To Plot a Graph in Origin

Example: Number of Counts from a Geiger-Müller Tube as a Function of Supply Voltage

Digression on Error Bars

- What entity do you use for the magnitude of the error bars?
- Standard Deviation
  - Assumes data are “normally distributed”
  - A given measurement has a 68% probability of falling within σ of the mean of the measurements
  - It has a 95.5% probability of falling within 2xσ.
  - Standard deviation only gives information about how close to the mean any given measurement can be expected to be.
  - Value of standard deviation depends little on number of measurements
  - Standard deviation is not useful for generating error bars.

Error Bars

- Standard Deviation of the Mean (SDoM)
  - Aka “Standard Error of the Mean”
  - Refers to the distribution of means (averages) of a series of measurements about the population mean.
    - Remember that the population mean is what you get by taking a census of all members of the population
  - There is a 68% probability that the mean of your measurements lies within one standard deviation of the mean of the true mean of the entire population. Get that?
- Good news: Mean of measurements approaches population mean with increasing number of measurements
- Bad news: Only approaches as $1/\sqrt{N}$
- SDoM approaches zero with increasing number of measurements

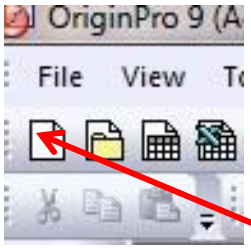
Error Bars

- The entity you want to plot as error bars is the Standard Deviation of the Mean ("Standard Error" for Origin).
  - Excel will calculate the Standard Deviation of a series of data/measurements
  - Excel will also determine the number of measurements
    - Rarely useful
    - How would you not know how many data you took?
    - Not equal to number of rows of data in Excel?
  - SDoM = SD/SQRT(N)

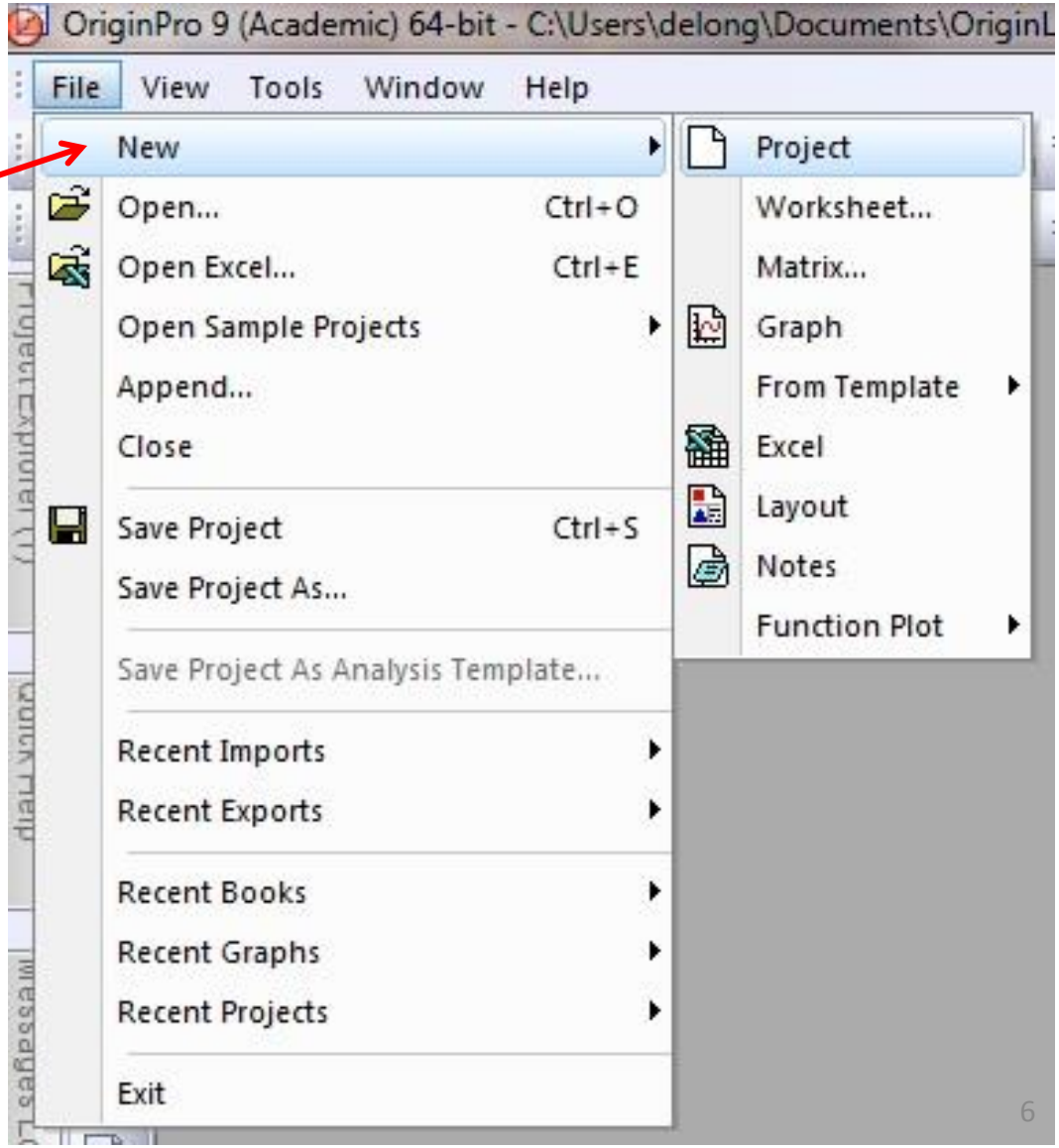
Back to Plotting in Origin with Error Bars

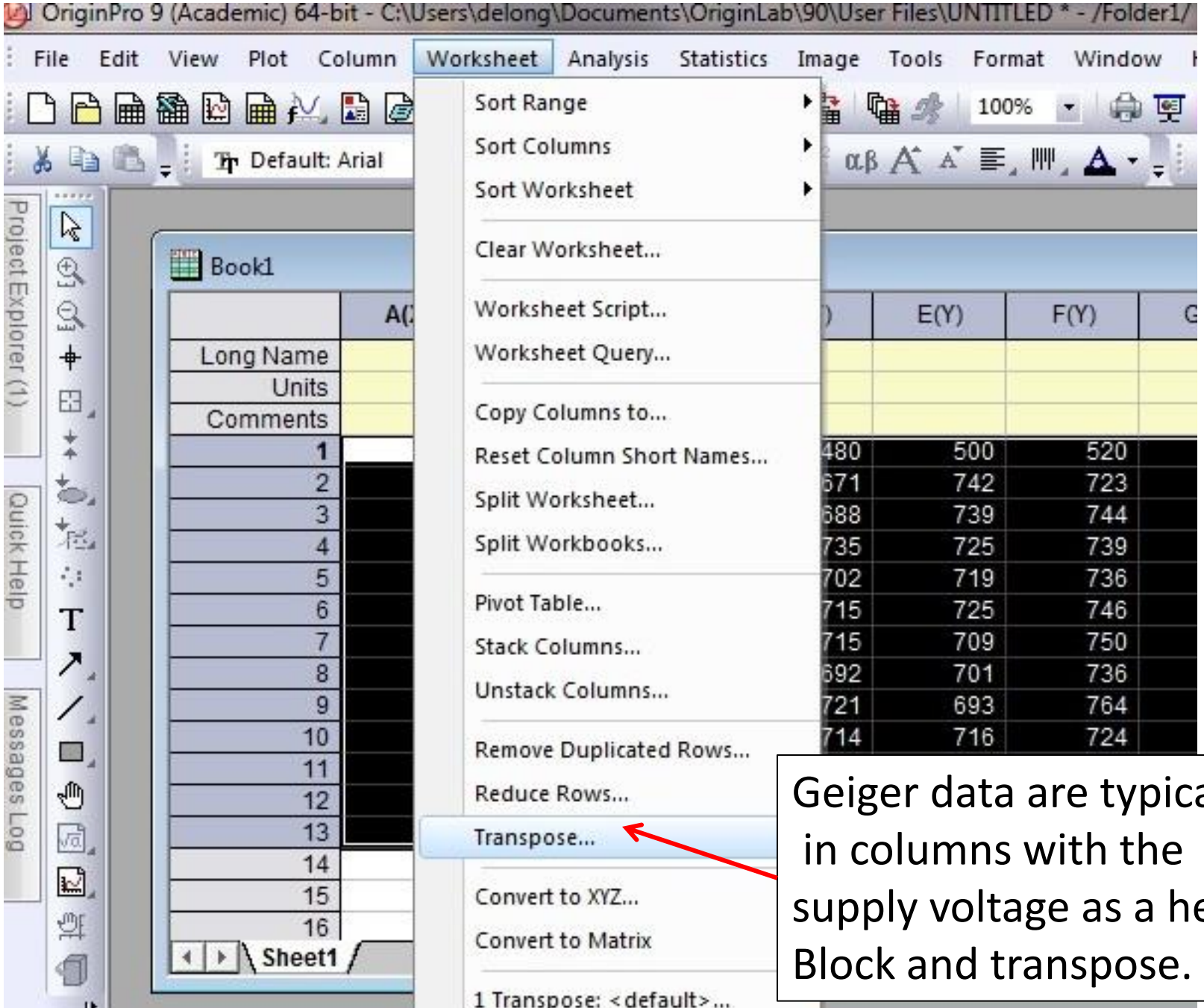
- File:New or the New Project icon (next slide)
- Enter data (two slides down)
  - Manually (e.g. Pendulum)
  - Copy and paste
  - From Excel…
  - Data

Getting Started in Origin



New project





Geiger data are typically in columns with the supply voltage as a header. Block and transpose.

