|------|--------|-------|------|------|
| Long Name  | time (s) | T(K)  |      |      |      | f (Hz) | X (V) | Y(V) | R(V) |
| Units      |          |       |      |      |      |        |       |      |      |
| Comments   |          |       |      |      |      |        |       |      |      |
| F(x)=      |          |       |      |      |      |        |       |      |      |
| Sparklines |          |       |      |      |      |        |       |      |      |
| 1          | 5.35899  | 1.571 |      |      |      |        |       |      |      |
| 2          | 5.84299  | 1.571 |      |      |      |        |       |      |      |
| 3          | 6.281    | 1.571 |      |      |      |        |       |      |      |
| 4          | 6.71799  | 1.571 |      |      |      |        |       |      |      |
| 5          | 7.172    | 1.571 |      |      |      |        |       |      |      |
| 6          | 7.60899  | 1.571 |      |      |      |        |       |      |      |
| 7          | 8.437    | 1.571 |      |      |      |        |       |      |      |
| 8          | 8.906    | 1.571 |      |      |      |        |       |      |      |
| 9          | 9.39     | 1.571 |      |      |      |        |       |      |      |
| 10         | 9.85899  | 1.571 |      |      |      |        |       |      |      |
| 11         | 10.297   | 1.571 |      |      |      |        |       |      |      |
| 12         | 10.71799 | 1.571 |      |      |      |        |       |      |      |
| 13         | 11.156   | 1.571 |      |      |      |        |       |      |      |
| 14         | 11.59299 | 1.571 |      |      |      |        |       |      |      |
| 15         | 12.031   |       |      |      |      |        |       |      |      |
| 16         | 12.46799 |       |      |      |      |        |       |      |      |
| 17         | 12.89    |       |      |      |      |        |       |      |      |
| 18         | 13.312   |       |      |      |      |        |       |      |      |
| 19         | 13.73399 |       |      |      |      |        |       |      |      |

SecondSound2 - SecondSound\_T2\_16K VERY\_BIG

|            | A(X)     | B(Y)       | C(Y)     | D(Y)    | E(Y)    | F(Y)   | G(Y)  | H(Y)       | I(Y)        | R(V)  |
|------------|----------|------------|----------|---------|---------|--------|-------|------------|-------------|-------|
| Long Name  | time (s) | T(K)       | P (mm)   | Tp (K)  | Uac (V) | f (Hz) | X (V) | Y(V)       | R(V)        |       |
| Units      |          |            |          |         |         |        |       |            |             |       |
| Comments   |          |            |          |         |         |        |       |            |             |       |
| F(x)=      |          |            |          |         |         |        |       |            |             |       |
| Sparklines |          |            |          |         |         |        |       |            |             |       |
| 1          | 5.35899  | -271.42831 | 12.9419  | 1.8147  |         | 5      | 20    | 5.48318E-8 | -2.53787E-8 | 6.042 |
| 2          | 5.84299  | -271.42862 | 12.6291  | 1.80774 |         | 5      | 20.1  | 5.49483E-8 | -2.52622E-8 | 6.047 |
| 3          | 6.281    | -271.42847 | 13.82822 | 1.83378 |         | 5      | 20.2  | 5.55303E-8 | -2.44473E-8 | 6.067 |
| 4          | 6.71799  | -271.42816 | 15.1315  | 1.86029 |         | 5      | 20.3  | 5.49483E-8 | -2.32832E-8 | 5.967 |
| 5          | 7.172    | -271.42831 | 13.0983  | 1.81814 |         | 5      | 20.4  | 5.39005E-8 | -2.20026E-8 | 5.821 |
| 6          | 7.60899  | -271.42831 | 14.6623  | 1.85095 |         | 5      | 20.5  | 5.42498E-8 | -2.00235E-8 | 5.782 |
| 7          | 8.437    | -271.42831 | 15.1315  | 1.86029 |         | 5      | 20.6  | 5.57632E-8 | -1.89758E-8 | 5.890 |
| 8          | 8.906    | -271.42847 | 12.42062 | 1.80303 |         | 5      | 20.7  | 5.77422E-8 | -1.76952E-8 | 6.039 |
| 9          | 9.39     | -271.42862 | 13.82822 | 1.83378 |         | 5      | 20.8  | 6.00708E-8 | -1.64147E-8 | 6.227 |
| 10         | 9.85899  | -271.42831 | 16.33062 | 1.88327 |         | 5      | 20.9  | 6.27483E-8 | -1.50177E-8 | 6.452 |
| 11         | 10.297   | -271.42831 | 16.5391  | 1.88714 |         | 5      | 21    | 6.53095E-8 | -1.32714E-8 | 6.664 |
| 12         | 10.71799 | -271.42816 | 14.87078 | 1.85513 |         | 5      | 21.1  | 6.76378E-8 | -1.09431E-8 | 6.851 |
| 13         | 11.156   | -271.42831 | 11.89918 | 1.791   |         | 5      | 21.2  | 7.01989E-8 | -8.84762E-9 | 7.075 |
| 14         | 11.59299 | -271.42831 | 13.4111  | 1.82492 |         | 5      | 21.3  | 7.24108E-8 | -8.03271E-9 | 7.28  |
| 15         | 12.031   | -271.42831 | 15.80918 | 1.87343 |         | 5      | 21.4  | 7.39242E-8 | -8.38196E-9 | 7.439 |
| 16         | 12.46799 | -271.42831 | 16.12198 | 1.87936 |         | 5      | 21.5  | 7.45063E-8 | -9.31328E-9 | 7.508 |
| 17         | 12.89    | -271.42847 | 14.6623  | 1.85095 |         | 5      | 21.6  | 7.4157E-8  | -1.04774E-8 | 7.489 |
| 18         | 13.312   | -271.42847 | 14.3495  | 1.8446  |         | 5      | 21.7  | 7.36914E-8 | -1.14088E-8 | 7.456 |
| 19         | 13.73399 | -271.42831 | 13.4111  | 1.82492 |         | 5      | 21.8  | 7.32257E-8 | -1.22223E-8 | 7.42  |

Set Values - [SecondSound2]"SecondSound\_T2\_16K VE..."

