



Scientific Graphing and Analysis Software

<http://www.originlab.com/>

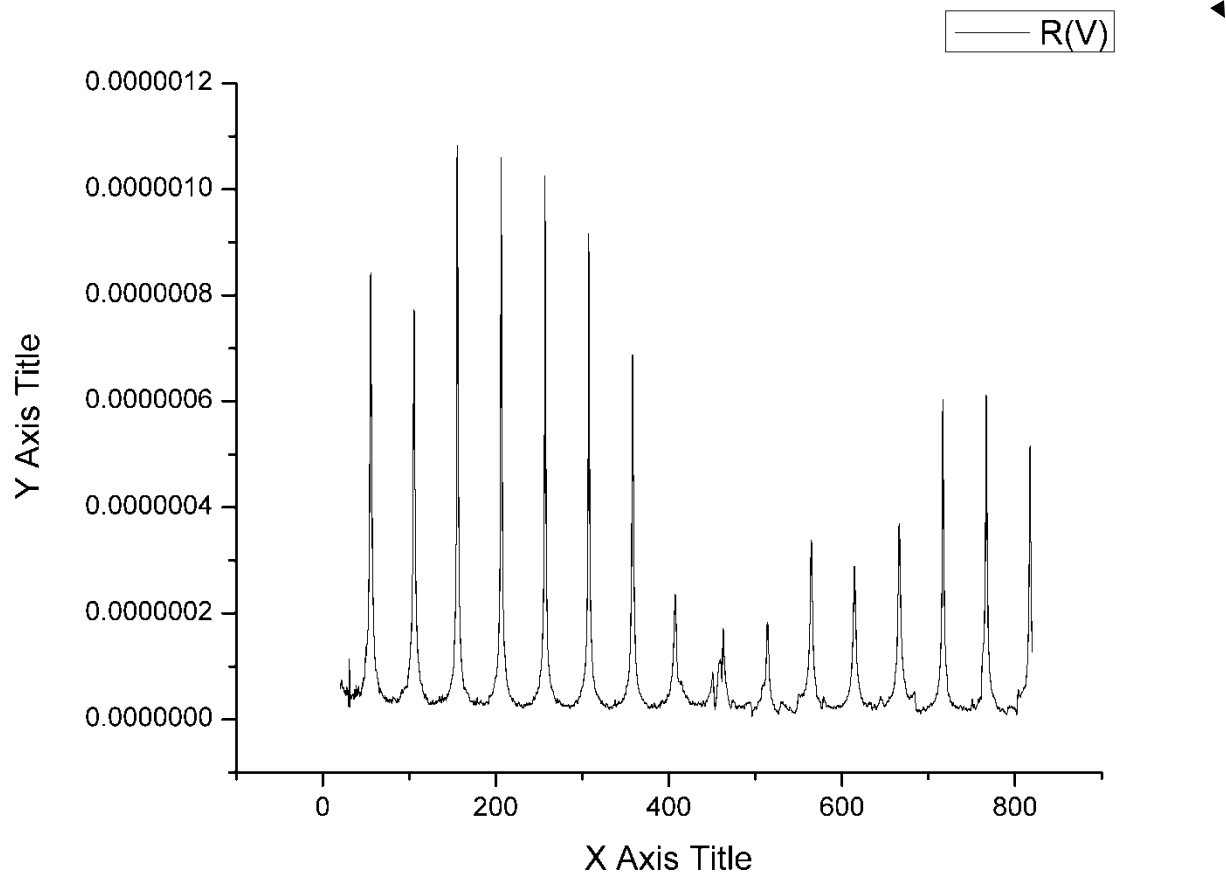
Current versions on all Physics 403 computers are [OriginPro](#) 2016

What can it do:

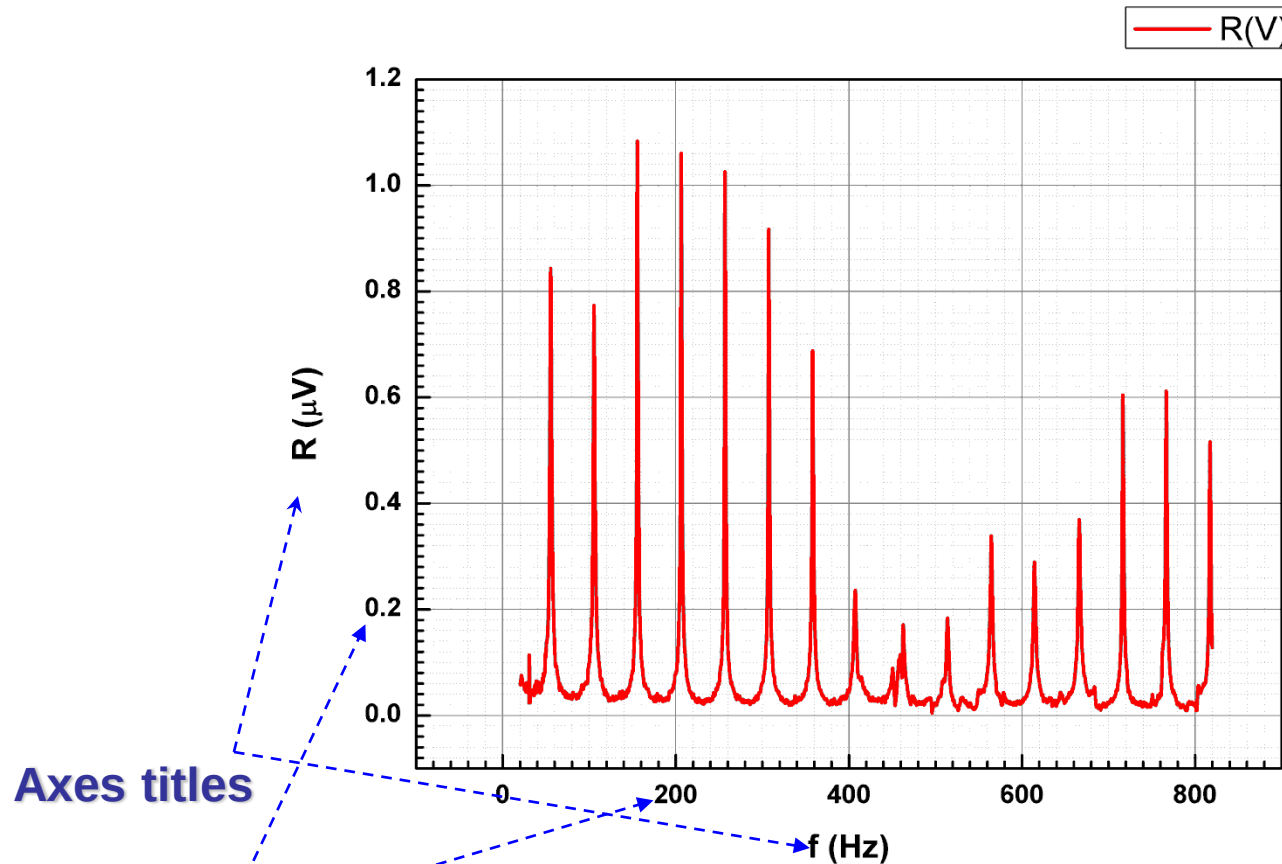
- 1. Graphical presentation of the data**
- 2. Data analysis**
- 3. Preparation of the publishing quality figures.**

This software is specially designed for scientific graphics and is a “standard” Windows application which does not require knowledge of C++ or any other high level computer language. In the same time if you like you can write some special functions or procedures using provided by Origin some programming tools:

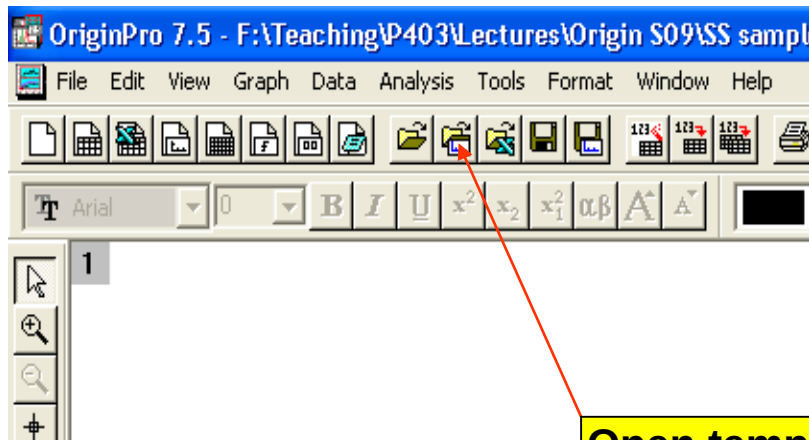
Graphical presentation of the data. Basic.



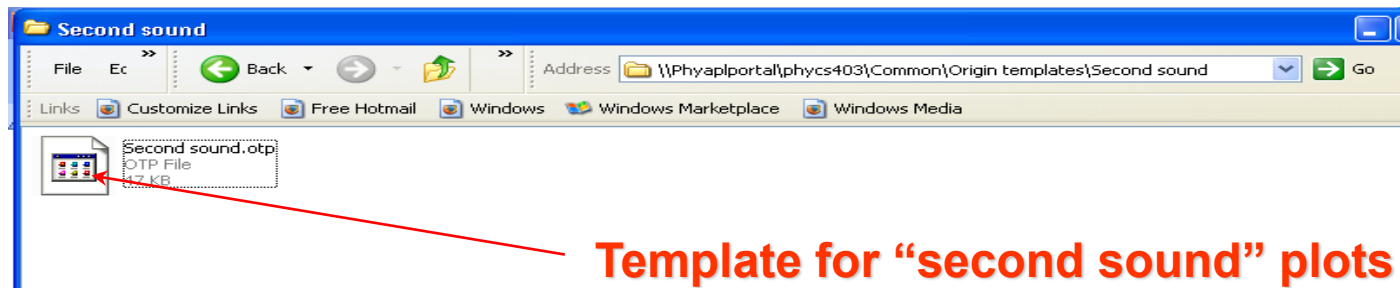
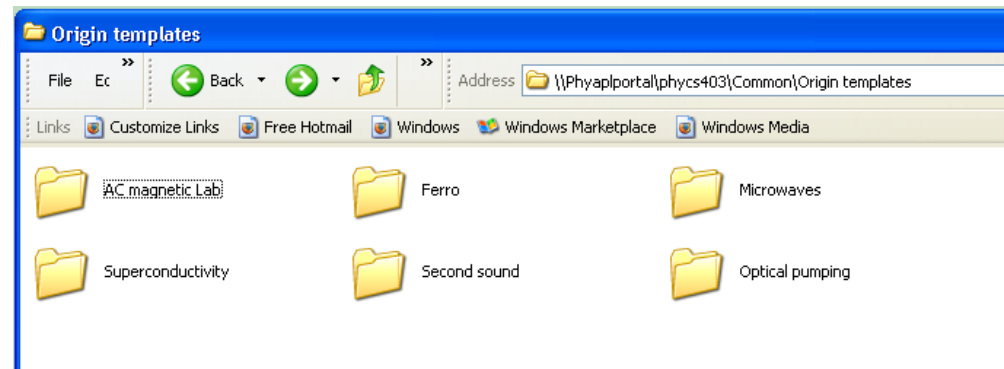
Graphical presentation of the data. Basic.