Plotting in Origin, cont'd

- Data to be plotted horizontally ("independent variable") must be in first column set as X or you may use another column set as Y and change it to X
- Data to be plotted vertically ("dependent variable", typically multiple measurements thereof) must be in columns to right of x-values
- If initial format is opposite (e.g. Geiger data)
  - Worksheet:Transpose: Open Dialog:Ok (two slides down)

Format for generating mean, SD and SDoM

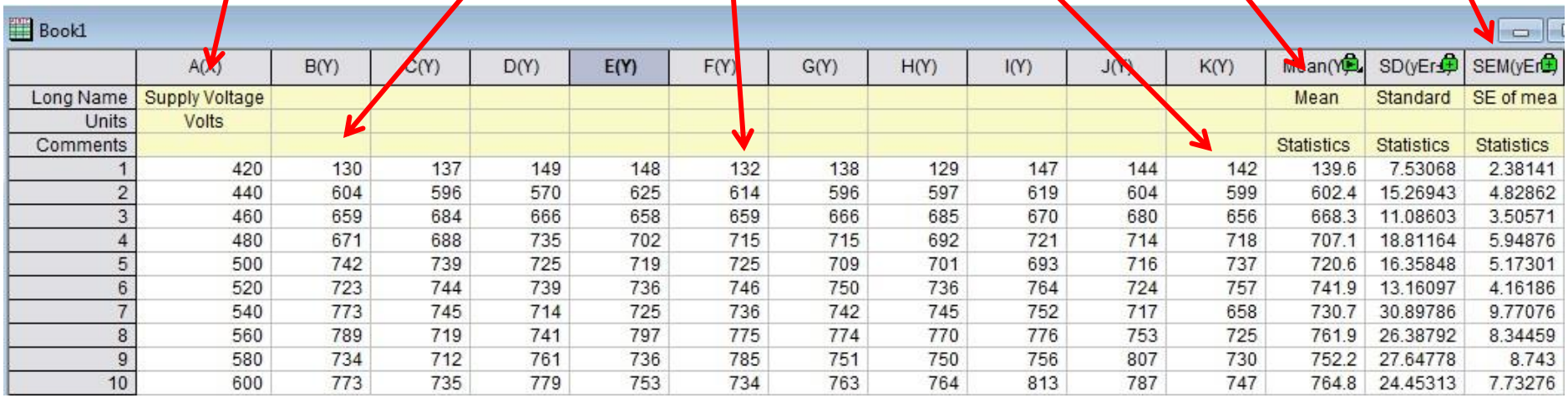
- Block all (only) data for statistical analysis…click and drag…like blocking in any program?
- Statistics:Descriptive statistics:Statistics on rows (or “on columns” if your data are displayed in that way) :Open dialog
  - De-select everything, specifically including the “Optional Report” and “Quartiles”, except Mean, SD and (add) Standard Error of Mean.
- Ok
- Mean, Standard Deviation and Standard Error of Mean will appear in columns to the right of data or in a new sheet

"Independent variable" values

Multiple values of dependent variable

Mean

SDoM

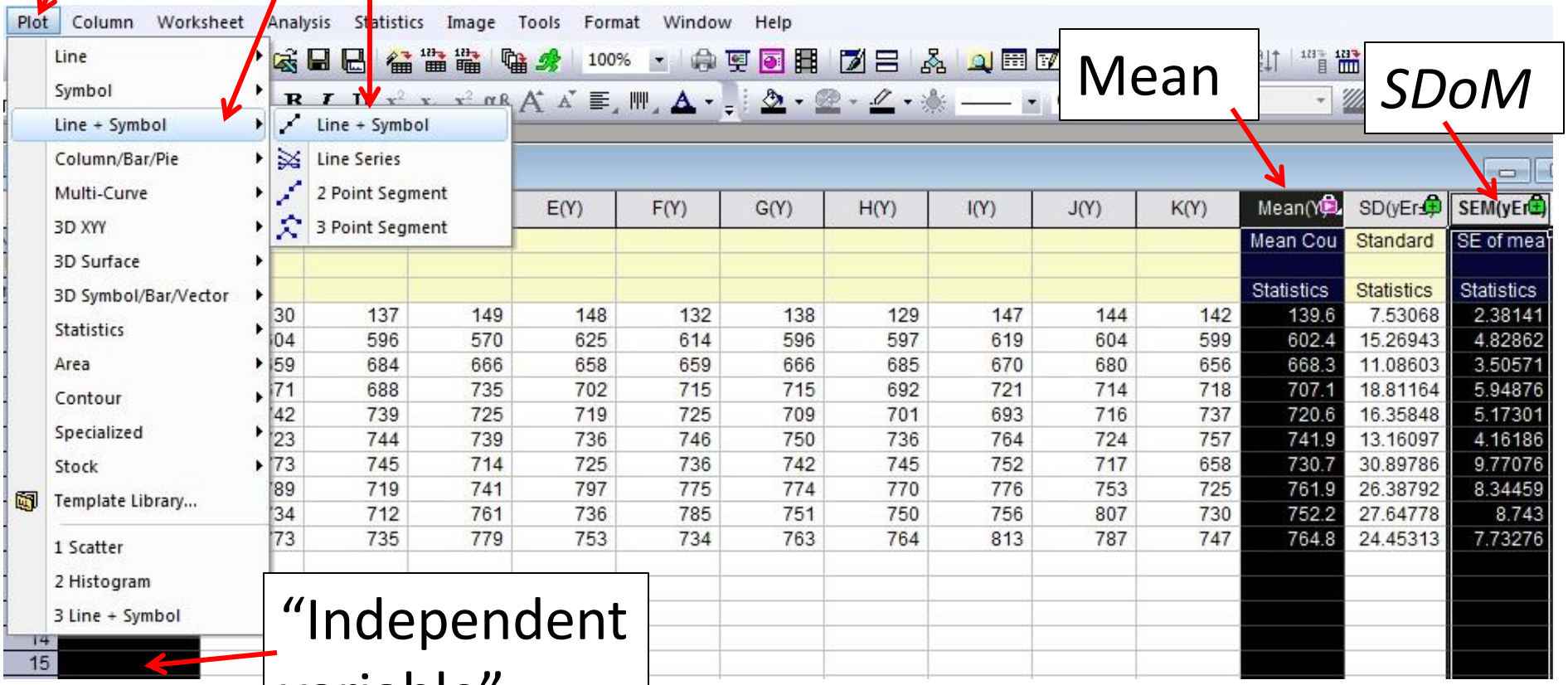


Book1

	A(X)	B(Y)	C(Y)	D(Y)	E(Y)	F(Y)	G(Y)	H(Y)	I(Y)	J(Y)	K(Y)	Mean(Y)	SD(yEr)	SEM(yEr)
Long Name	Supply Voltage											Mean	Standard	SE of mea
Units	Volts													
Comments												Statistics	Statistics	Statistics
1	420	130	137	149	148	132	138	129	147	144	142	139.6	7.53068	2.38141
2	440	604	596	570	625	614	596	597	619	604	599	602.4	15.26943	4.82862
3	460	659	684	666	658	659	666	685	670	680	656	668.3	11.08603	3.50571
4	480	671	688	735	702	715	715	692	721	714	718	707.1	18.81164	5.94876
5	500	742	739	725	719	725	709	701	693	716	737	720.6	16.35848	5.17301
6	520	723	744	739	736	746	750	736	764	724	757	741.9	13.16097	4.16186
7	540	773	745	714	725	736	742	745	752	717	658	730.7	30.89786	9.77076
8	560	789	719	741	797	775	774	770	776	753	725	761.9	26.38792	8.34459
9	580	734	712	761	736	785	751	750	756	807	730	752.2	27.64778	8.743
10	600	773	735	779	753	734	763	764	813	787	747	764.8	24.45313	7.73276

Plot

Line + Symbol



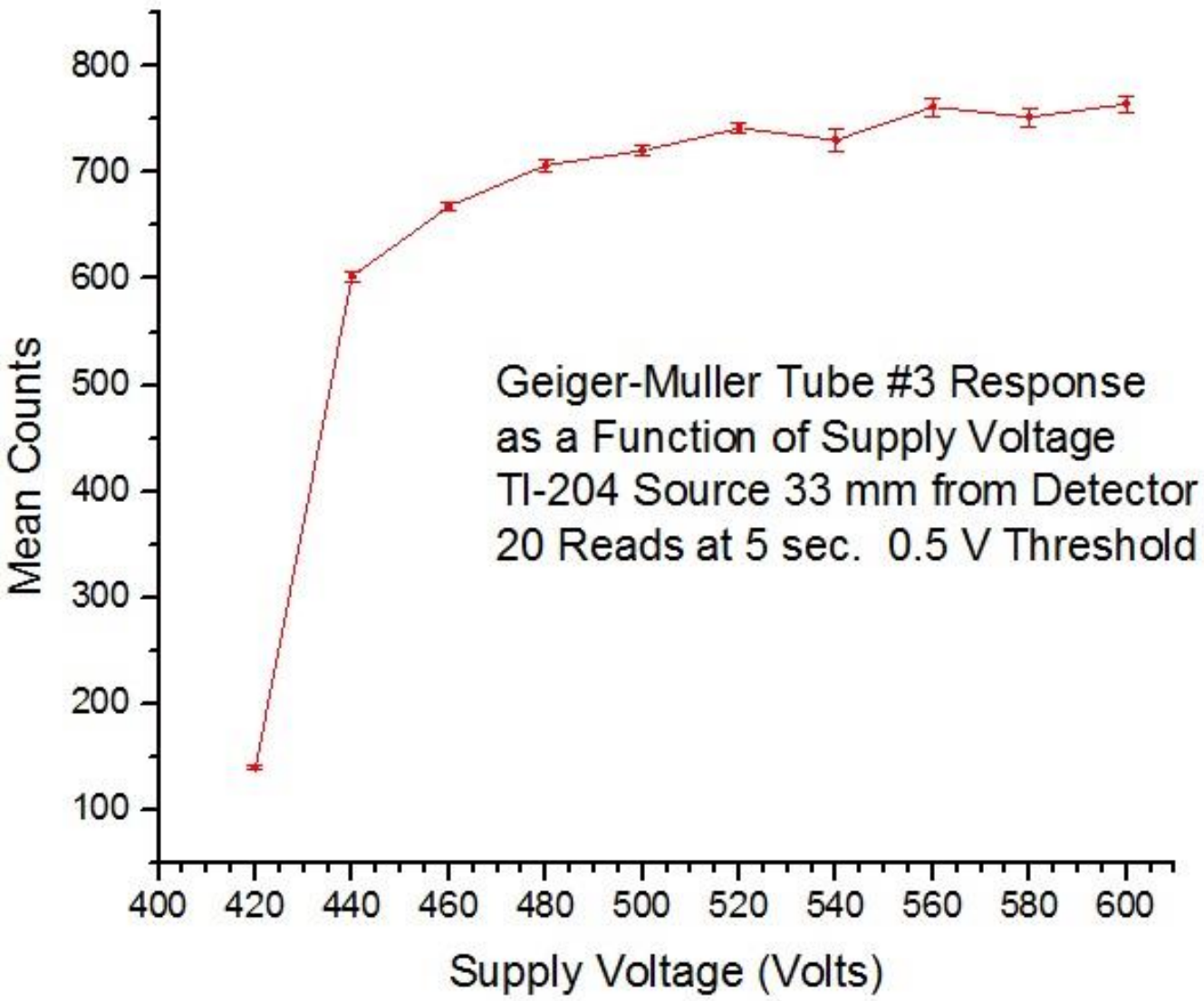
Mean

SDoM

"Independent variable" values

- Block the first column [A(x)], [CTRL: click above column] the third from last [Mean] and last [SE of Mean] columns
- Plot:Line:Scatter
- If you double click on the plot (line or point) a menu appears allowing you to choose line and line+symbol curve, line or symbol shape, size and color, etc.
  - If your data are any good you will have to choose much smaller symbols to see your error bars!