Formula wcol(1) Col(A) Function Variables Options

Row (i): From <auto> To <auto>

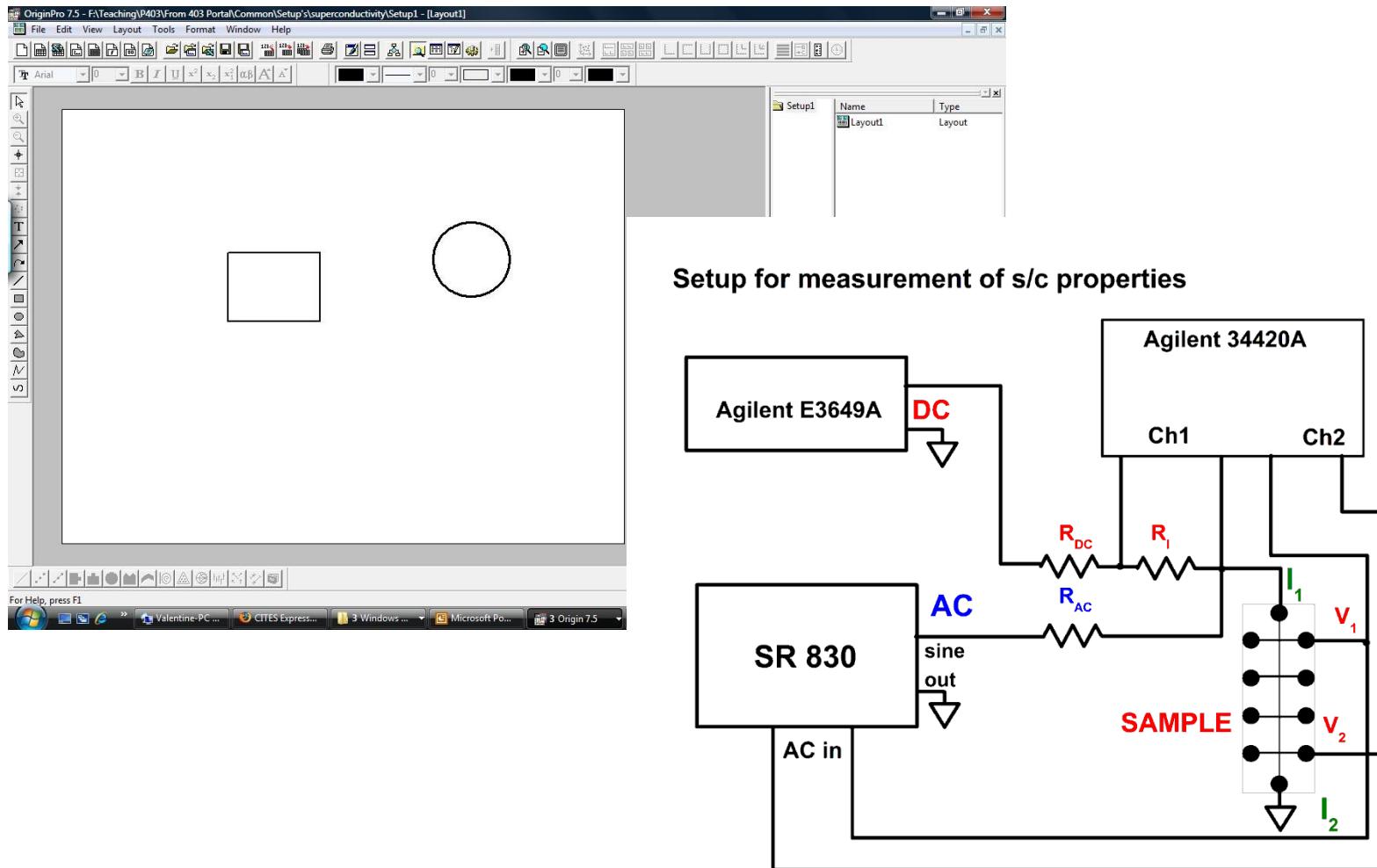
Col(B) = col(B) -273

Recalculate Auto OK Cancel Apply

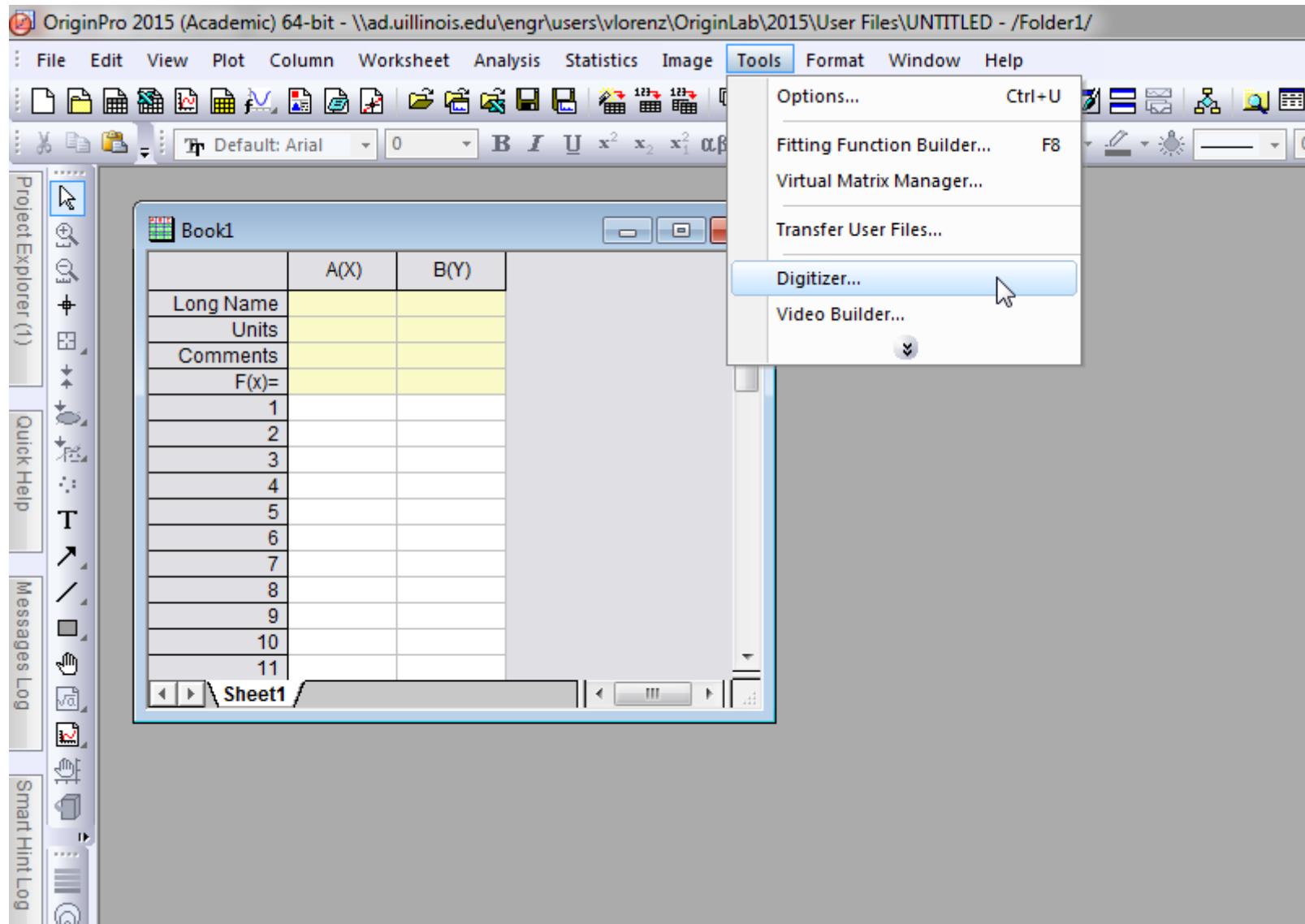