Graphical presentation of the data. Templates.



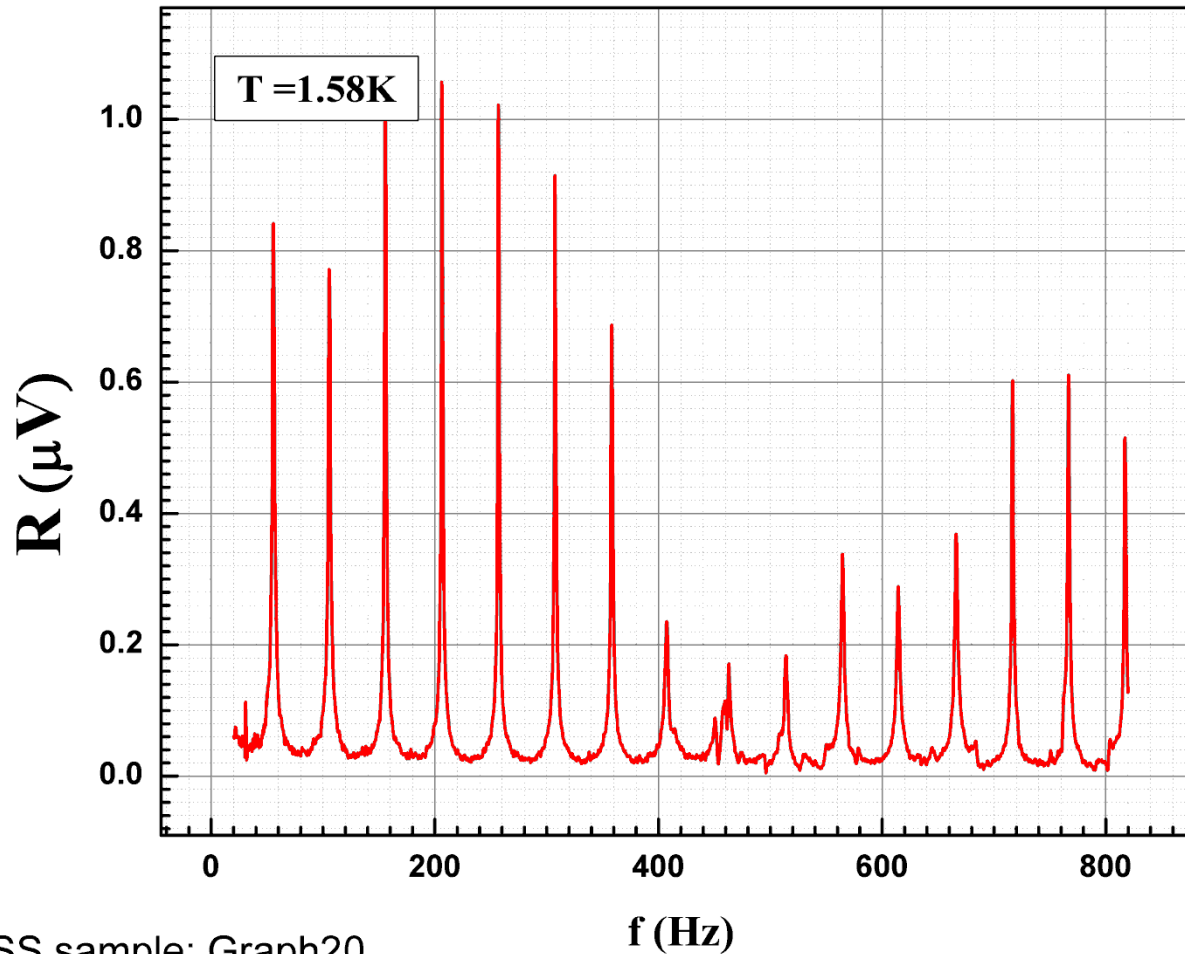
Open template



Template for "second sound" plots

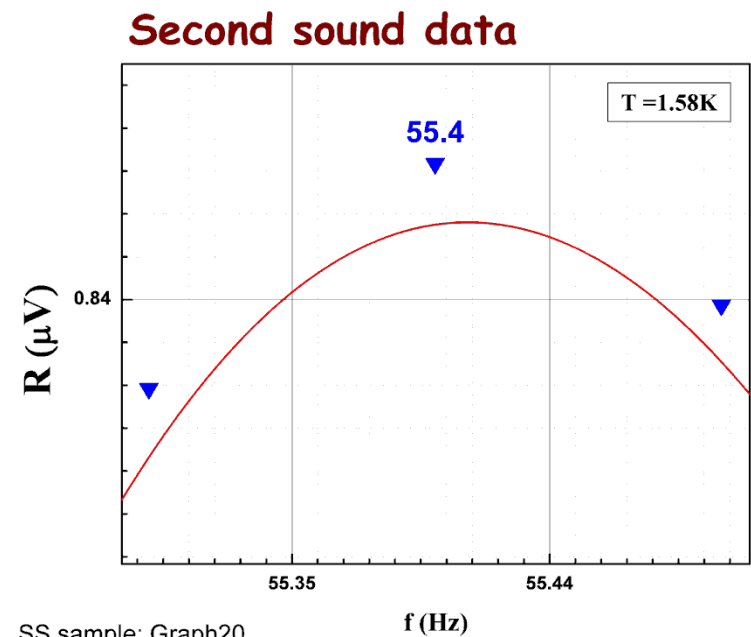
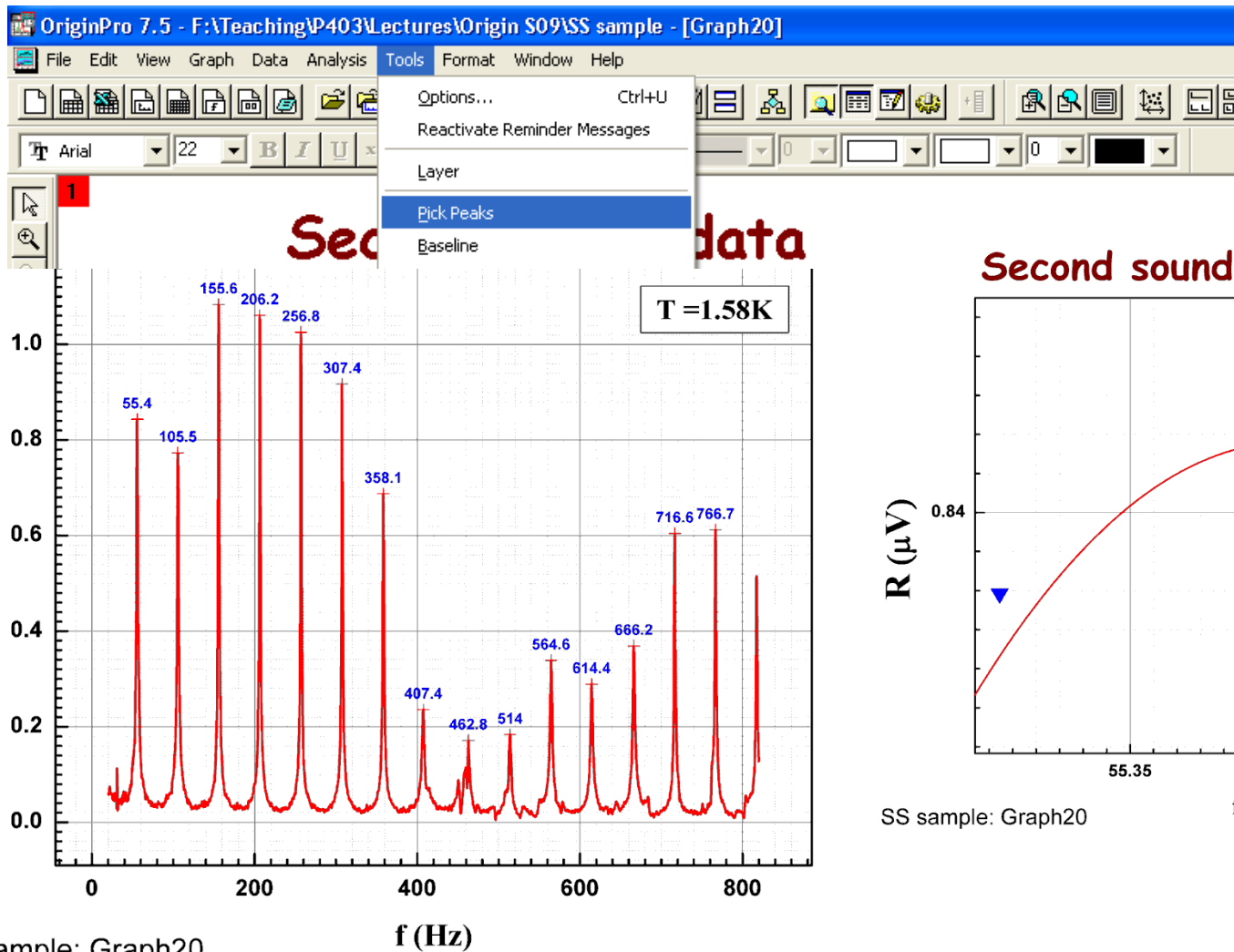
Graphical presentation of the data. Templates.