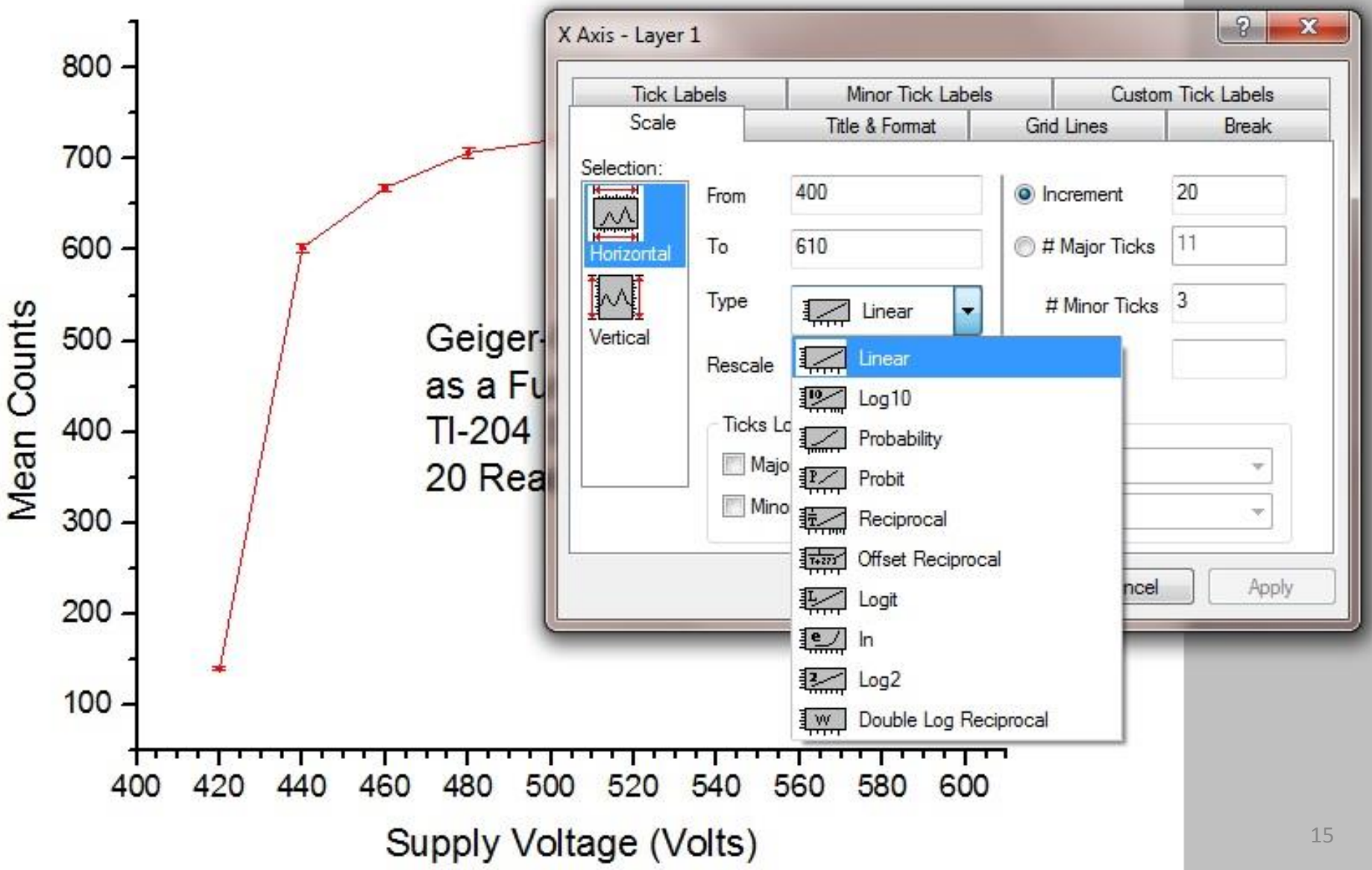
Voilà! A plot!


Mean Counts
800
700
600
500
400
300
200
100
400
420
440
460
480
500
520
540
560
580
600
Supply Voltage (Volts)
Geiger-Muller Tube #3 Response
as a Function of Supply Voltage
Tl-204 Source 33 mm from Detector
20 Reads at 5 sec. 0.5 V Threshold

Changing Plotting Parameters

- Double click on axes to change parameters therein
- Click on “T” on the left bar to add text (like the title of your graph!)
- If you entered text for “Long name” and “Units” in the headers of the “Sheet” in the “Book” they will appear as axis labels.