Before Formula Scripts

Enter LabTalk script to define variables or execute calculation before formula.

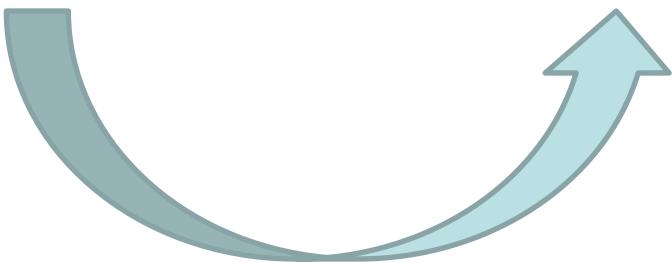
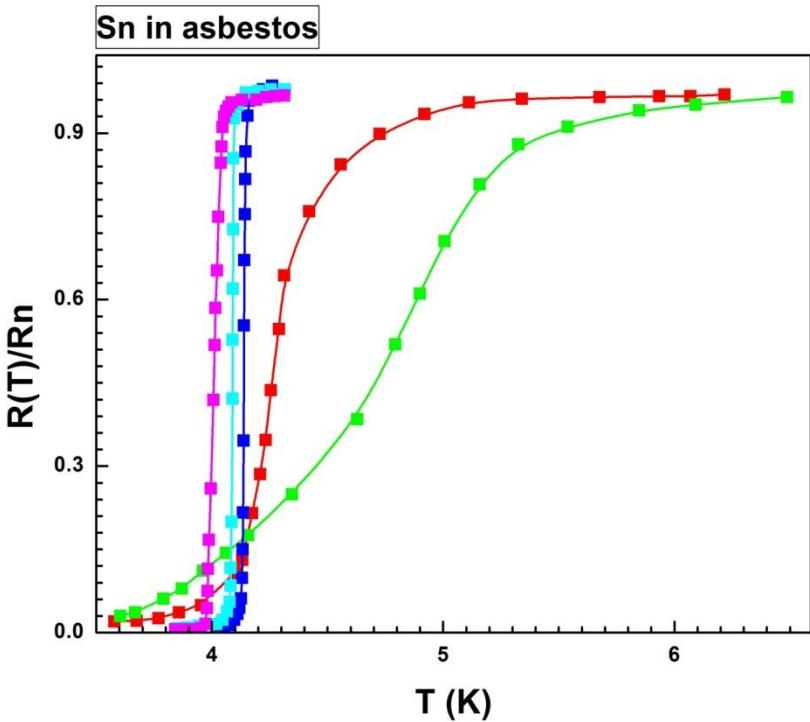
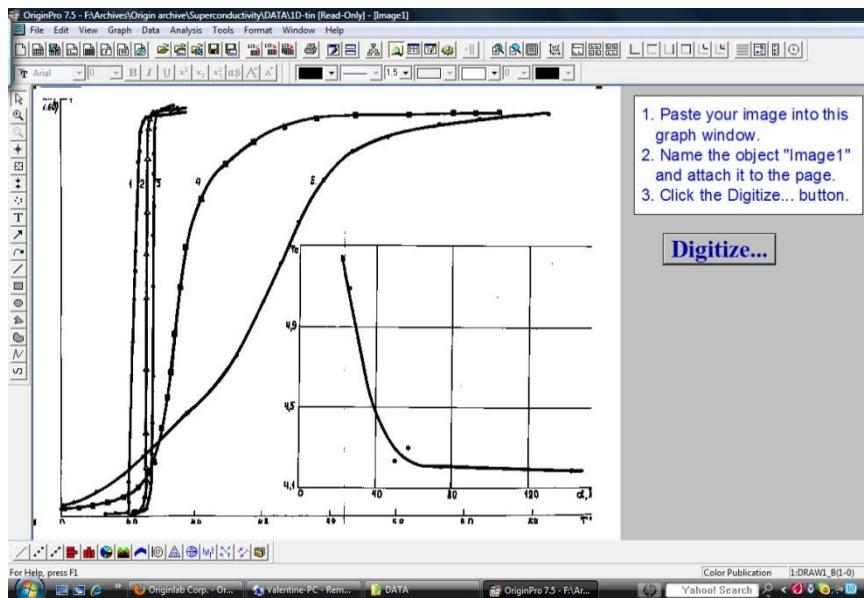
# Layouts