Second sound data

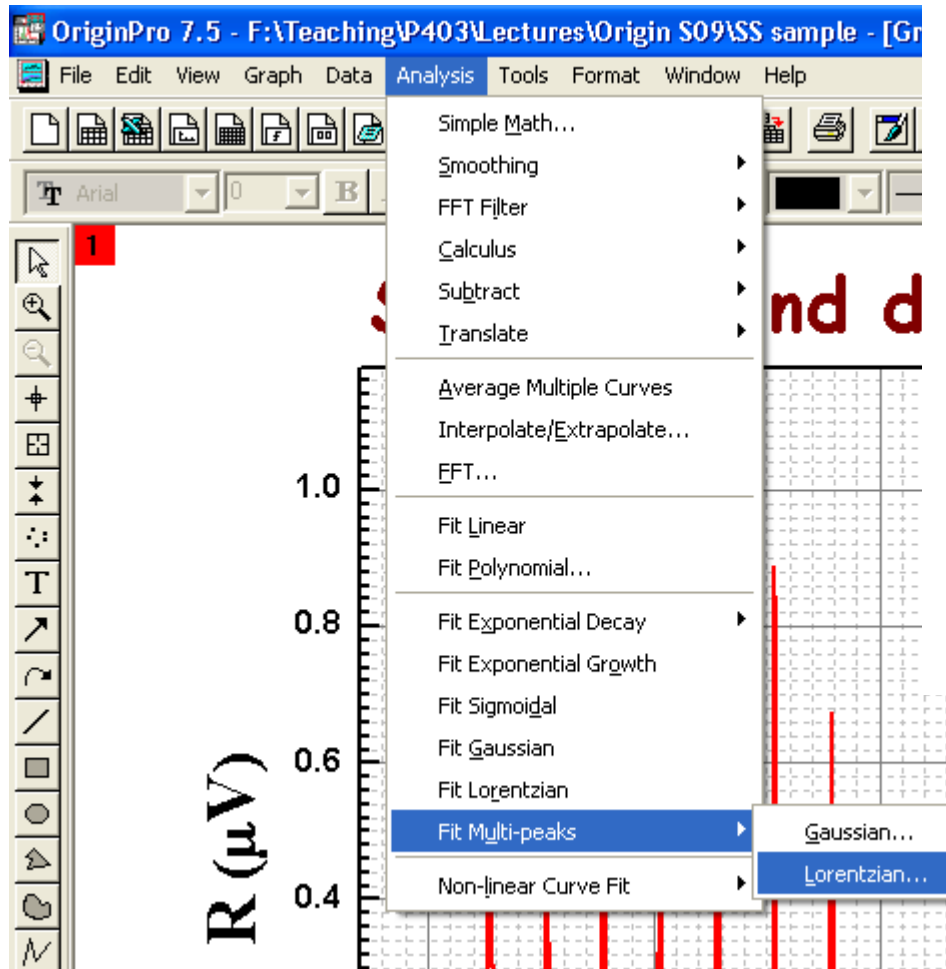


SS sample: Graph20

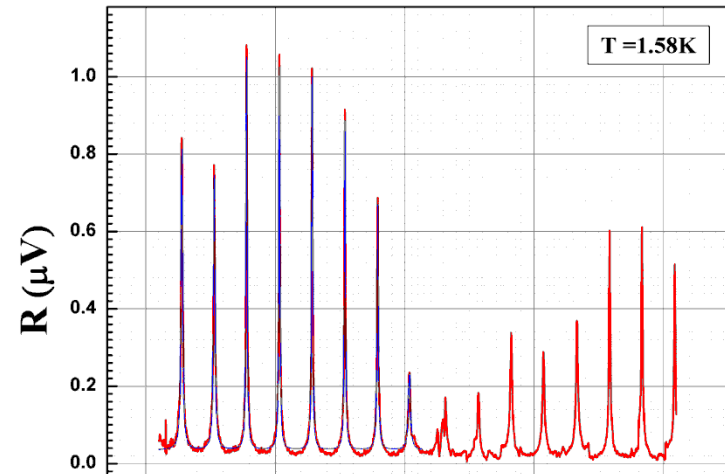
Graphical presentation of the data. Fitting etc.



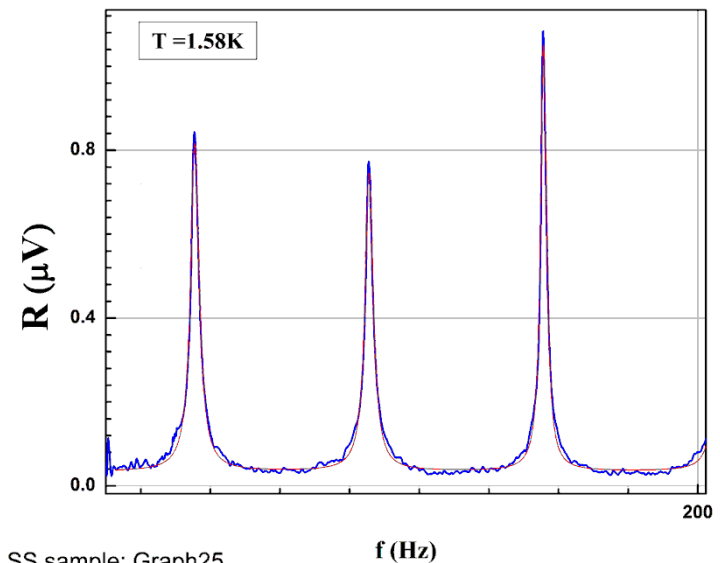
Graphical presentation of the data. Fitting etc.



Second sound data

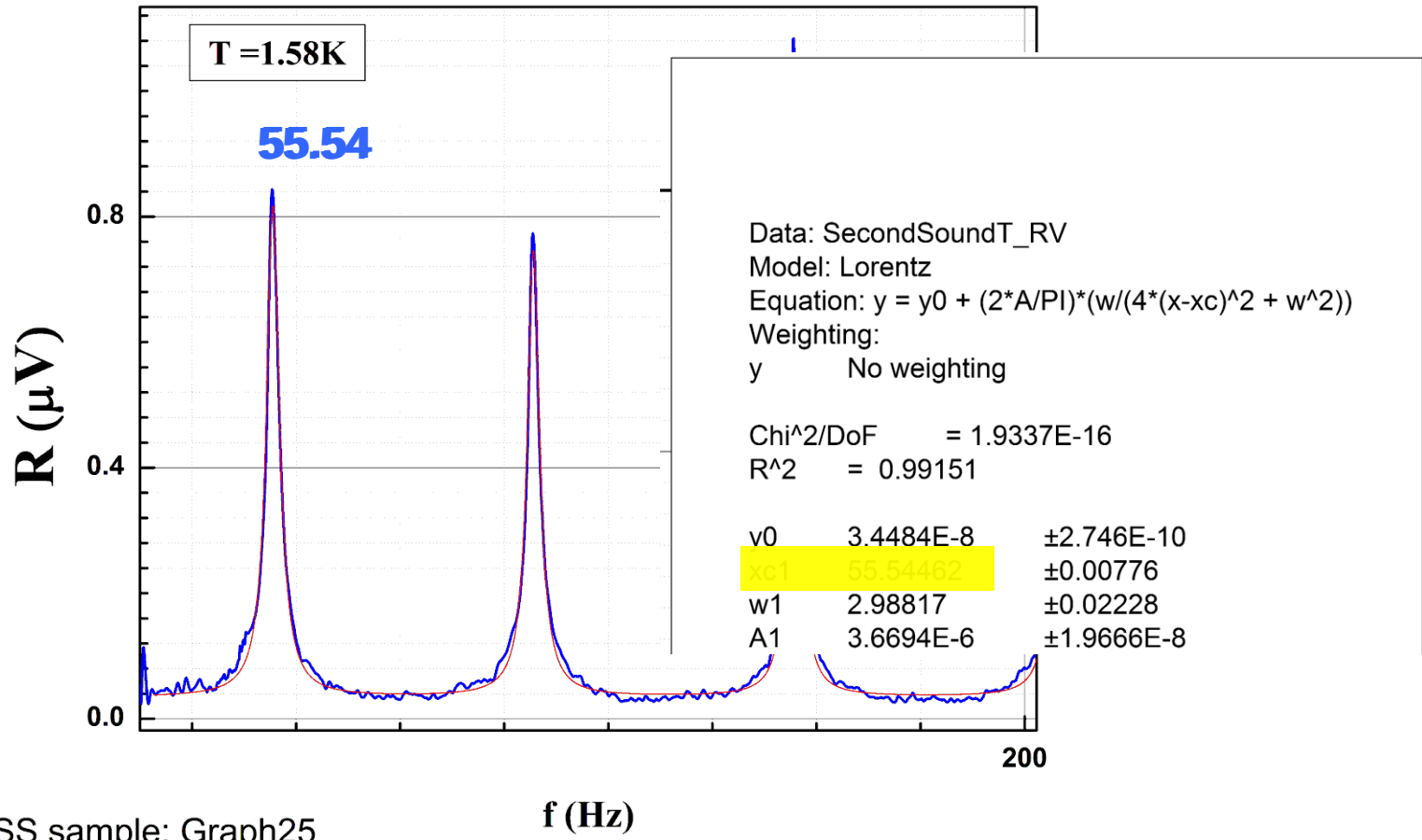


Second sound data

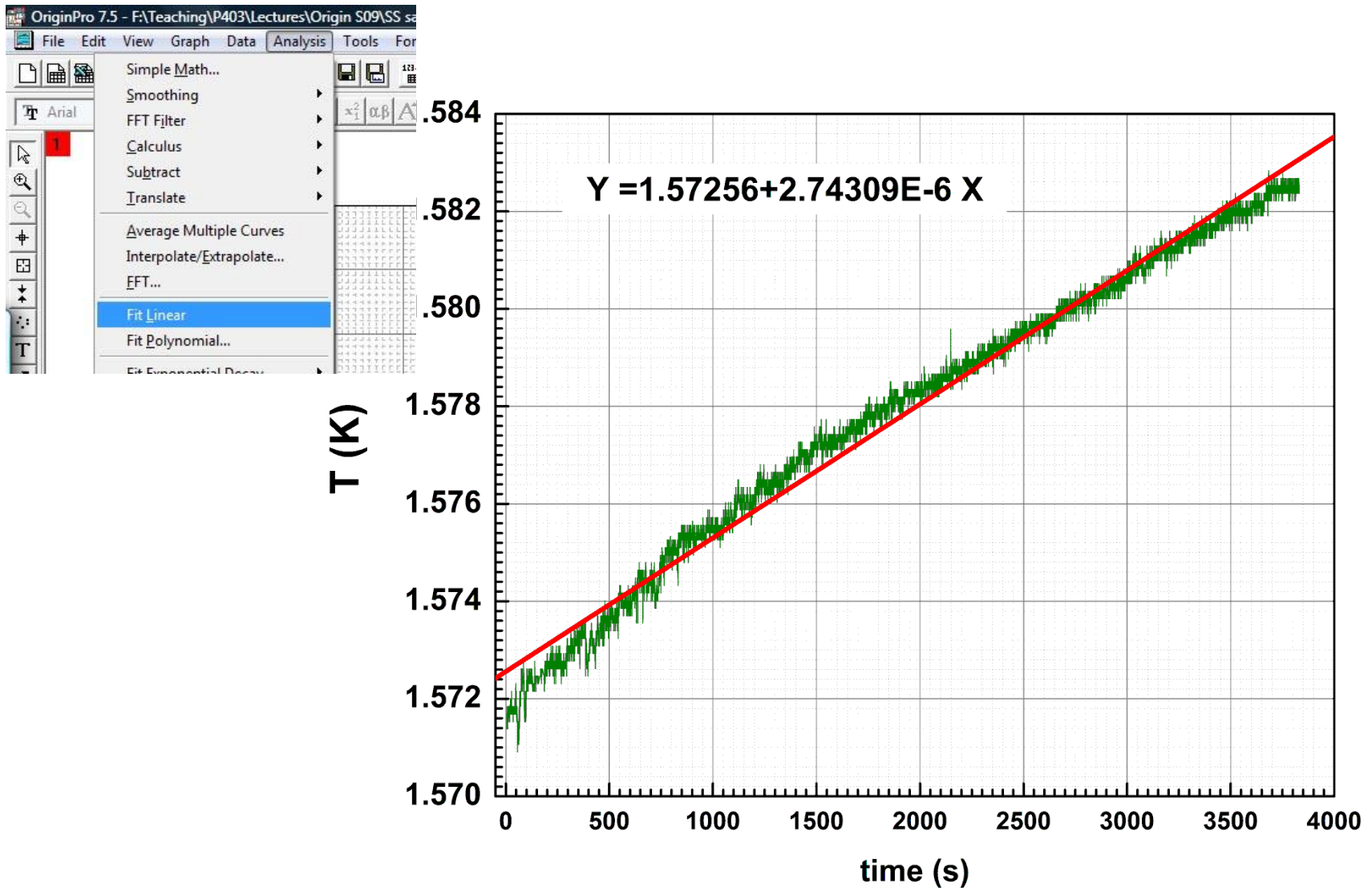


Graphical presentation of the data. Fitting etc.