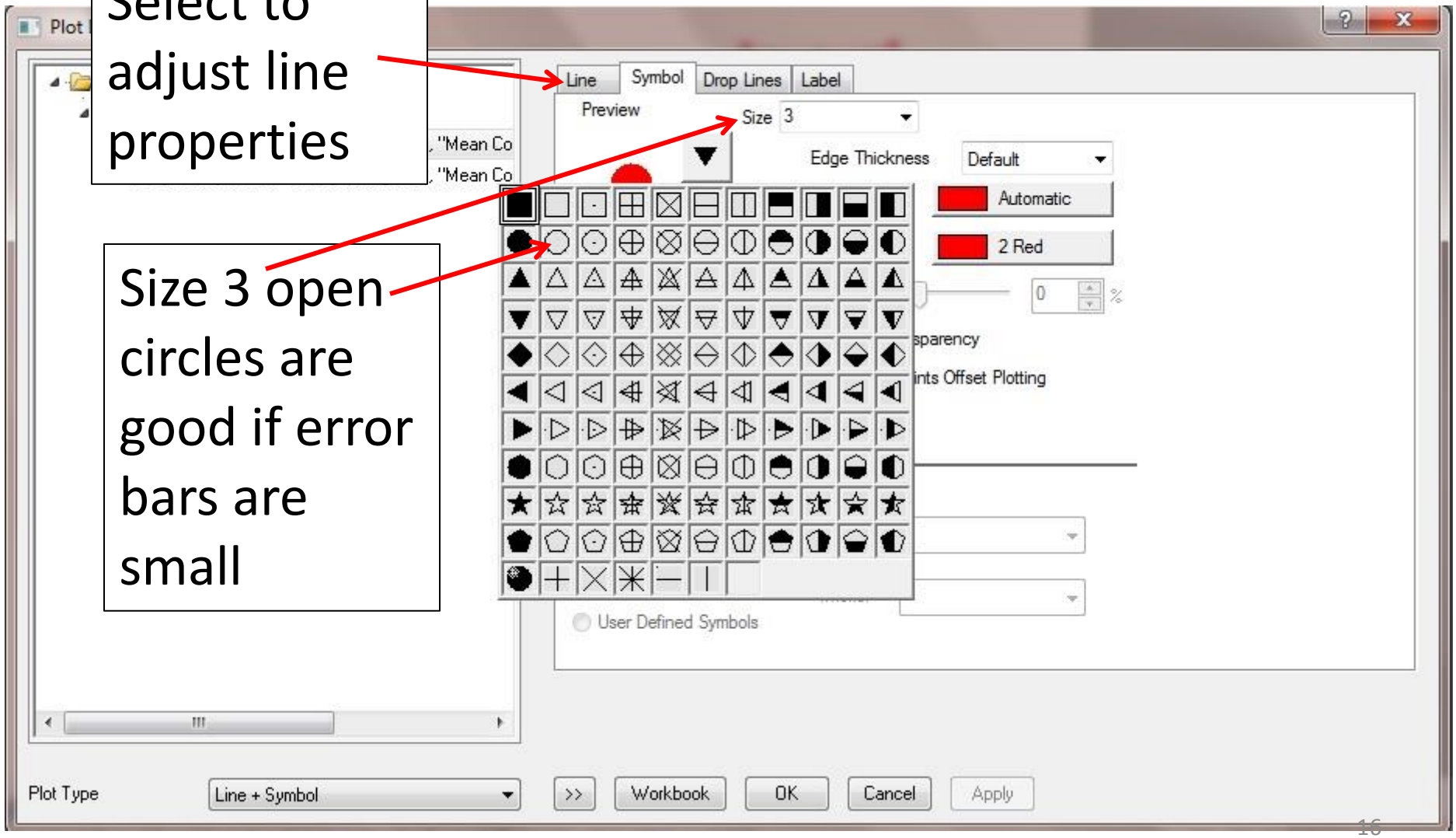
Adjust Axis Parameters



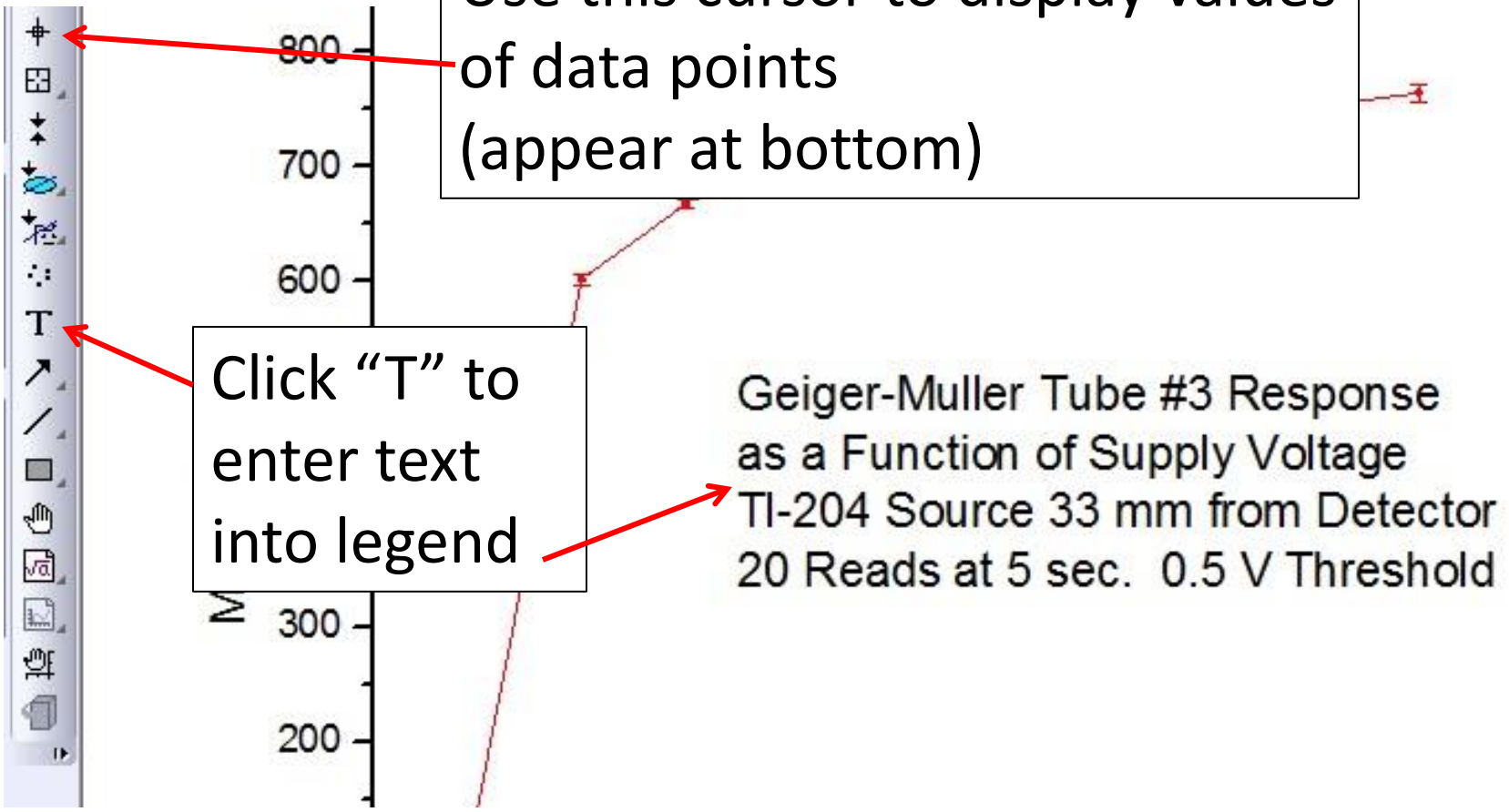
Adjust Plot Details

Select to adjust line properties

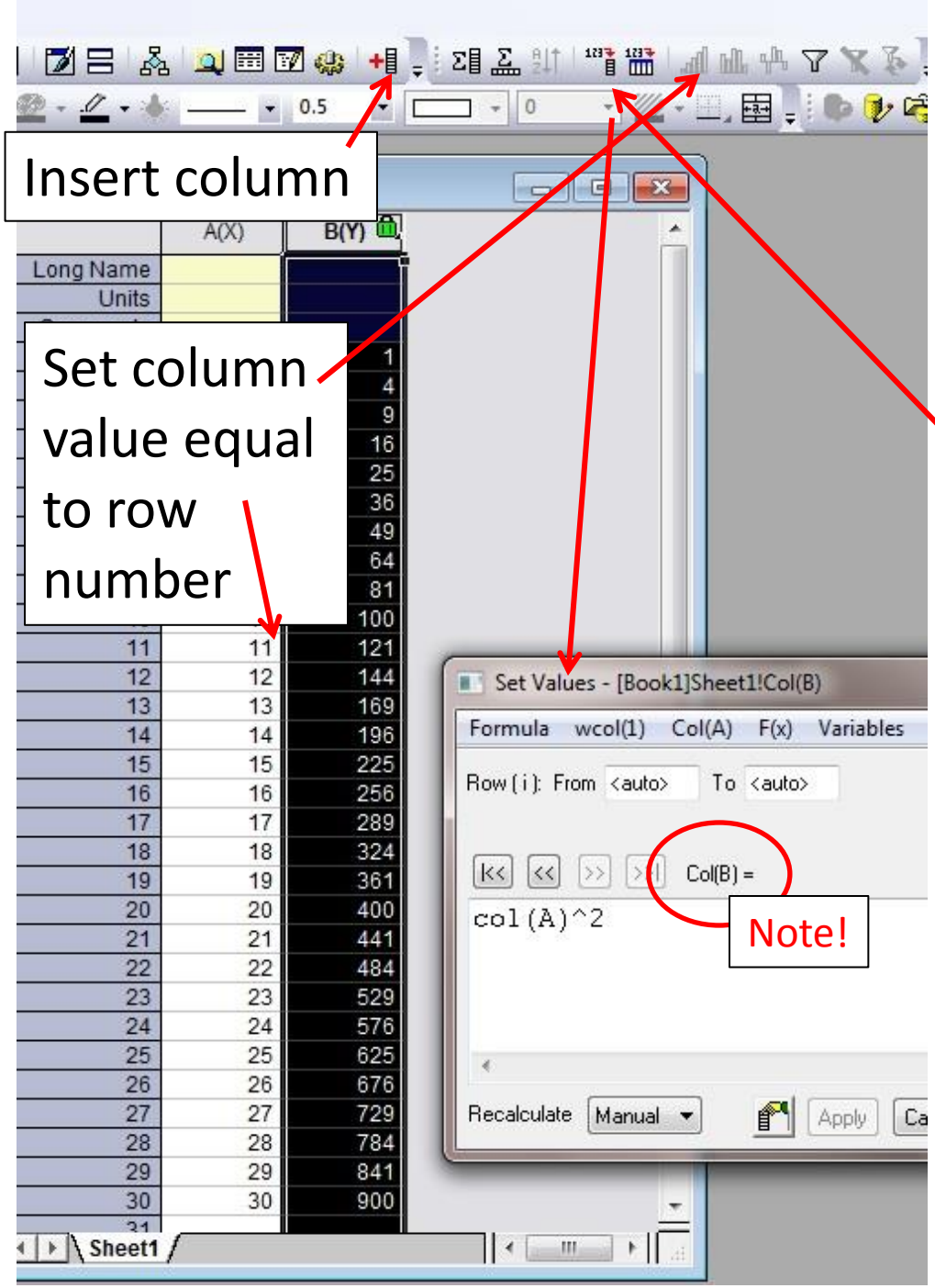
Size 3 open circles are good if error bars are small



Adding a Legend



Column Manipulations



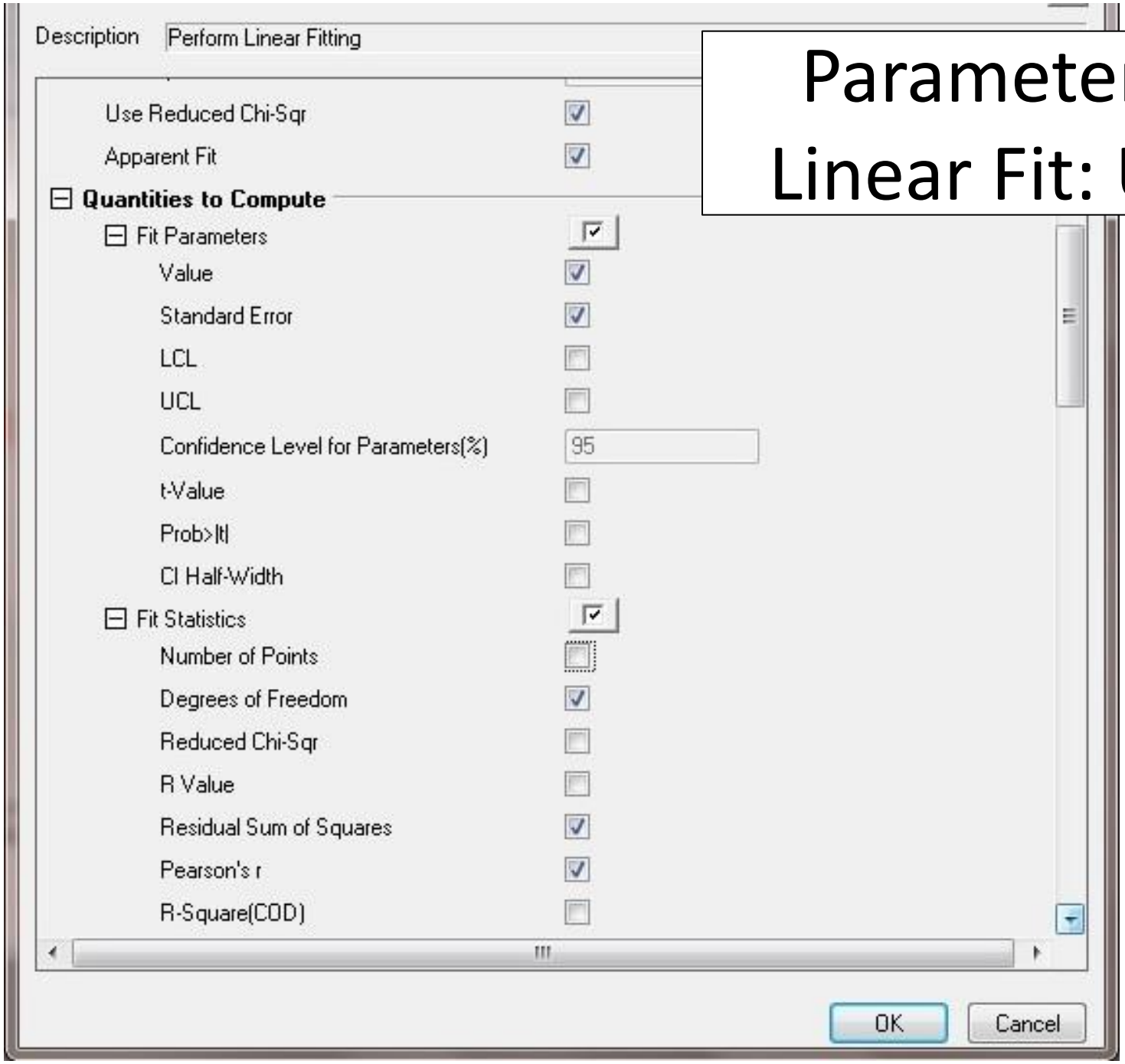
Select column where results are to appear, here B.
Click the icon to “Set column values”
Syntax: You are telling the program to generate in the new column rows whose values are the result of operating on the adjacent values in the named column [in this case col(A)] in the specified manner [in this case squared]