# Custom tools



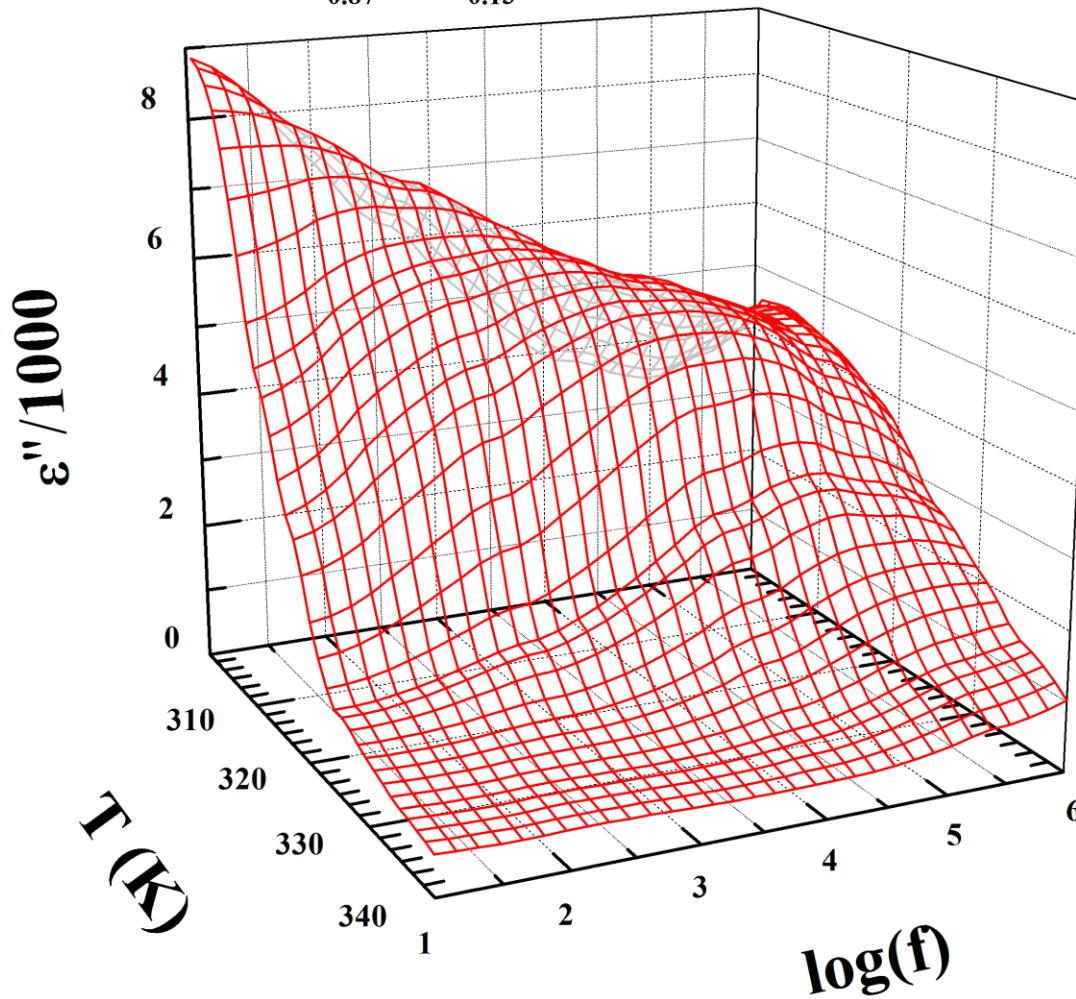
# Using digitizer script



# Example Origin