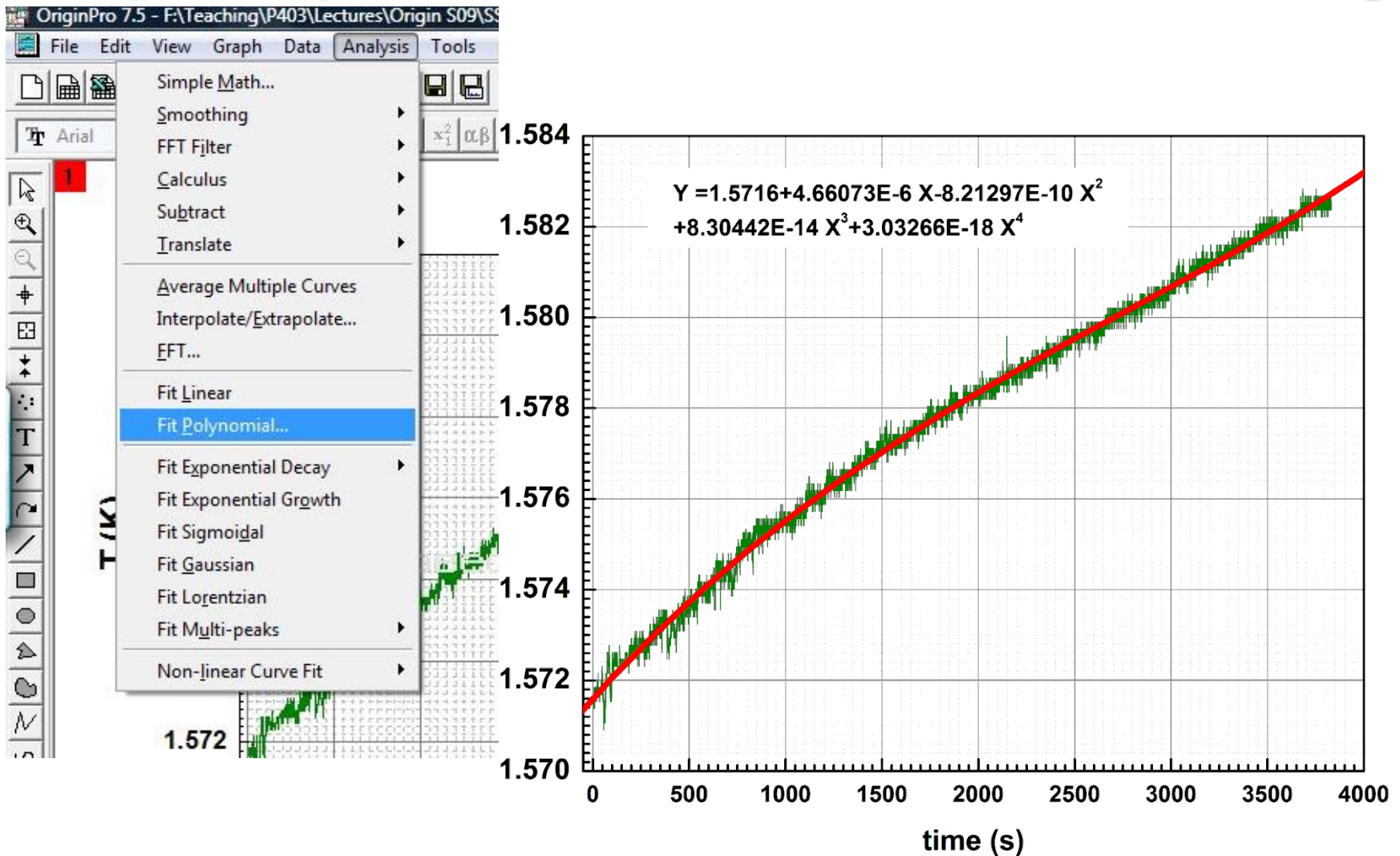
Second sound data



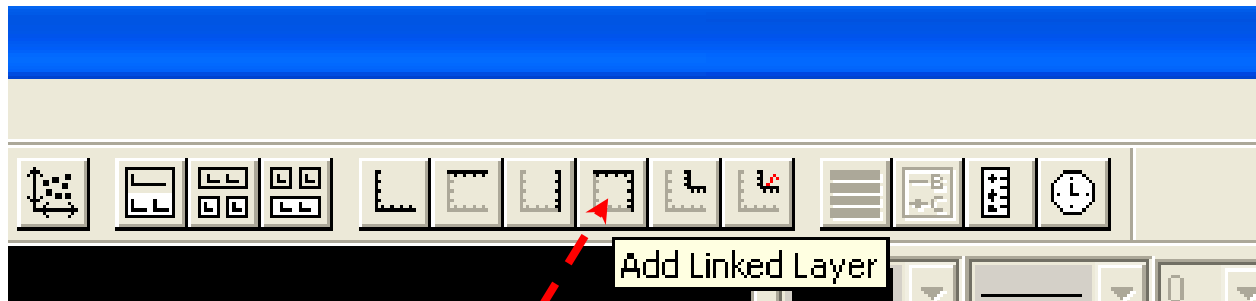
Graphical presentation of the data. Linear fitting.



Graphical presentation of the data. Linear fitting.

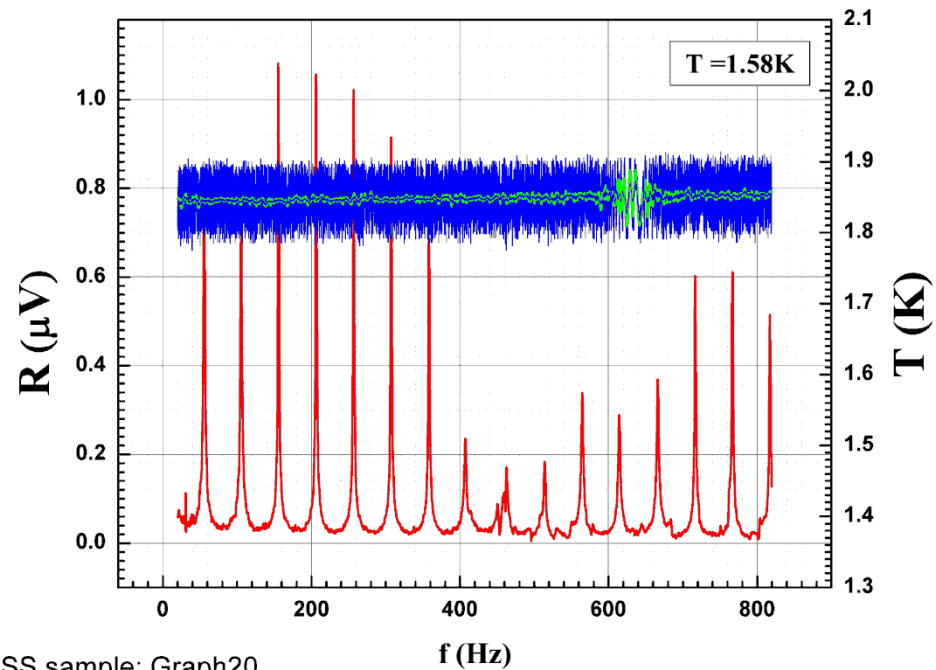


Graphical presentation of the data. 2 layers graph.