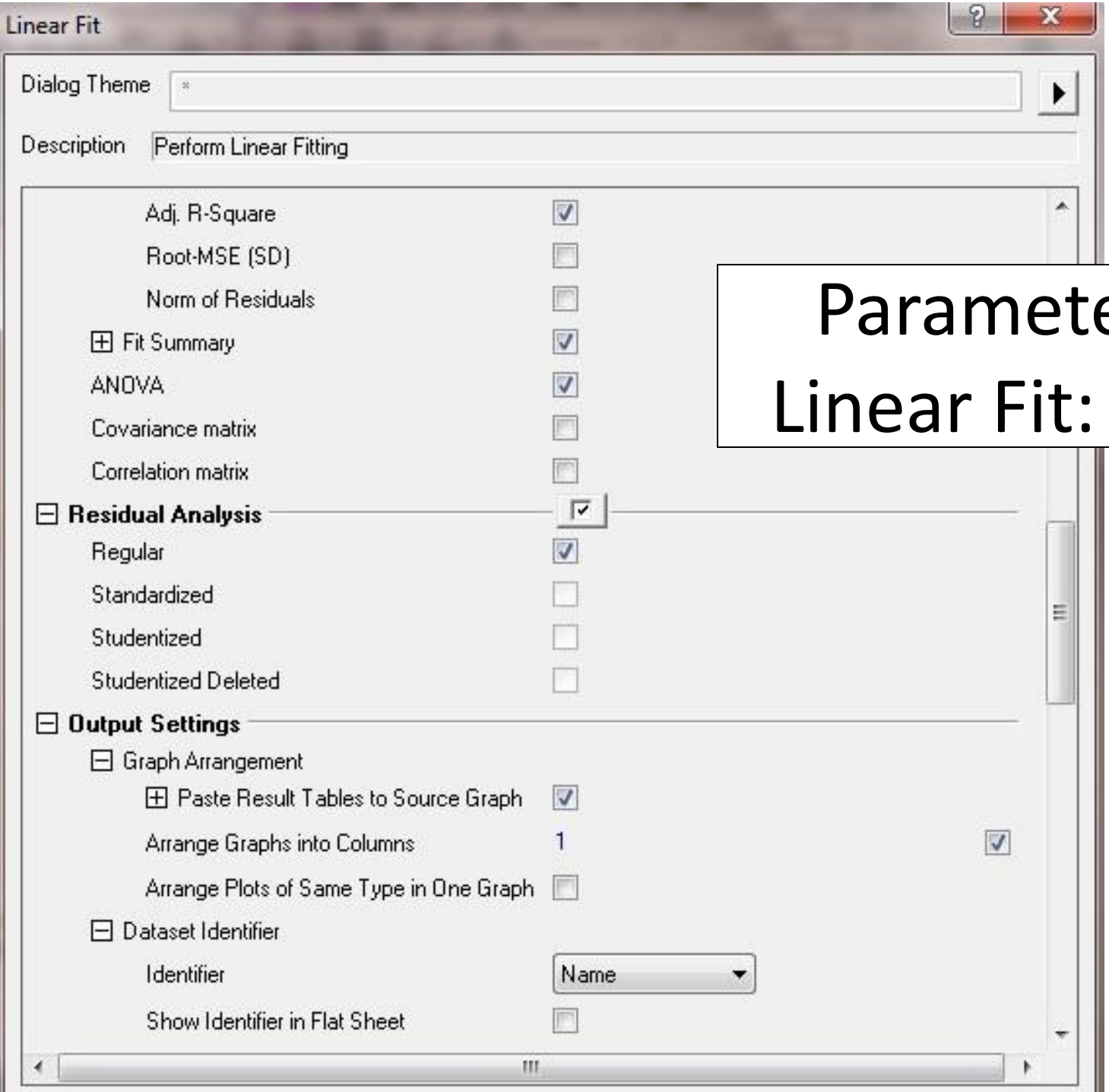
Linear Least Squares Fitting

- Plot data!
- Analysis: Fitting: Linear Fit: Open Dialog
  - “Residual sum of squares” is another name for chi squared
  - Check “R-value” or “R-square” (this is the correlation coefficient)
  - Assure that it is checked!
  - Also check “Reduced chi Sqr” (for G-M experiment)
  - Also assure that Residual Analysis: Regular is checked
  - Uncheck the “Adj. R-Square” and “Pearson’s r” (their formulas are not the typical ones for the correlation coefficient R or r)

- Alternatively
  - Enter all data into Excel
  - Calculate mean, Standard Deviation and Standard Deviation of the Mean
  - Transfer relevant rows to empty Book in Origin
  - Worksheet/Transpose/Dialog/OK
- Plot:Line:scatter
- Select columns to plot
  - A(X) for X
  - B(Y) for Y
  - C2(Y) for YEr
- Adjust symbols, line, axes and labels as appropriate
- Use “T” icon on left to generate plot label