graphs

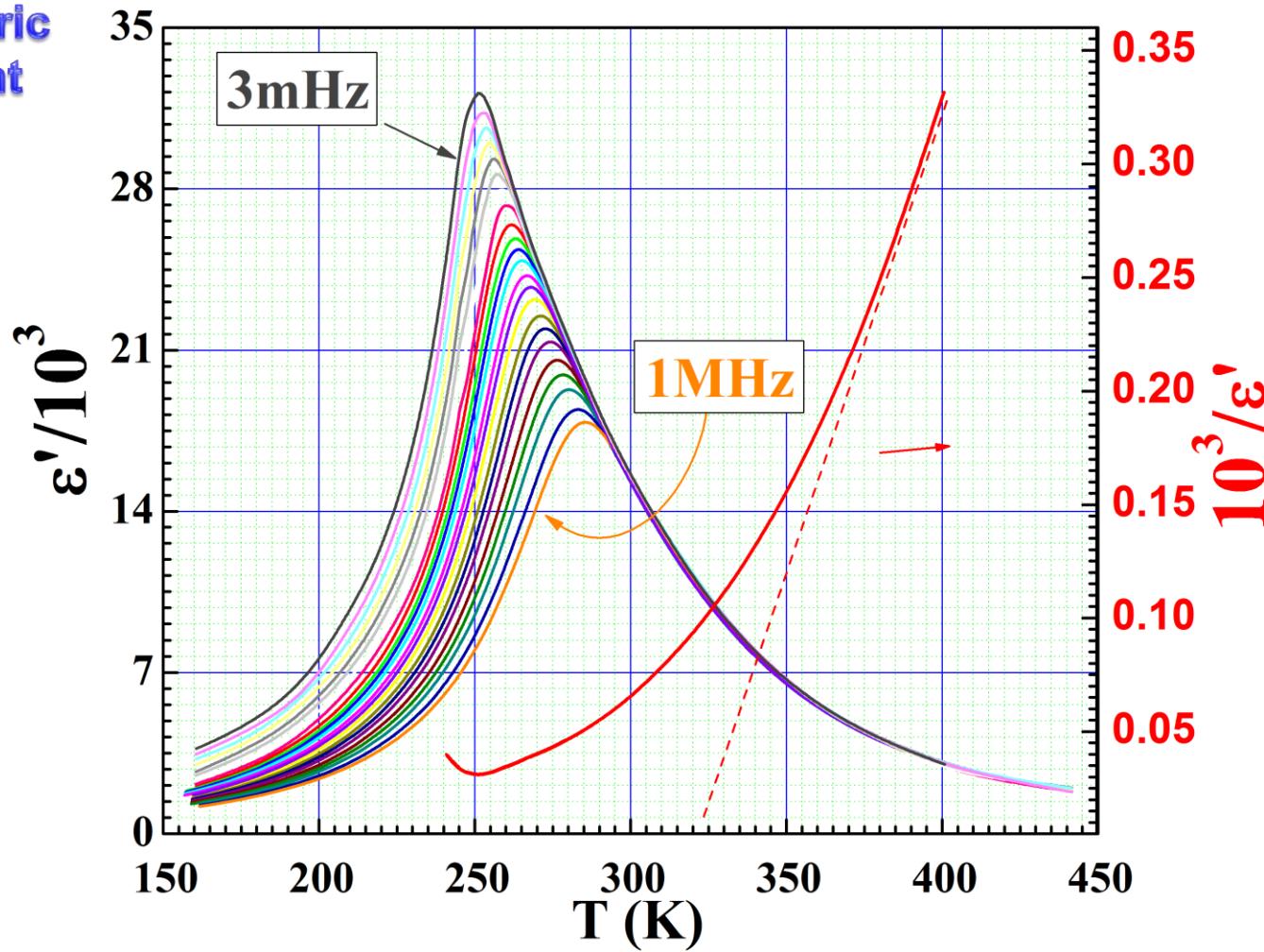
$(\text{PMN})_{0.87}(\text{PT})_{0.13}$ , single crystal