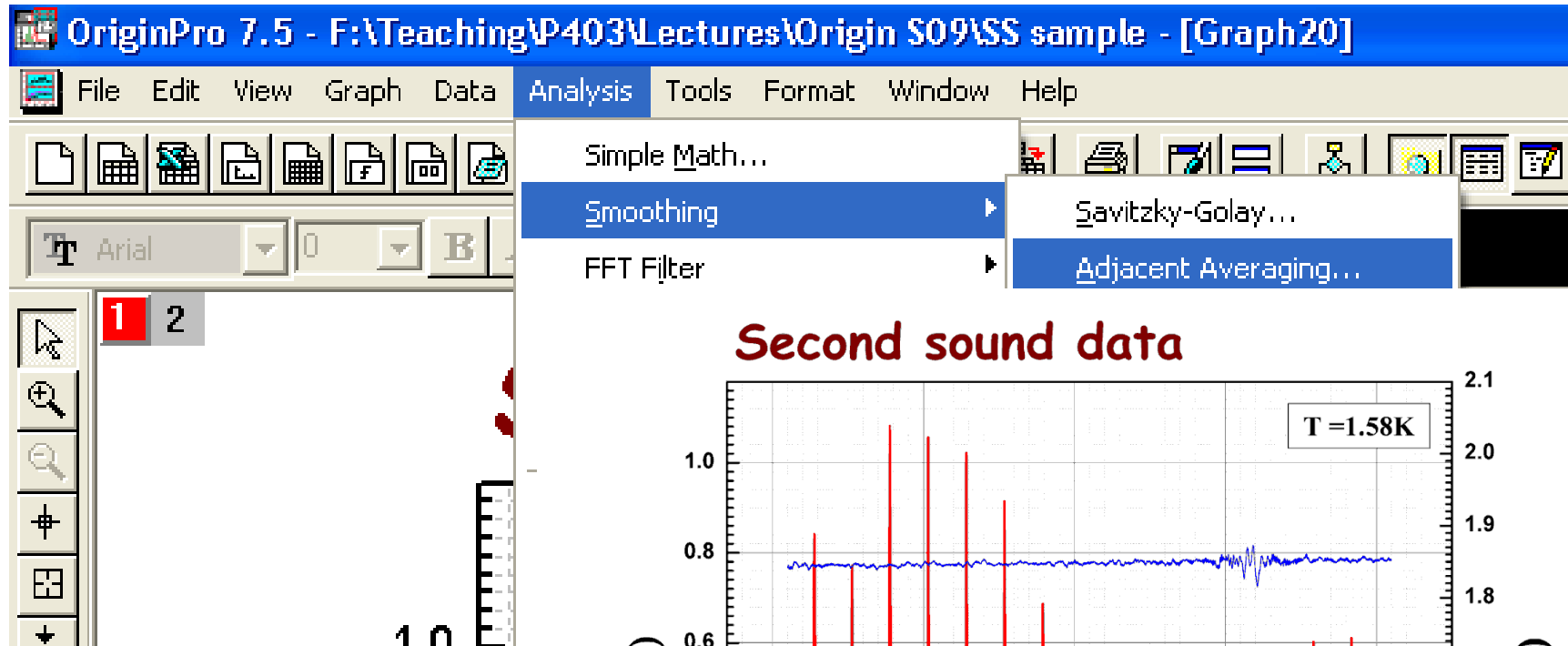


Add Layer

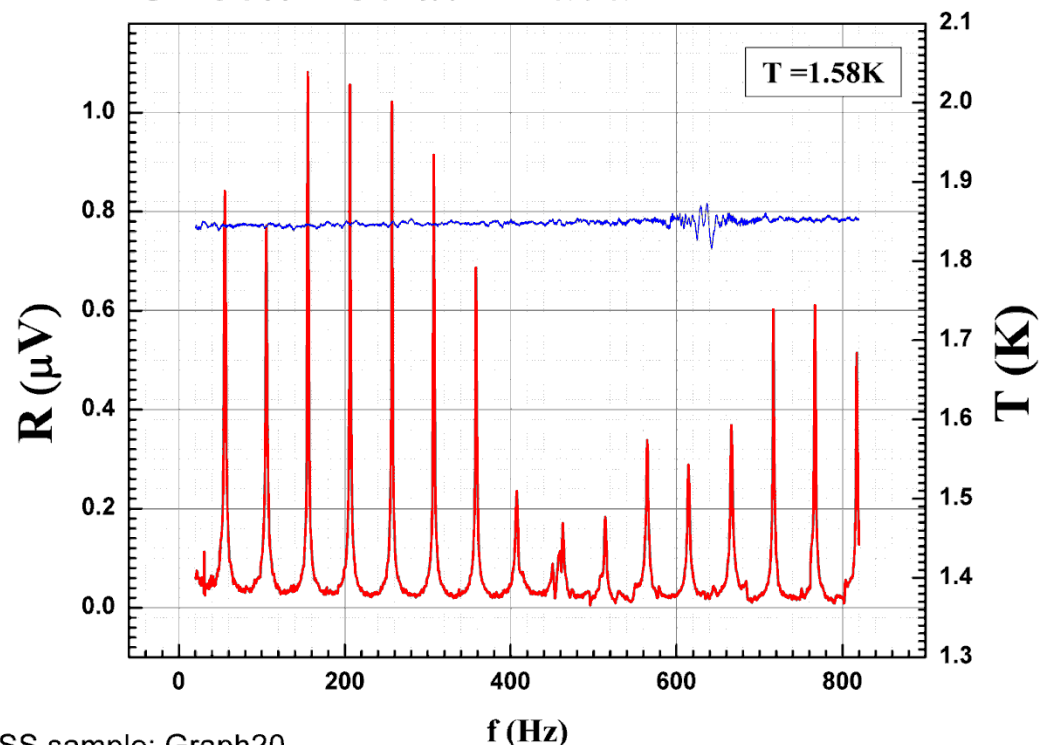
Second sound data



Graphical presentation of the data. 2 layers graph.



Second sound data



SS sample: Graph20

Worksheets. Working with data.

OriginPro 7.5 - F:\Teaching\P403\Lectures\Origin S09\SS sample - [SecondSoundT - \\Physiporta\phys403\Students\dkovari2\Second Sound\SecondSound_T2_16K VER]

File Edit View Plot Column Analysis Statistics Tools Format Window Help

Plot

times[X] TK[Y] Pmm[Y] TpK[Y] UacV[Y] fHz[Y] XV[Y] YV[Y] RV[Y]

time [s] T[K] Uac [V] f [Hz] X [V] Y [V] R [V]

7968 3814.75 1. 1.8147 5 816.7 -1.54135E-7 3.62286E-7 3.93711E-7

7969 3815.265 1. .84566 5 816.8 -1.27476E-7 4.04545E-7 4.24154E-7

7970 3815.765 1. .89667 5 816.9 -8.80104E-8 4.44359E-7 4.52991E-7

7971 3816.281 1. .86944 5 817 -3.56233E-8 4.76723E-7 4.78052E-7

7972 3816.781 1. .81355 5 817.1 2.72413E-8 4.97097E-7 4.97843E-7

7973 3817.297 1. .18823 5 817.2 9.49954E-8 5.01987E-7 5.10896E-7

7974 3817.797 1. .87936 5 817.3 1.62284E-7 4.90345E-7 5.16502E-7

7975 3818.312 1. .86944 5 817.4 2.23053E-7 4.63218E-7 5.14124E-7

7976 3818.812 1. .81355 5 817.5 2.7416E-7 4.23288E-7 5.04318E-7

7977 3819.328 1. .88327 5 817.6 3.12344E-7 3.75441E-7 4.8838E-7

7978 3819.84299 1. .87936 5 817.7 3.38072E-7 3.23753E-7 4.6809E-7

7979 3820.34299 1. .82937 5 817.8 3.52391E-7 2.72297E-7 4.45337E-7

7980 3820.85899 1. .82937 5 817.9 3.56698E-7 2.23518E-7 4.20944E-7

7981 3821.375 1. .18881 5 818 3.53439E-7 1.79281E-7 3.96309E-7

7982 3821.875 1. .89194 5 818.1 3.44358E-7 1.40165E-7 3.71791E-7

7983 3822.39 1. .82937 5 818.2 3.31087E-7 1.06986E-7 3.47943E-7

7984 3822.906 1. .81355 5 818.3 3.15022E-7 7.86972E-8 3.24703E-7

7985 3823.406 1. .90876 5 818.4 2.97909E-7 5.51811E-8 3.02976E-7

7986 3823.922 1. .88714 5 818.5 2.80563E-7 3.58561E-8 2.82845E-7

7987 3824.422 1. .81355 5 818.6 2.63683E-7 2.06056E-8 2.64487E-7

7988 3824.937 1. .82492 5 818.7 2.47501E-7 8.84762E-9 2.47659E-7

7989 3825.453 1. .90043 5 818.8 2.32017E-7 0 2.32017E-7

7990 3825.953 1. .86029 5 818.9 2.17698E-7 -6.75212E-9 2.17803E-7

7991 3826.46799

7992 3826.98399

7993 3827.48399

7994 3828

Statistics on Columns

Recalculate

Advanced Statistics ☒ Percentile 95.00

Col(X) Rows(Y) Mean(Y) sd(yErz) se(yErz) CL(Y) CU(Y) P25(Y) P75(Y)

1 TK [1.8000] 1.57775 0.00302 3.37709E-5 1.57768 1.57781 1.57541 1.58

2

Calculate statistics on the selected column(s)

Color Publication 2:SecondSoundT_TK(1-8000) SecondSoundT Radian

Valentine-PC ... CITES Express... 2 Windows ... Microsoft Po... OriginPro 7.5 ... Adobe Photo... Yahoo! Search 10:18 PM

Worksheets. Working with data.

OriginPro 7.5 - F:\Teaching\P403\Lectures\Origin S09\SS sample - [SecondSound T - \\Phyap\portal\physcs403\Students\dkovari2\Second Sound\SecondSound_T2_16K VER]

File Edit View Plot Column Analysis Statistics Tools Format Window Help

times[X] TKM Pmm[Y] TpK[Y] UacV[Y] fHz[Y]

time [s] T [K] P [mm] Tp [K] Uac [V] f [Hz]

7968 3814.75 1.8147 5 81
7969 3815.265 1.84566 5 81
7970 3815.765 1.89667 5 81
7971 3816.281 1.86944 5
7972 3816.781 1.81355 5 81
7973 3817.297 1.8823 5 81
7974 3817.797 1.87936 5 81
7975 3818.312 1.86944 5 81
7976 3818.812 1.81355 5 81
7977 3819.328 1.88327 5 81
7978 3819.84299 1.87936 5 81
7979 3820.34299 1.82937 5 81
7980 3820.85899 1.82937 5 81
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7982 3821.875 1.89194 5 81
7983 3822.39 1.82937 5 81
7984 3822.906 1.81355 5 81
7985 3823.406 1.90876 5 81
7986 3823.922 1.88714 5 81
7987 3824.422 1.81355 5 81
7988 3824.937 1.82492 5 81
7989 3825.453 1.90043 5 81
7990 3825.953 1.86029 5 81

Plot

- Cut
- Copy
- Paste
- Insert
- Delete
- Clear
- Set As
- Set Column Values...
- Fill Column with
- Sort Column
- Sort Worksheet
- Normalize...
- Frequency Count
- Statistics on Columns
- Mask
- Set as Categorical

Set Column Values

Abs(x): Absolute value

For row (i) Auto to Auto

abs()

col(TK)

col(TK)=

col(TK):273

AutoUpdate

OK Cancel

times[X] TKM Pmm[Y] TpK[Y] UacV[Y] fHz[Y] XV[Y] YV[Y] RV[Y]

time [s] T [K] P [mm] Tp [K] Uac [V] f [Hz] X [M] Y [M] R [M]

7968 3814.75 -271.41732 12.9419 1.8147 5 816.7 -1.54135E-7 3.62286E-7 3.93711E-7
7969 3815.265 -271.41747 14.40158 1.84566 5 816.8 -1.27476E-7 4.04545E-7 4.24154E-7
7970 3815.765 -271.41732 17.06038 1.89667 5 816.9 -8.80104E-8 4.44359E-7 4.52991E-7
7971 3816.281 -271.41747 15.6007 1.86944 5 817 -3.56233E-8 4.76723E-7 4.78052E-7
7972 3816.781 -271.41747 12.88982 1.81355 5 817.1 2.72413E-8 4.97097E-7 4.97843E-7
7973 3817.297 -271.41763 16.27038 1.8823 5 817.2 9.49954E-8 5.01987E-7 5.10896E-7
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7975 3818.312 -271.41732 15.6007 1.86944 5 817.4 2.23053E-7 4.63218E-7 5.14124E-7
7976 3818.812 -271.41763 12.88982 1.81355 5 817.5 2.7416E-7 4.23288E-7 5.04318E-7
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7980 3820.85899 -271.41763 13.61958 1.82937 5 817.9 3.56698E-7 2.23518E-7 4.20944E-7
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7983 3822.39 -271.41732 13.61958 1.82937 5 818.2 3.31087E-7 1.06986E-7 3.47943E-7
7984 3822.906 -271.41732 12.88982 1.81355 5 818.3 3.15022E-7 7.86972E-8 3.24703E-7
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7987 3824.422 -271.41763 12.88982 1.81355 5 818.6 2.63683E-7 2.06056E-8 2.64487E-7
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7991 3826.46799 -271.41763 12.21198 1.79826 5 819 2.0431E-7 -1.16416E-8 2.04641E-7
7992 3826.98399 -271.41763 14.14102 1.84031 5 819.1 1.92203E-7 -1.50177E-8 1.92789E-7
7993 3827.48399 -271.41747 16.0699 1.87838 5 819.2 1.81143E-7 -1.7346E-8 1.81972E-7
7994 3828 -271.41747 13.82822 1.83378 5 819.3 1.71015E-7 -1.89758E-8 1.72065E-7