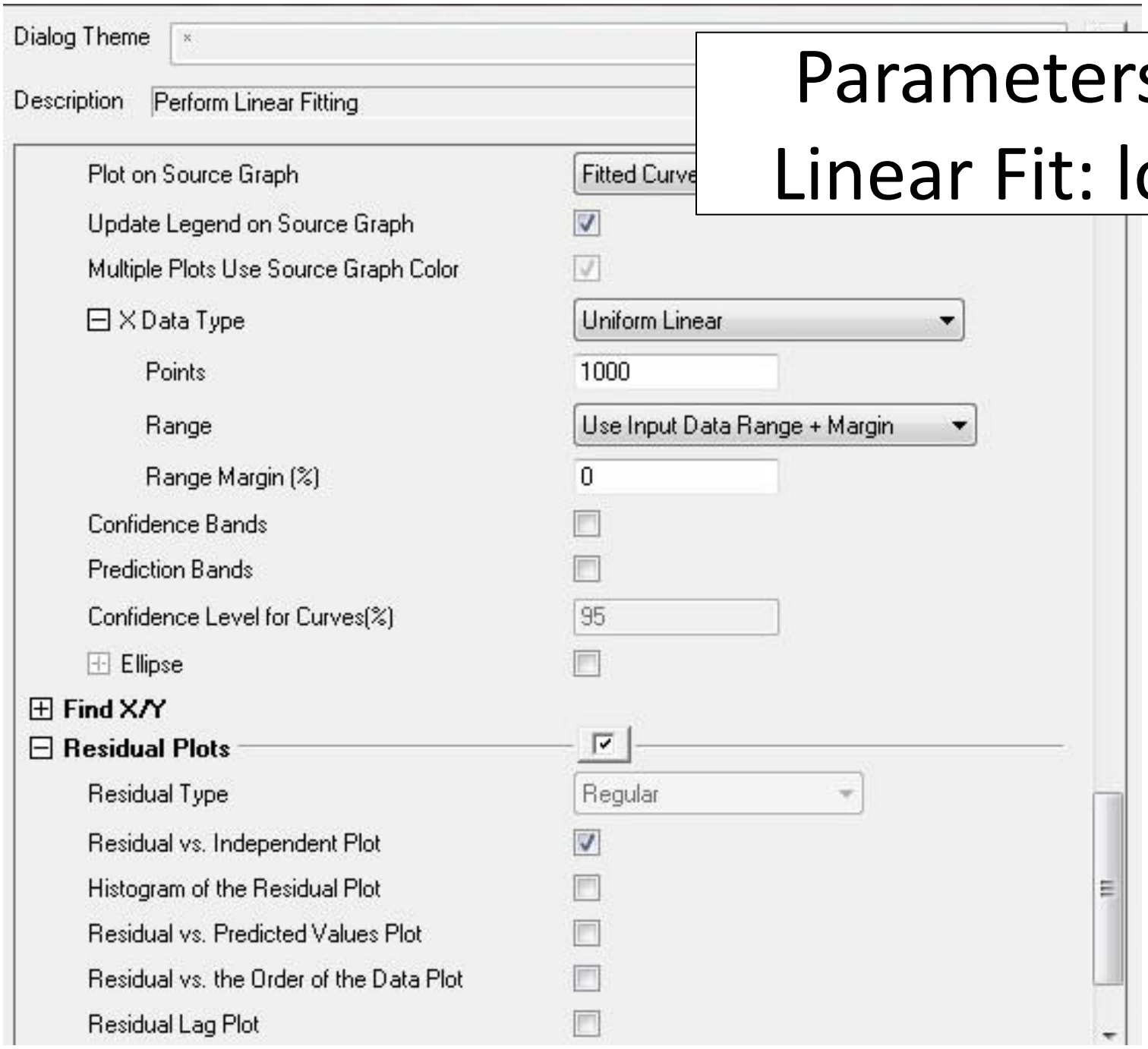
Parameters for Linear Fit: Upper





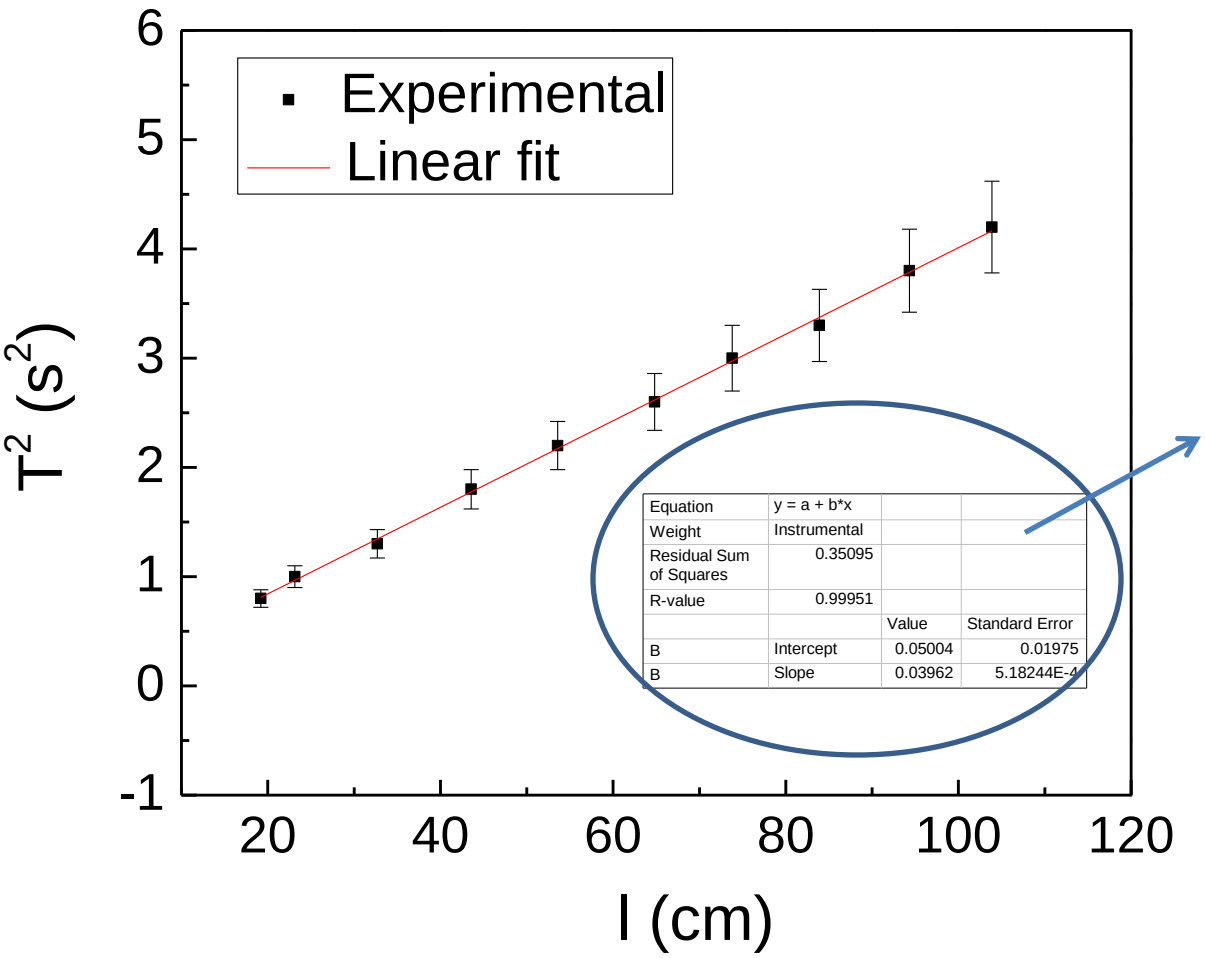
Parameters for Linear Fit: Middle

Parameters for Linear Fit: lower



Plotted Data with Fit and Error Bars

Example: pendulum experiment



Info about the linear fit (next slide)

- Info about the linear fit (from previous slide graph):

Equation	y = A + Bx			
Weight	Instrumental			Considering error bars
Residual Sum of Squares	0.35095			Chi-squared ($\chi 2$) considering error bars
R-value	0.99951			Correlation coefficient (r or R)
		Value	Standard Error	Value and Absolute error
A	Intercept	0.05004	0.01975	
B	Slope	0.03962	5.18244E-4	

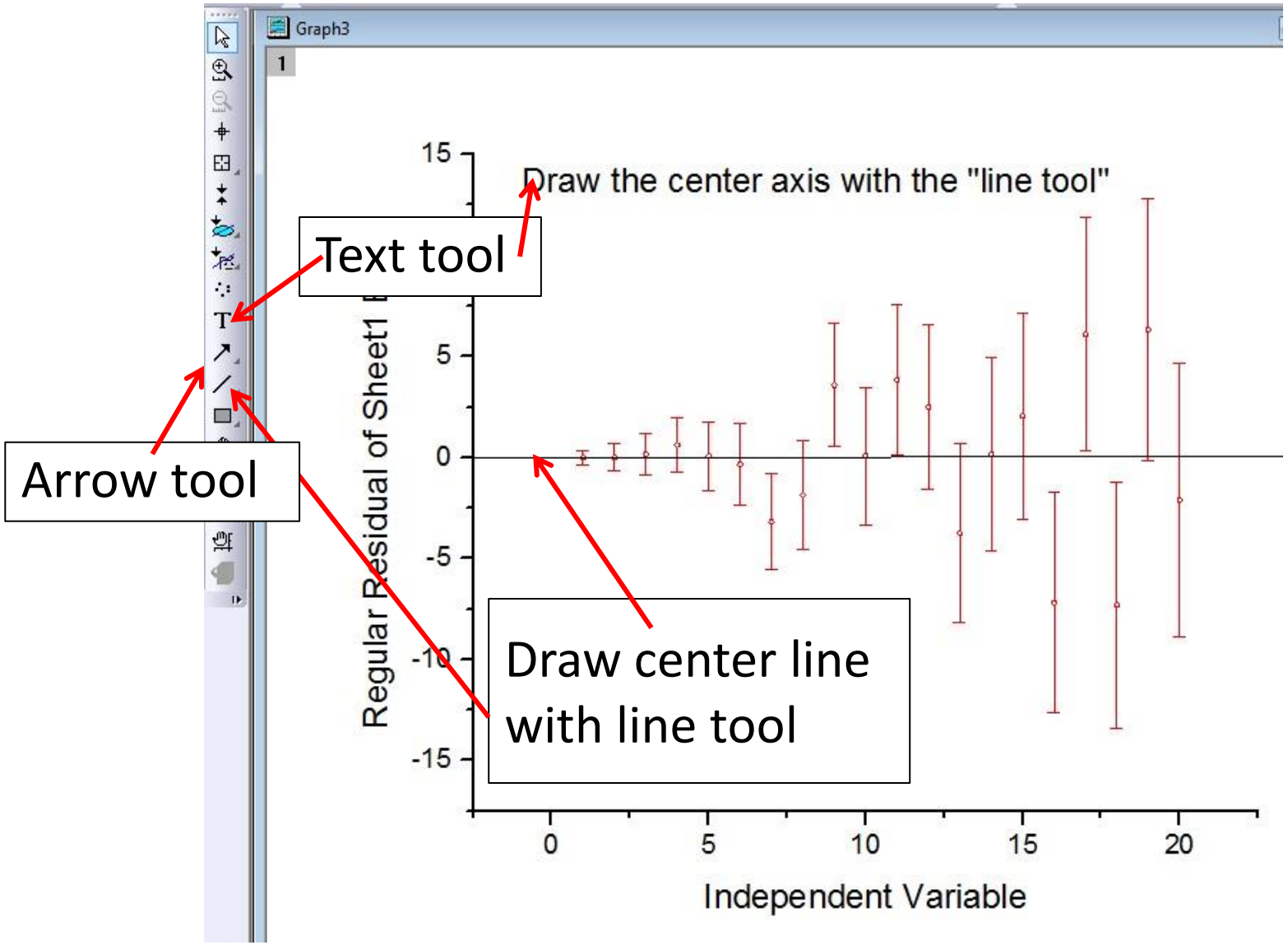
Residual Plot with Error Bars

- Residual values will appear as a new column in the sheet “FitLinearCurve1”
- Retrieve error bar magnitudes from original calculations [column SEM(yEr)]
- Plot residual values with error bars as a function of y-data as usual

A3(X2)	A4(Y2)	A(Y2)
Independent Variable	Regular Residual of Sheet1 C"Y"	Error bars
1	0.01774	0.34
2	-0.30879	0.68
3	0.55795	1.02
4	0.52993	1.36
5	-0.27298	1.7
6	1.20008	
7	-3.66752	
8	0.78302	
9	2.06146	
10	3.06399	
11	-5.2316	
12	0.91976	
13	-4.87794	
14	-7.84186	
15	5.47137	5.1
16	0.73543	5.44
17	0.65829	5.78
18	4.92268	6.12
19	5.60616	6.46
20	-2.40591	6.8

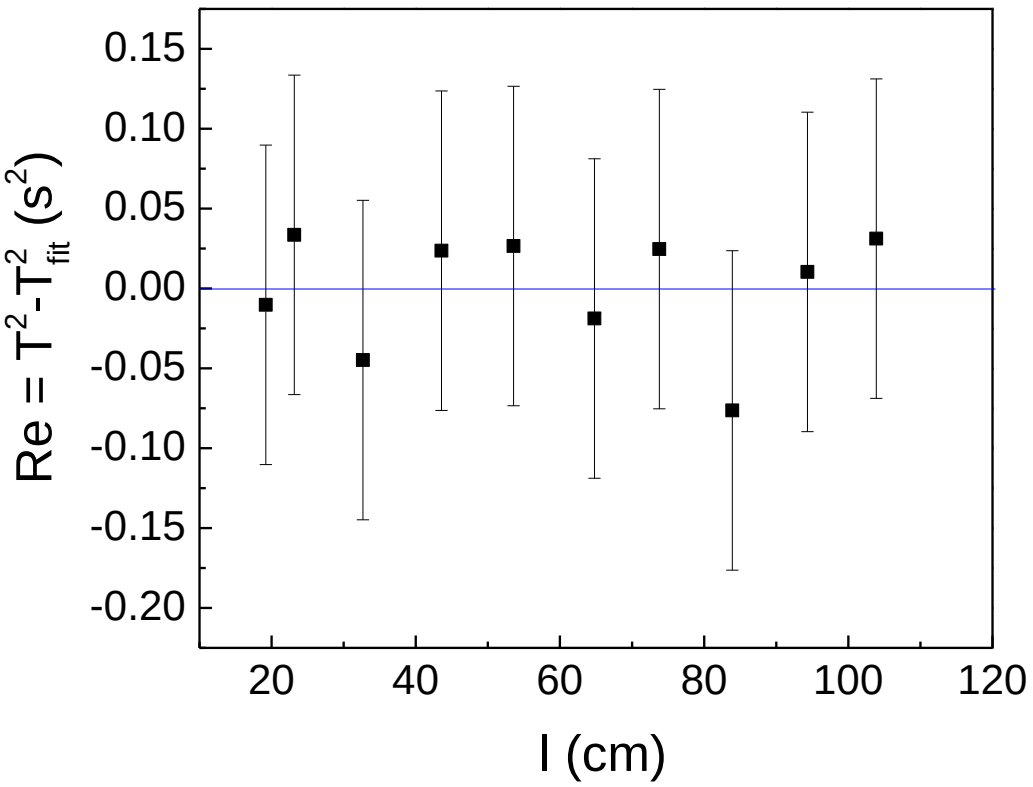
Data for Residual Plot: FitLinearCurve1 Sheet