Ferroelectric  
Experiment



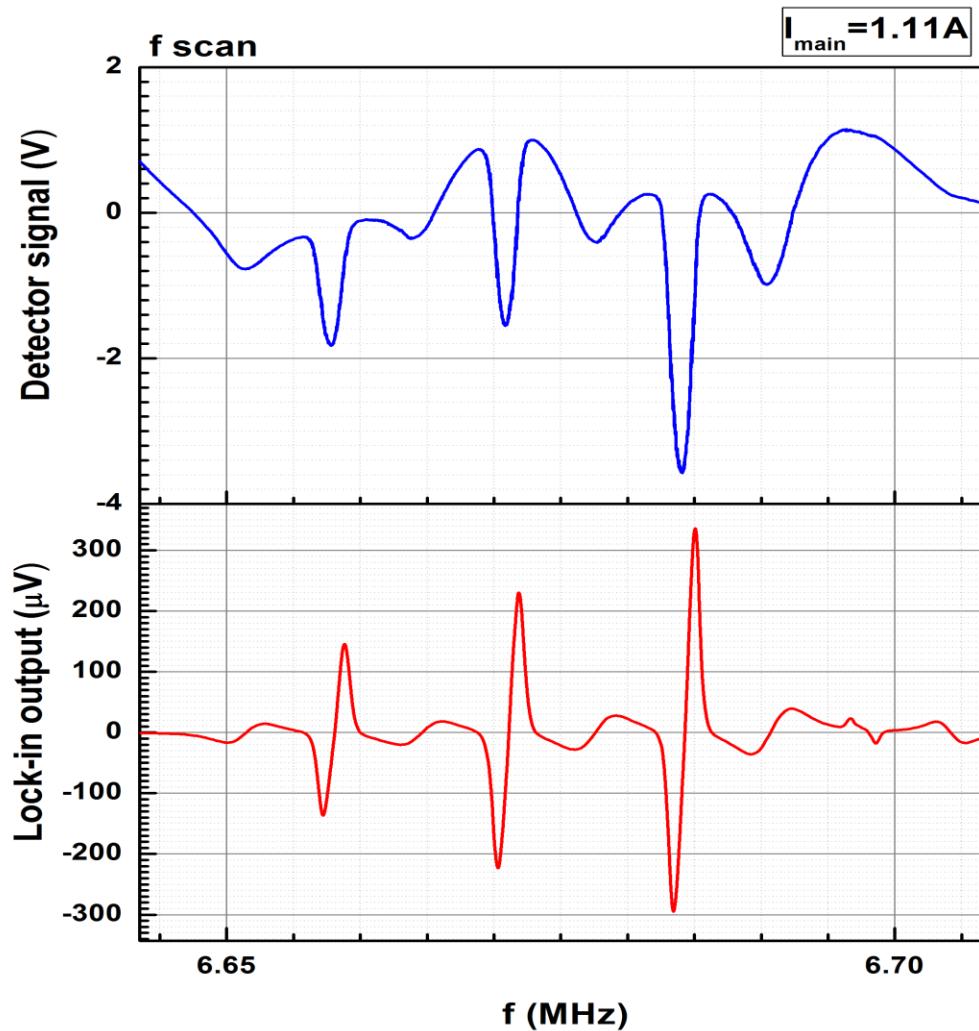
# Example Origin graphs

Ferroelectric  
Experiment



# Example Origin graphs

Optical pumping

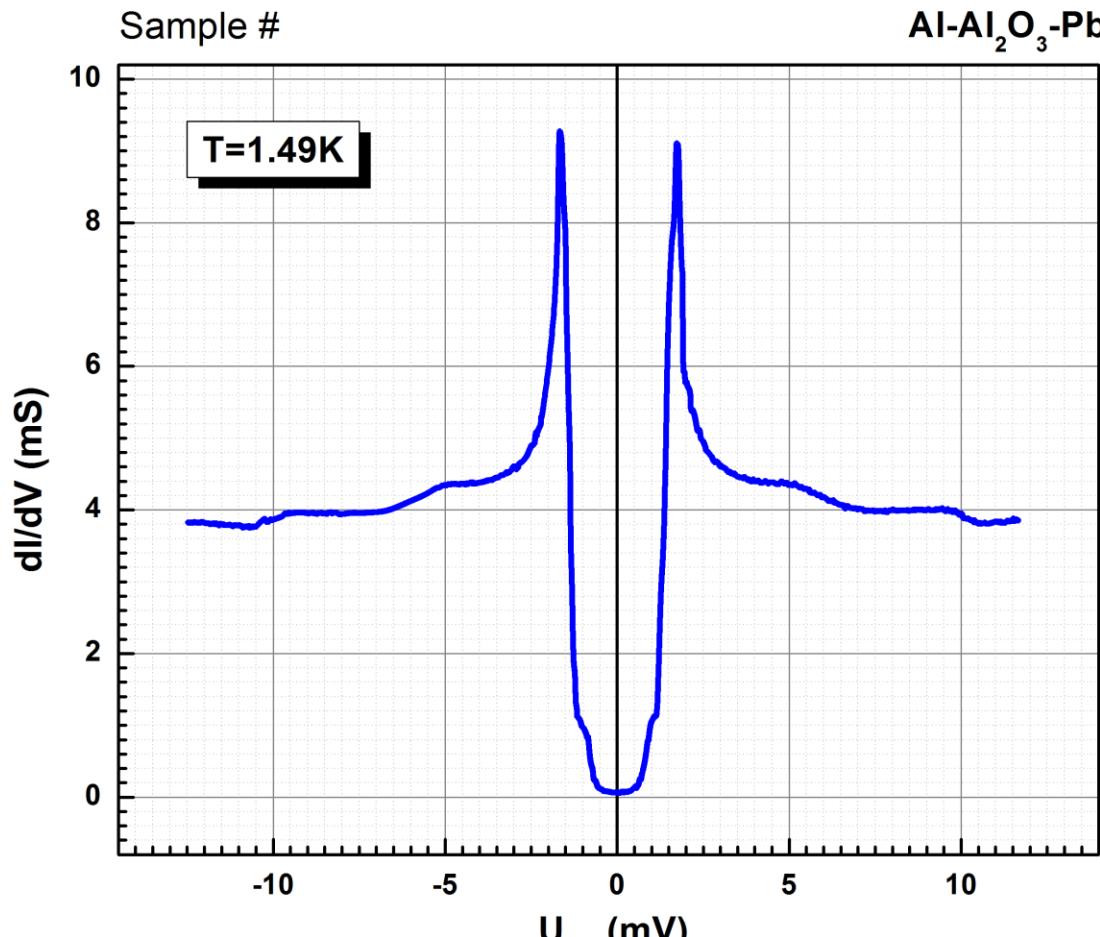


Mapping 0.5-2.5A from March 1st 2012: Graph7



# Example Origin graphs

Tunnelling  
Experiment

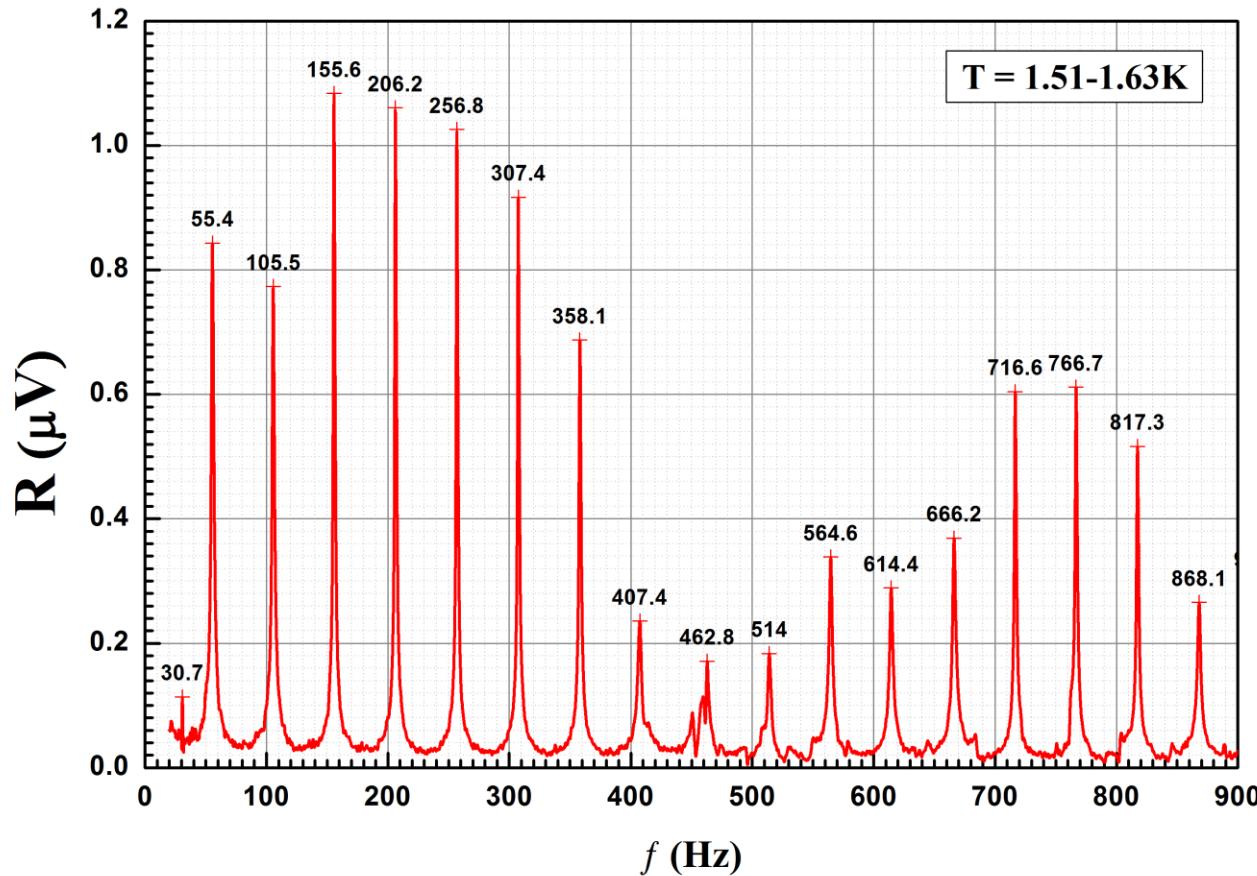


Sample n2 run8 zoom temp 1.55K



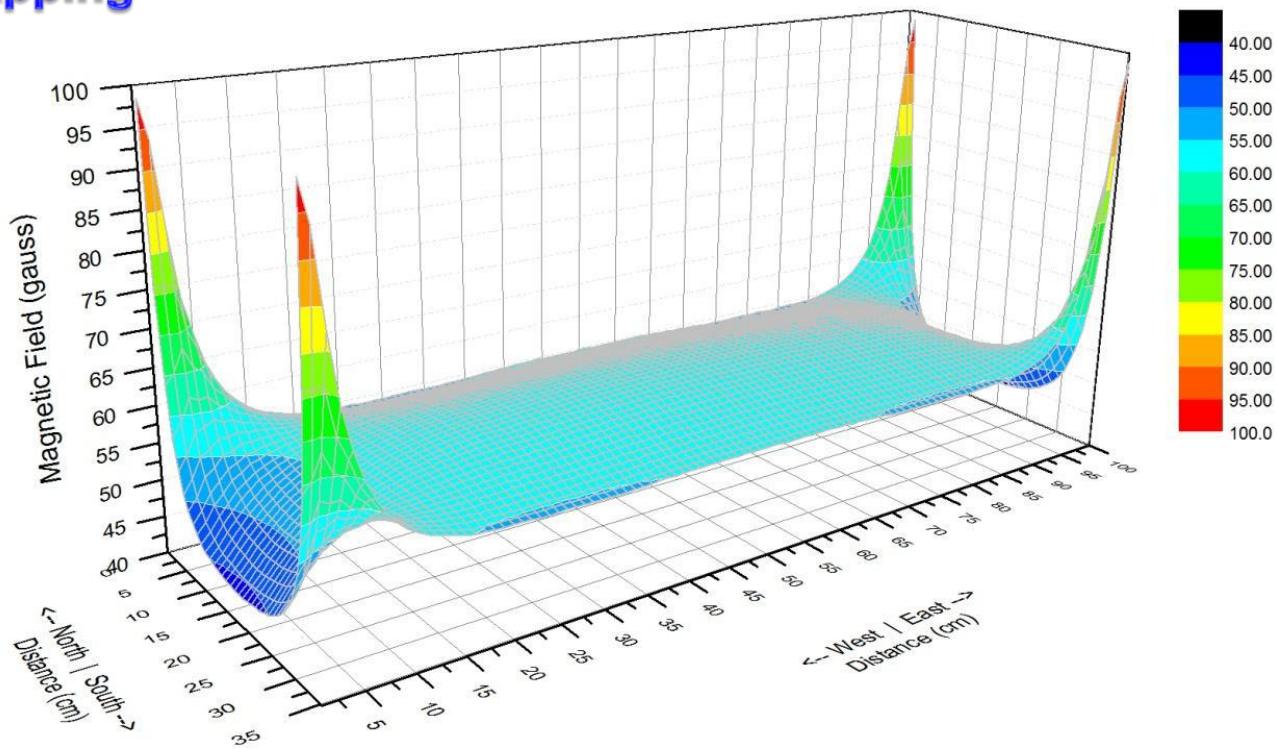
# Example Origin graphs

Second  
sound



# Example Origin graphs

## Magnet mapping



# Origin at UIUC Webstore and OriginLab site.

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This offer contains version Origin Pro for Windows 2025.

This offer contains version Origin Pro 2025 for Windows

The screenshot shows the main website for OriginLab. At the top, there's a navigation bar with links for 'Buy Now', 'Try Origin for Free', 'Watch Videos', 'English', 'Search', and 'Log In'. Below the navigation is a banner for 'ORIGINPRO® 2026' with the tagline 'The Ultimate Software for Graphing & Analysis'. The banner features several scientific plots and data analysis examples. To the right of the banner, there's a section titled 'See what people are saying about Origin' with a link to a review page. Further down, there's a section titled 'Why Choose Origin?' with a link to an explanation page. The main content area is divided into several sections: 'Graphing', 'Data Analysis', 'Statistics', 'Quality Improvement', 'Batch Operations', 'Apps', 'Technical Blog', and 'Videos'. Each section contains icons representing specific features or tools.