Set Column Values

Abs(x): Absolute value

For row (i) Auto to Auto

abs()

col(TK)

col(TK)=

col(TK):273

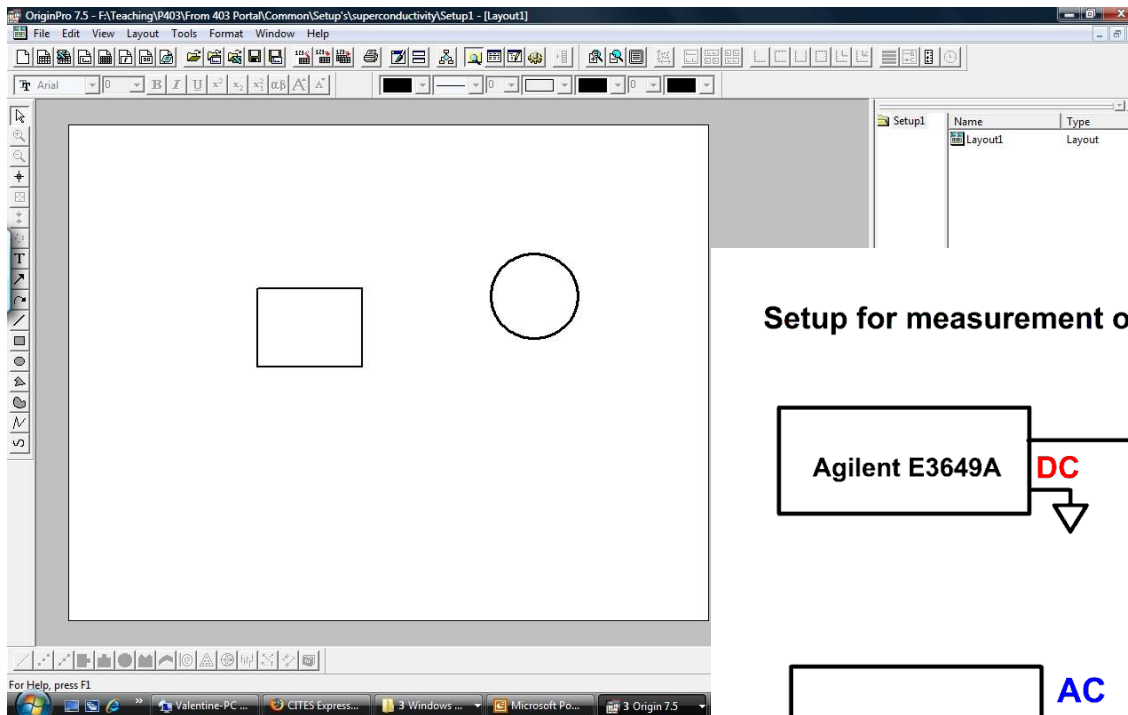
AutoUpdate

OK Cancel

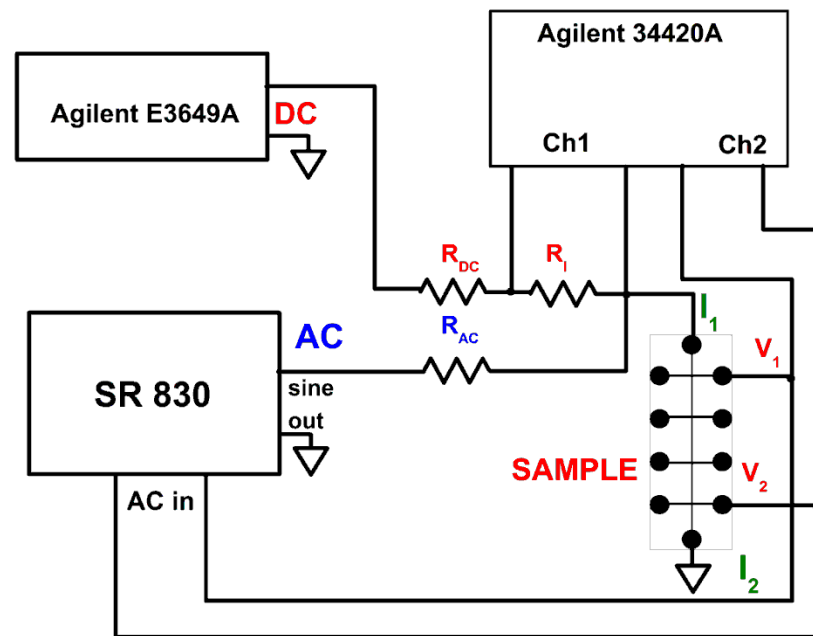
Color Publication

Valentine-PC ... CITES Express... 2 Windows ... Microsoft Po... OriginPro 7.5 ... Adobe Photo...

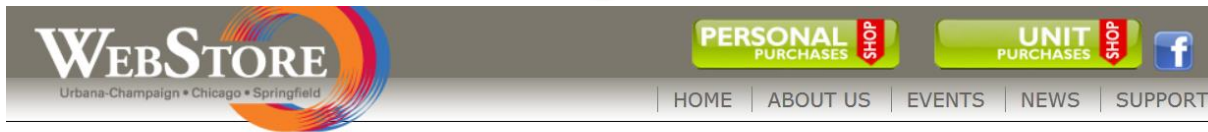
Layouts.



Setup for measurement of s/c properties



Origin at UIUC Webstore and OriginLab site.



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My Profile
Order History
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OriginPro

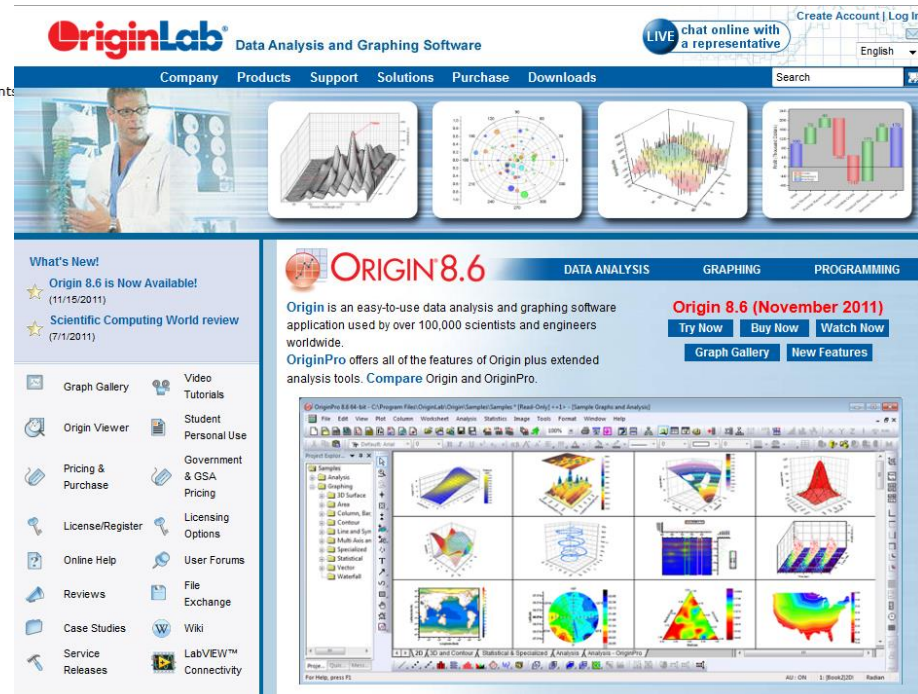
\$0.00

OriginLab, Inc.

Eligibility: UIC Faculty, UIC Staff, UIC Students, Faculty and Staff and UIUC Students.

<https://webstore.illinois.edu>

www.originlab.com



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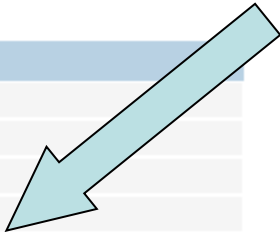
Most recently updated files:

[Separate data into blocks](#)[Automated analysis of pClamp data](#)[Cross Correlation](#)[Shortcut buttons](#)[Digitizer for Origin 7, 7.5 and 8.0 \(SR2 or later\)](#)

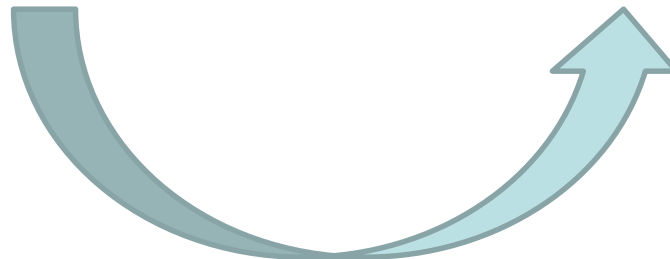
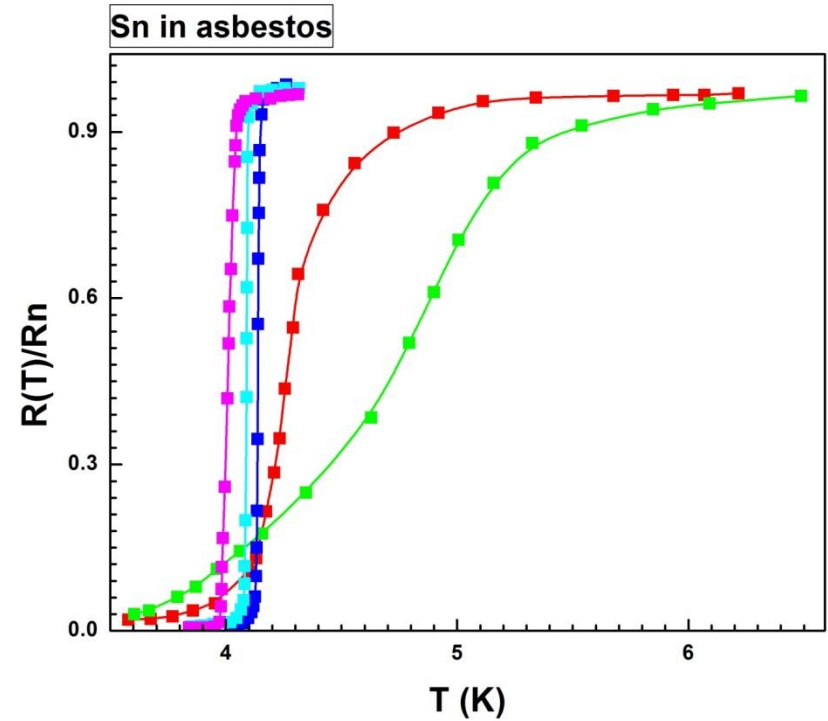
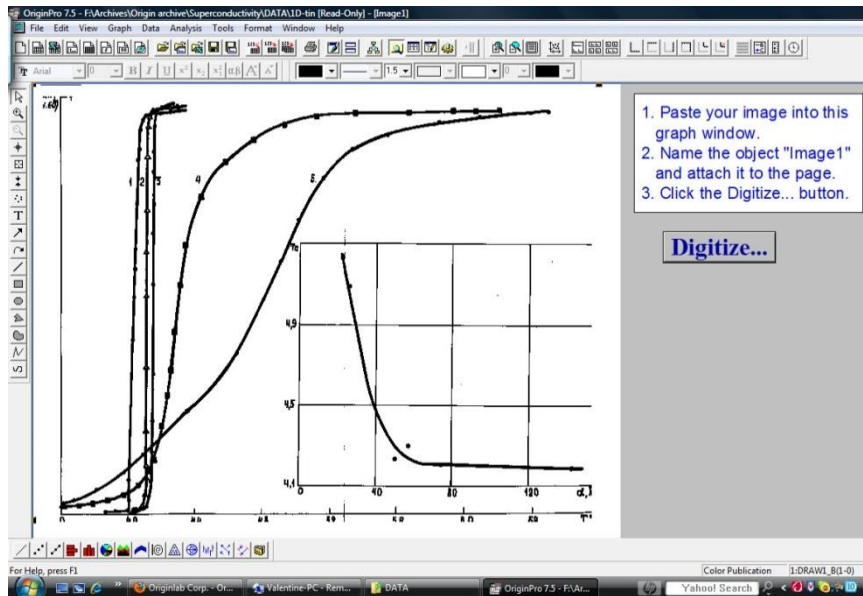
Most downloaded files (Last Month):

[Digitizer for Origin 7, 7.5 and 8.0 \(SR2 or later\)](#)[Tangents](#)[Peak Analysis Tool](#)[Extract data from graph](#)[MultiFit - Multiple curve fitting commands](#)[Cluster Tool](#)[Digitizer for Origin 6.0 and 6.1](#)[Tafel Extrapolation \(Estimate Ecorr and Icorr\)](#)[Envelope Curves](#)[Script Tool](#)[Linear Digitize Template](#)[Estimate Onset of Slope Change](#)[ONMR 7.5](#)[Shortcut buttons](#)[OAnimator](#)[ScanRead](#)[Import Princeton Instruments \(*.SPE\) Files](#)

Digitizer



Origin. Using digitizer script.