Test Fit Residuals with Error Bars



Residual plot for the example on slide 24 (pendulum experiment)

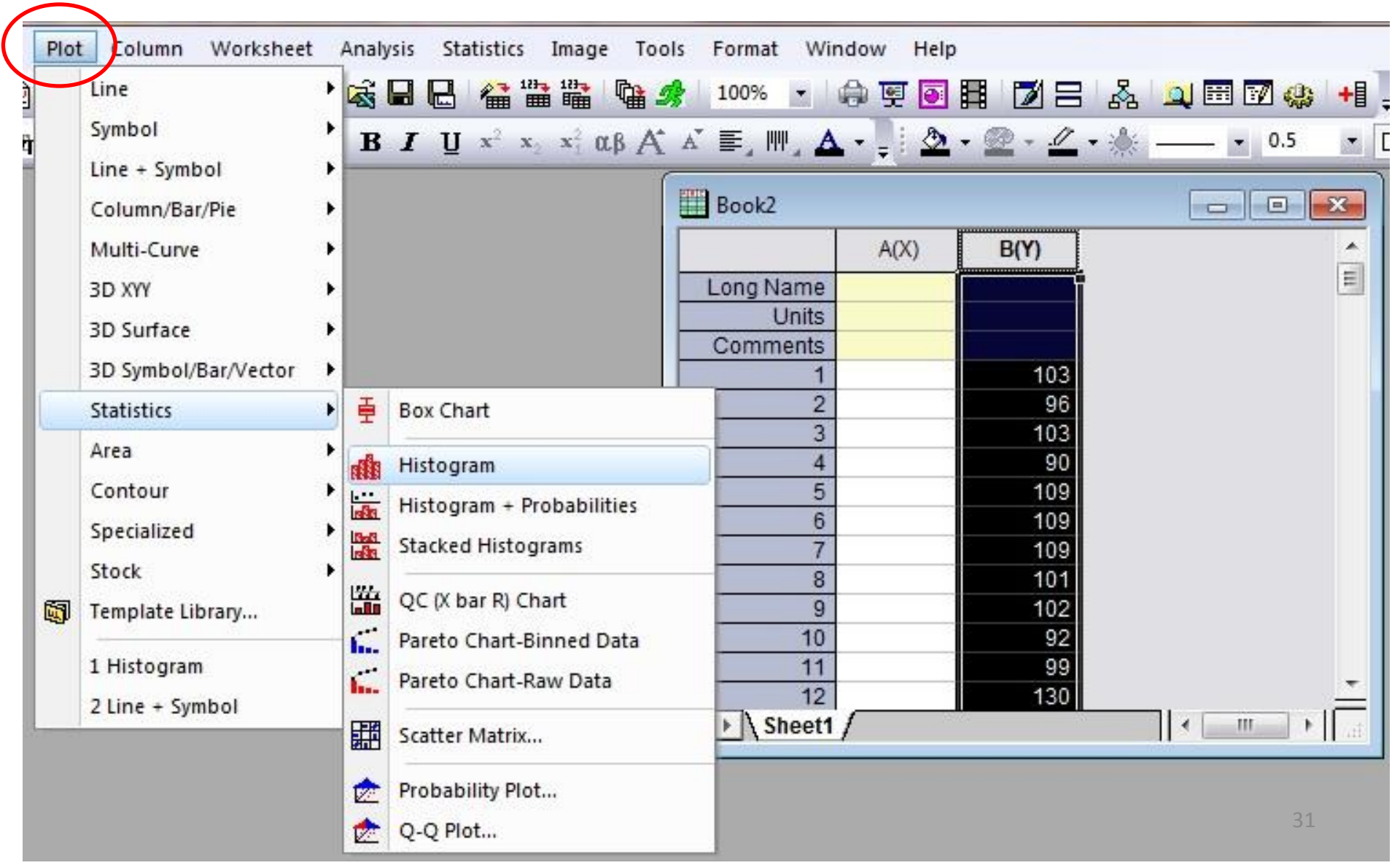
Plotting $Re = T^2 - T^2_{fit}$ vs. l with error bars for δT^2:



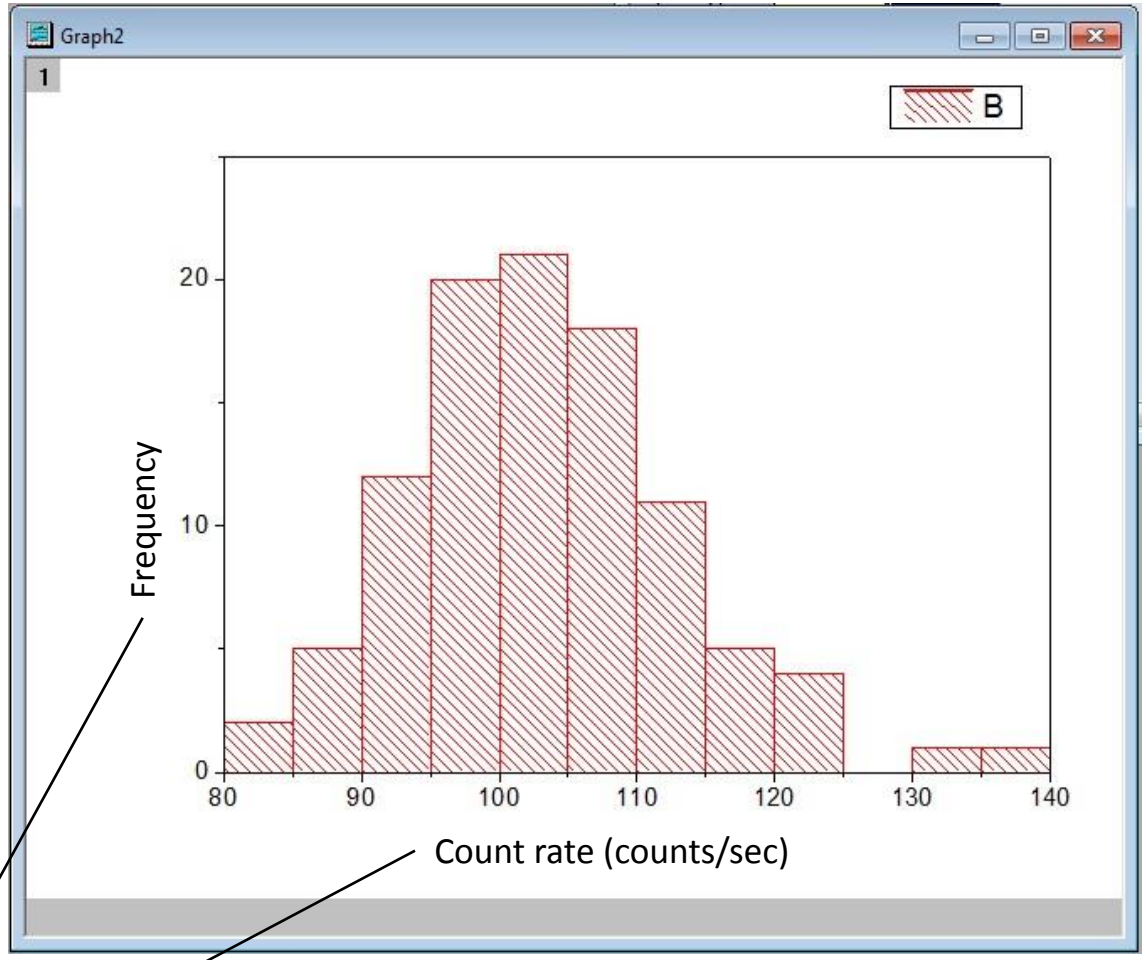
Generating and Fitting a Histogram

- Import data to be plotted into a Y-column of a new book/worksheet.
  - The x-column doesn't work, even if you have only one set of data to generate a histogram. Don't ask.
- Block those data (CTRL click above column)