[www.originlab.com](http://www.originlab.com)



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# Running Origin remotely

Here is another way to run Origin without needing to install it on your own computer (e.g. if you have a Mac, which is not supported by Origin):

1. Connect to VPN
2. Install and run Citrix:  
<http://it.engineering.illinois.edu/ews/lab-information/remote-connections/connecting-citrix>
3. Click on "Apps" and then "Origin"
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|---|---------------------|----------|---|-------------|---------|-------|---|
| <a href="#">Origin 2023 Highlights</a>                | General - Overviews | 00:05:26 |    | 11/1/2022   | 10.0    | Y     |    |
| <a href="#">Introduction to Origin/OriginPro</a>      | General - Overviews | 00:02:30 |    | 6/9/2021    | 9.85    | Y     |    |
| <a href="#">Getting Starting with Graphing</a>        | General - Overviews | 00:04:14 |    | 10/18/2019  | 9.7     | Y     |    |
| <a href="#">Bringing Data into Origin</a>             | General - Overviews | 00:03:07 |    | 10/18/2019  | 9.7     | Y     |    |
| <a href="#">Analysis with Auto Recalculations</a>     | General - Overviews | 00:02:28 |    | 10/18/2019  | 9.7     | Y     |    |
| <a href="#">Build Your Presentation in 60 Seconds</a> | General - Overviews | 00:01:22 |    | 1/5/2018    | 9.5     | Y     |    |
| <a href="#">Origin Learning Center</a>                | General - Overviews | 00:02:26 |    | 12/25/2017  | 9.5     | Y     |    |