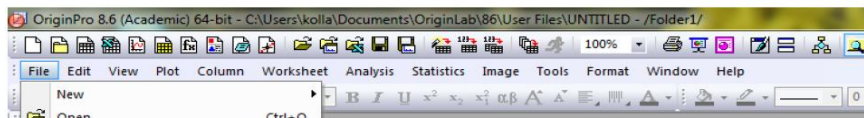


Origin manuals



Working with Origin 8.6.

Step1. Importing data

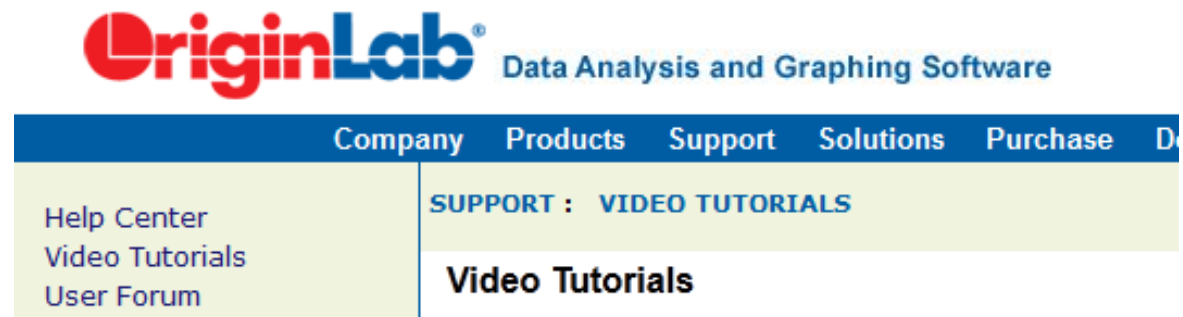


Very short and simple manual which covers only main general operations with Origin. Document located on server (\\Phyapportal\PHYCS403\Common\Origin manuals).

There are (\\Phyapportal\PHYCS403\Common\Origin manuals) also manuals from OriginLab.

Do not forget about Origin Help

Video Tutorials at the site of the company

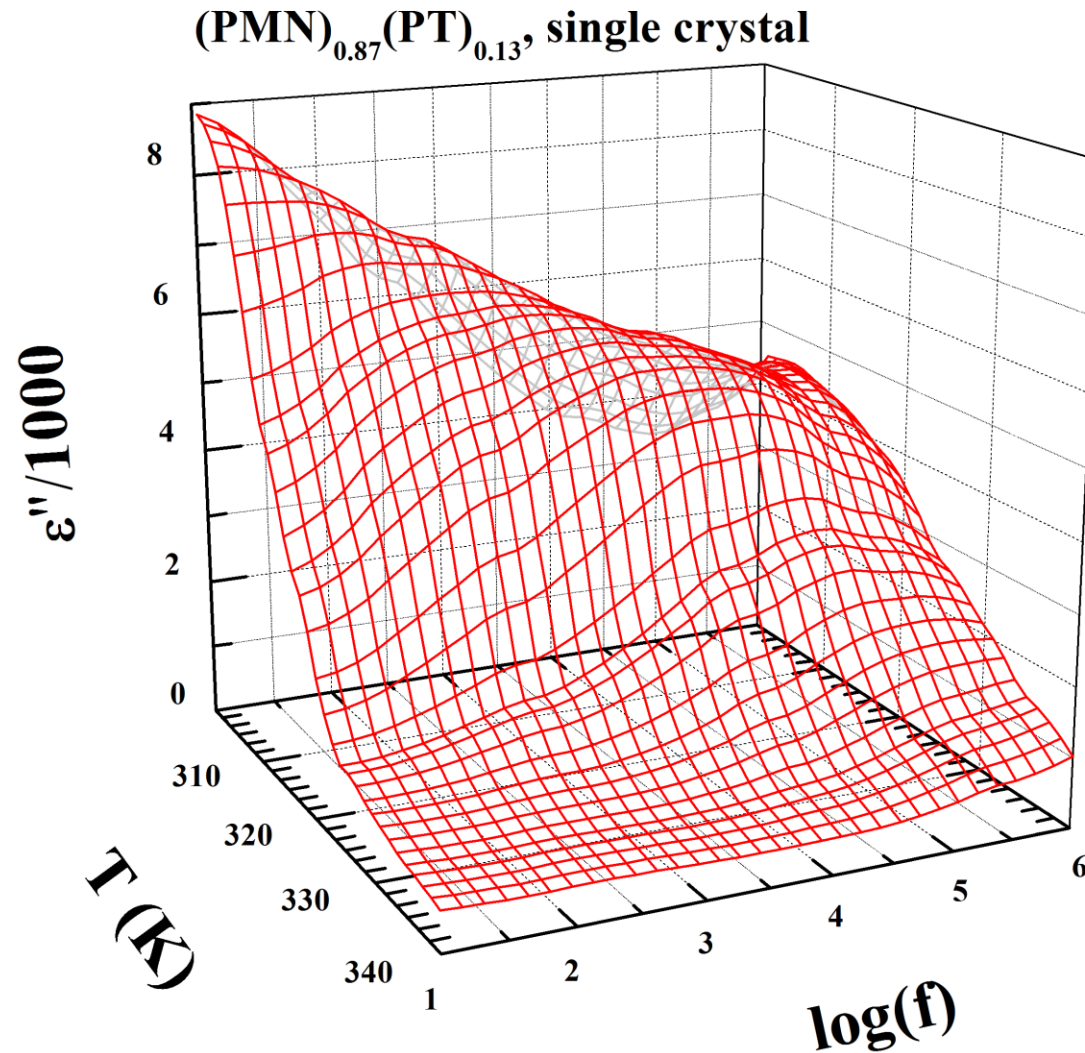


<http://www.originlab.com/index.aspx?go=SUPPORT/VideoTutorials>



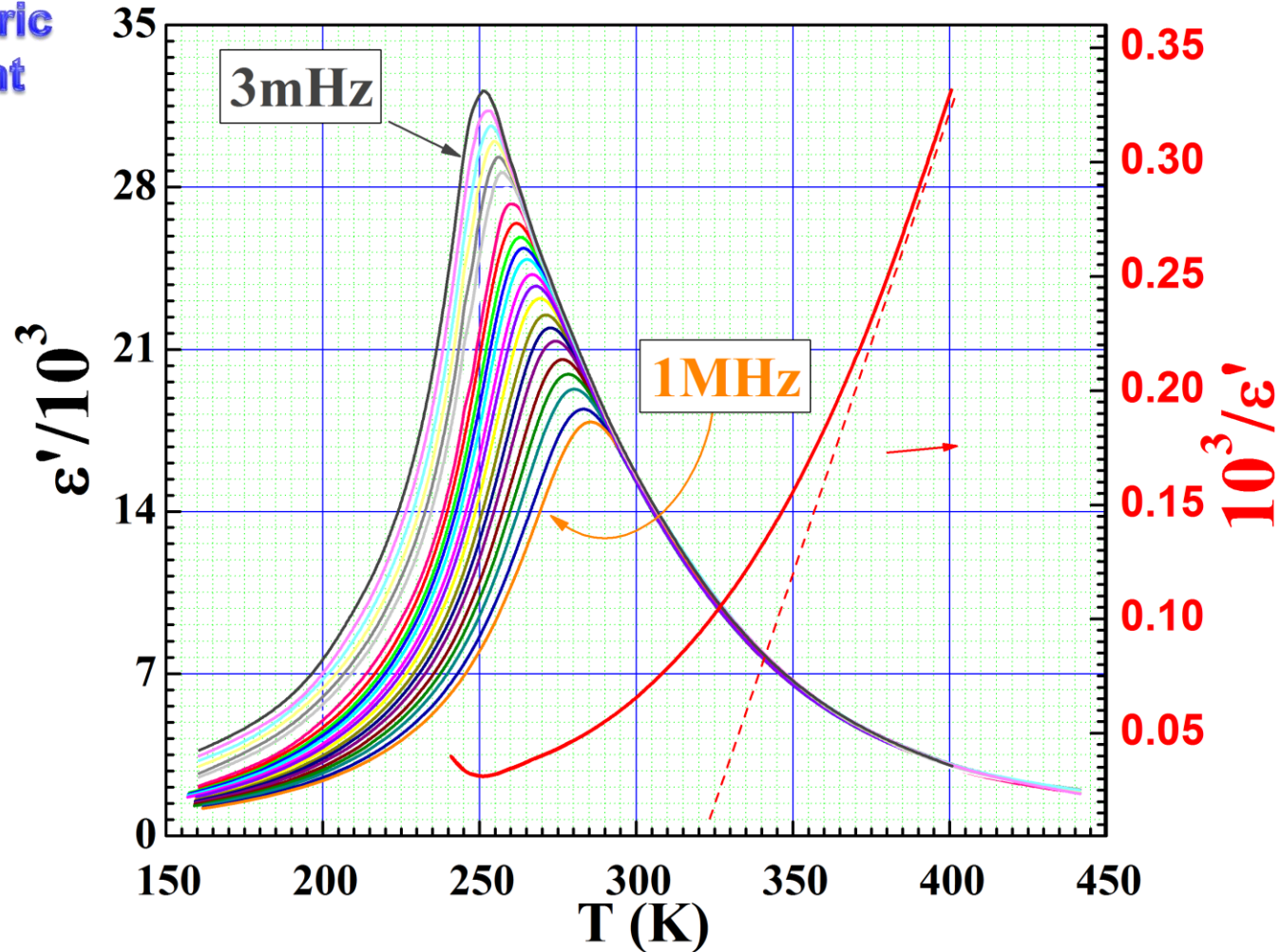
Origin graphs. Examples.