| <a href="#">Apps for Origin</a>                       | General - Overviews | 00:01:54 |   | 12/14/2017  | 9.5     | Y     |   |
| <a href="#">Origin vs OriginPro</a>                   | General - Overviews | 00:06:56 |  | 6/14/2016   | 9.3     | Y     |  |

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



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## PRO Statistical Process Control by OriginLab



Min.Version: 2026 (10.3)

Updated on: 11/21/2025



Statistical process control (SPC) or statistical quality control (SQC) is the application of statistical techniques to measure, monitor and control the quality of a process.

App



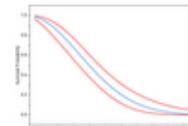
7 Ratings

7 Comments



888 Downloads (90 Days)

## PRO Reliability and Survival Analysis by OriginLab



Min.Version: 2026 (10.3)

Updated on: 11/19/2025



Analyze time-to-event data including censored data in reliability and survival.

App



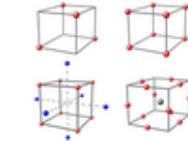
2 Ratings

2 Comments



136 Downloads (90 Days)

## PRO Design of Experiments by OriginLab



Min.Version: 2026 (10.3)

Updated on: 11/18/2025



Create DOE design matrix, perform analysis and optimization.

App



29 Ratings

29 Comments



1660 Downloads (90 Days)

## PRO Decision Tree Analysis by OriginLab



Min.Version: 2026 (10.3)

Updated on: 11/18/2025



Fit binary decision tree for classification and regression.

App



10 Ratings

10 Comments



453 Downloads (90 Days)