Ferroelectric
Experiment



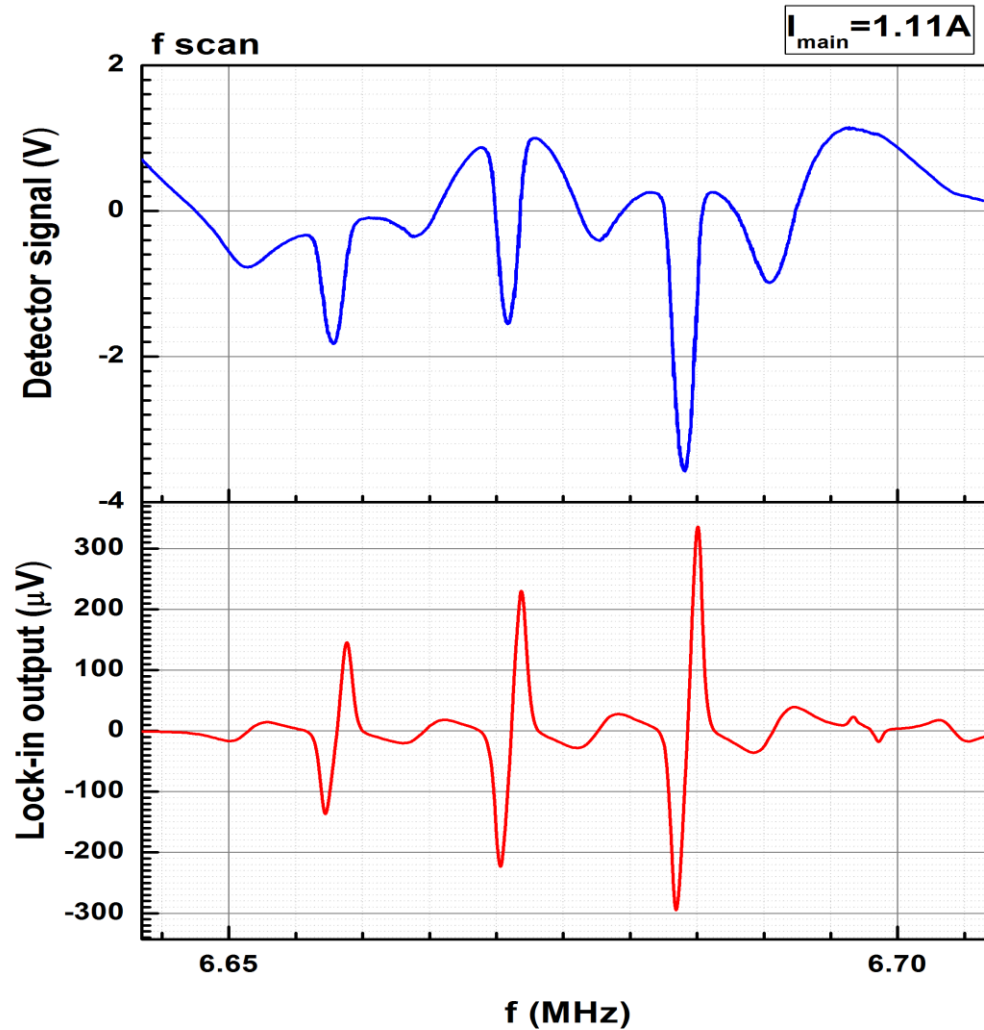
Origin graphs. Examples.

Ferroelectric
Experiment



Origin graphs. Examples.

Optical
pumping

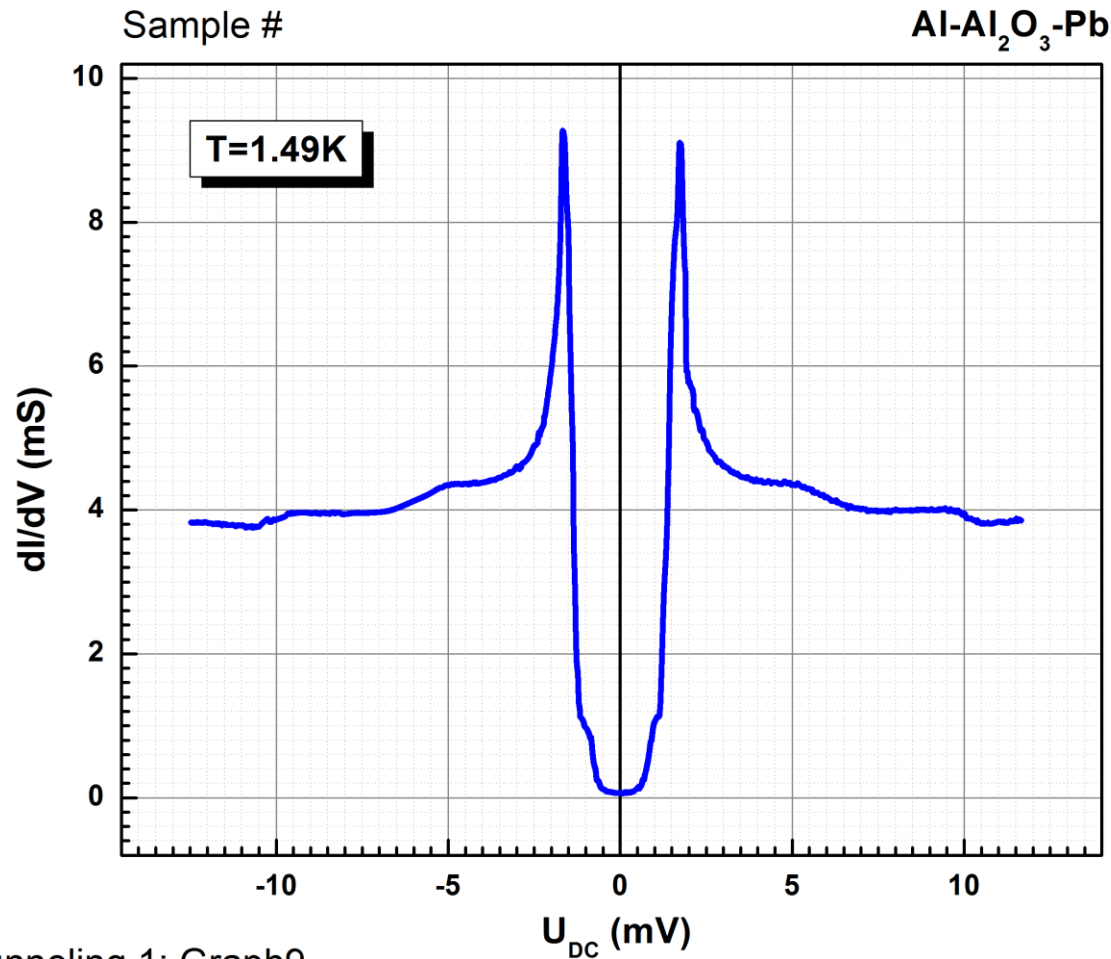


Mapping 0.5-2.5A from March 1st 2012: Graph7



Origin graphs. Examples.

Tunneling
Experiment



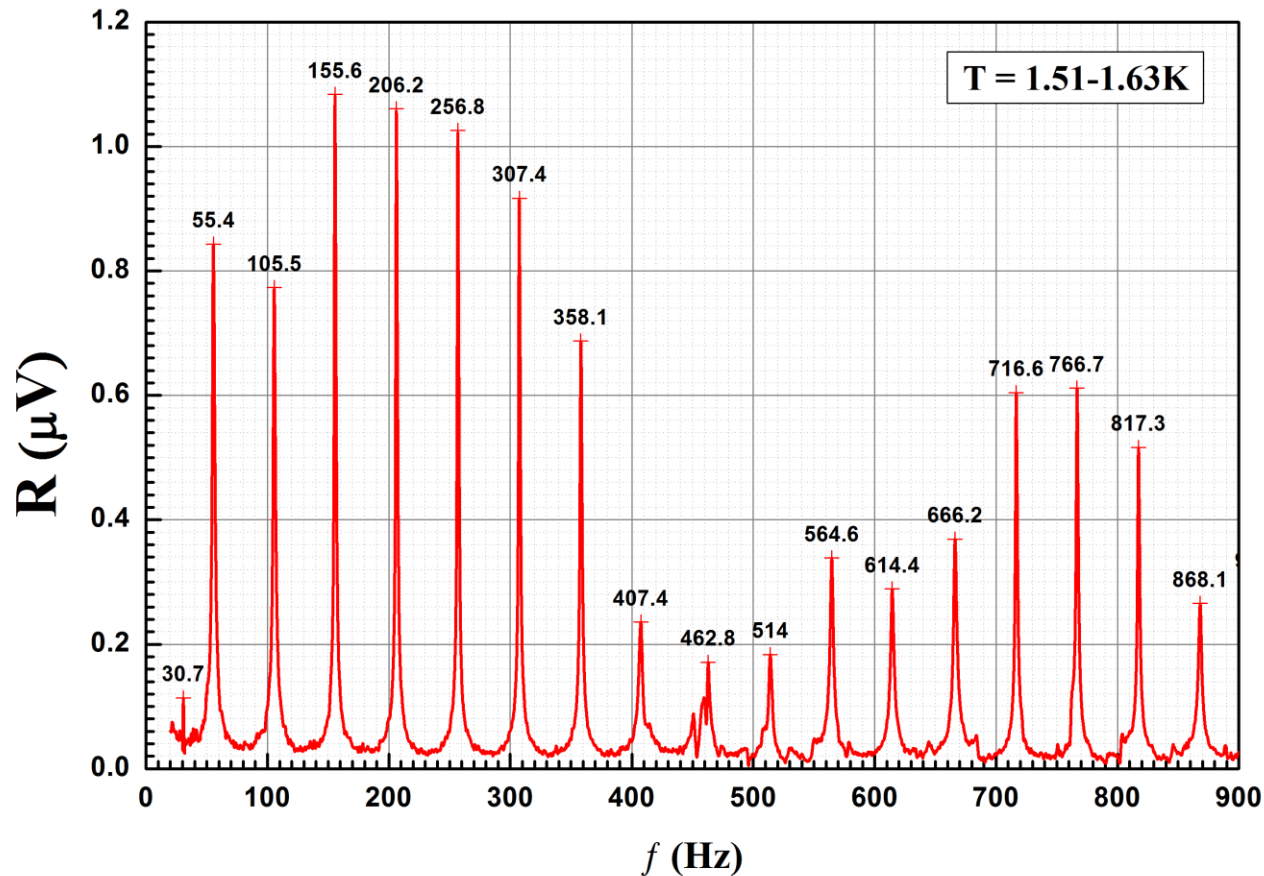
Tunneling 1: Graph9

Sample n2 run8 zoom temp 1.55K



Origin graphs. Examples.

Second
sound



Origin graphs. Examples.

Magnet mapping