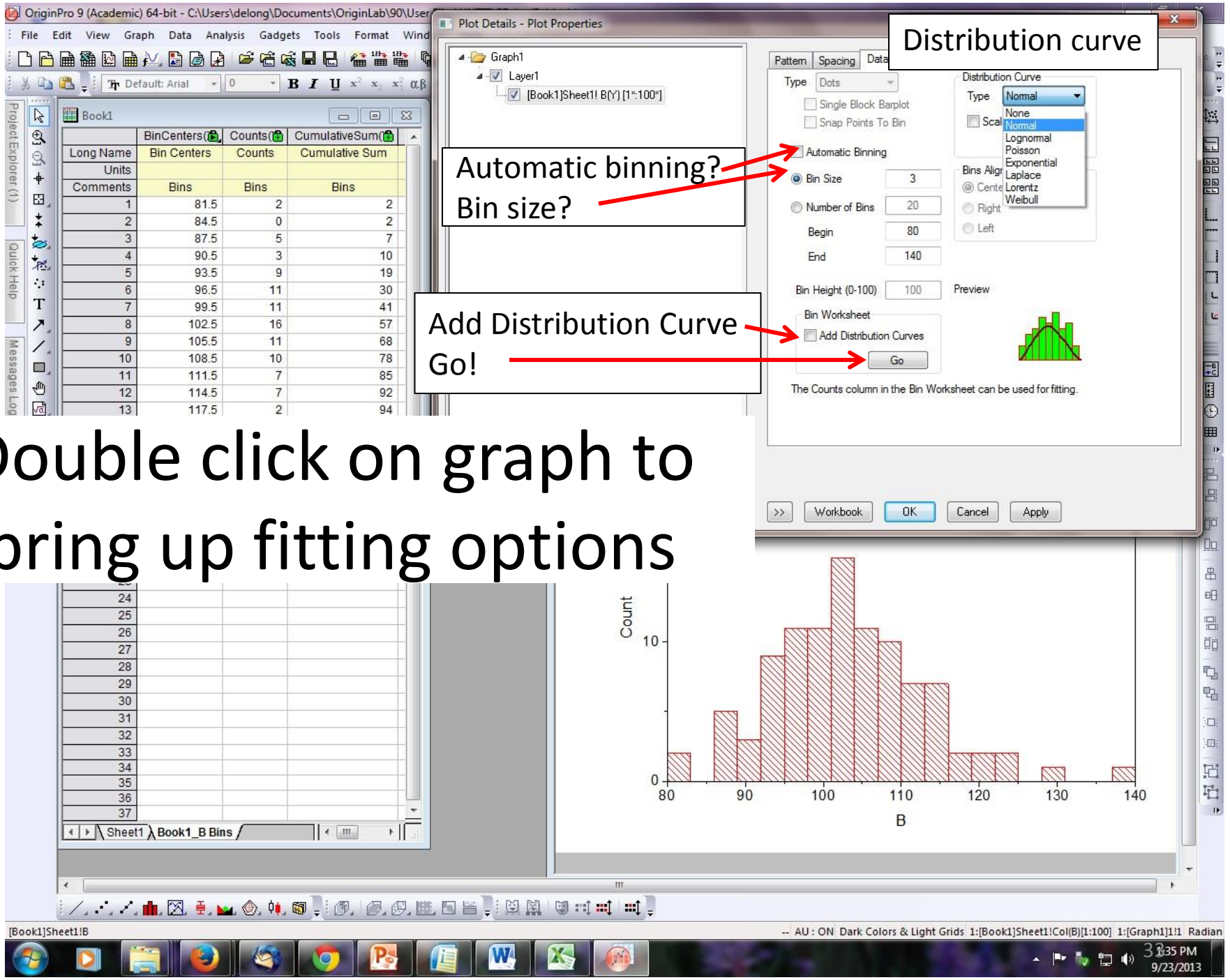
To Plot a Histogram



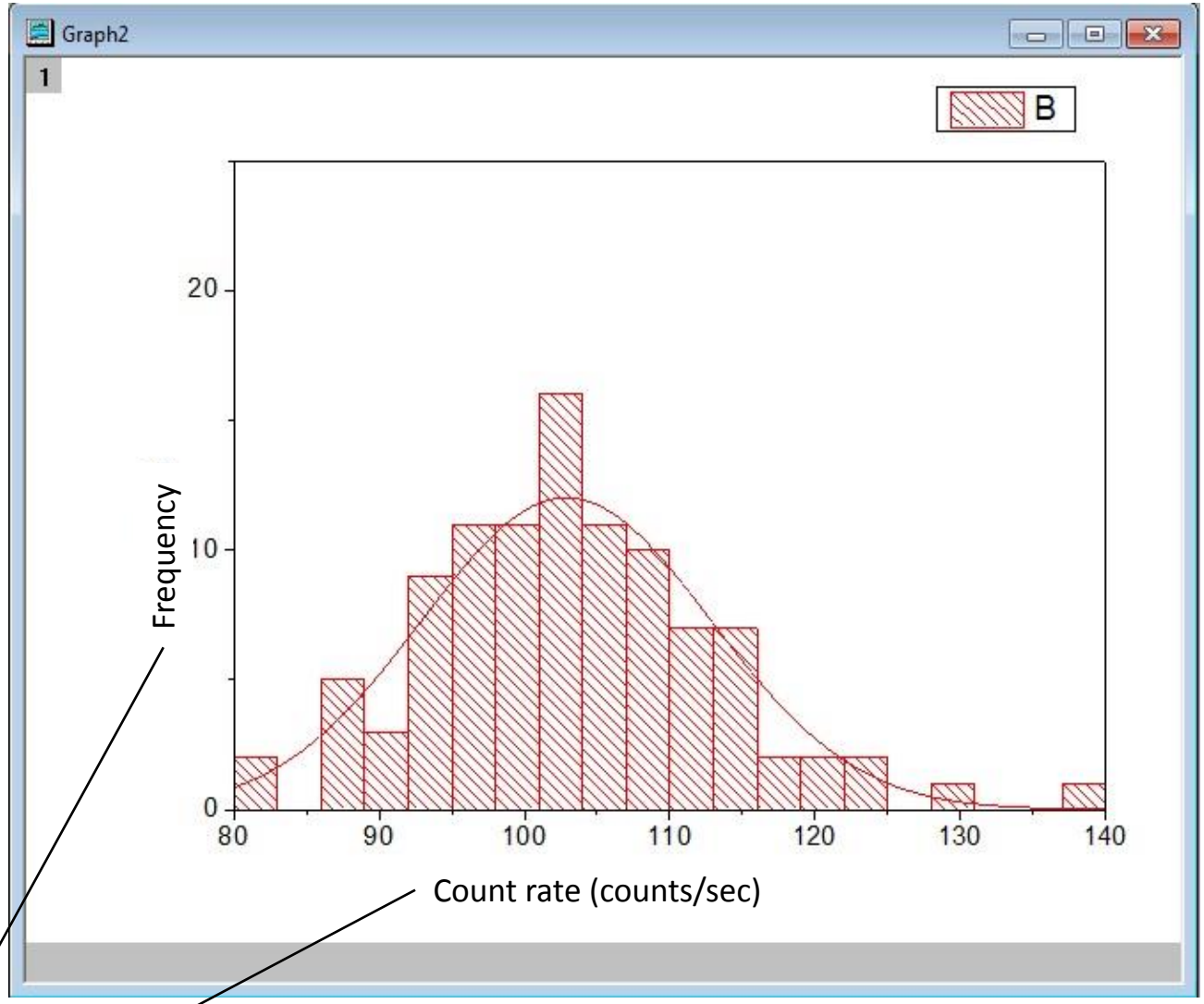
Initial Histogram



Example of axis labels for the Geiger-Müller experiment

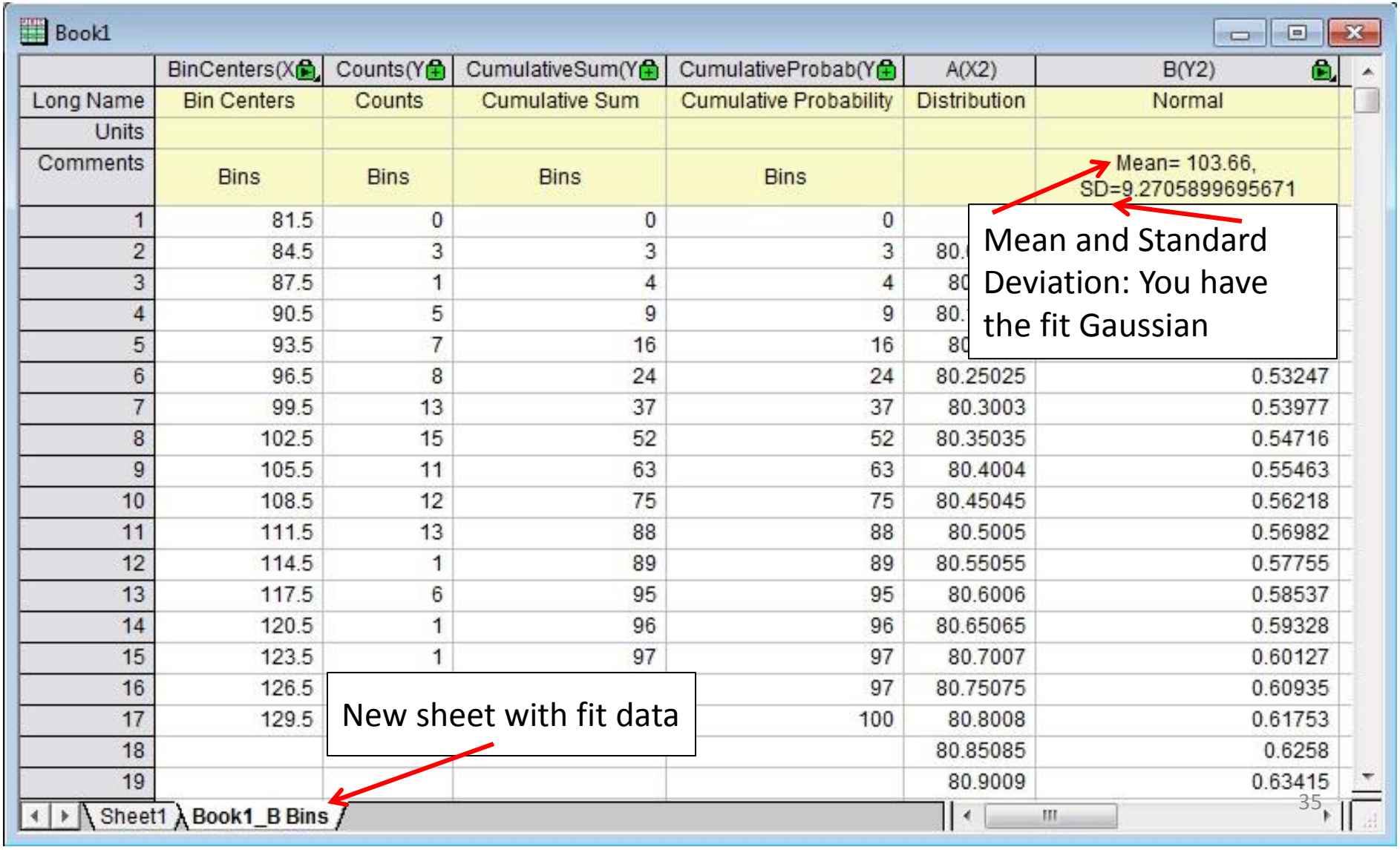

Distribution curve
Automatic binning?
Bin size?
Add Distribution Curve
Go!
Double click on graph to bring up fitting options
Plot Details - Plot Properties
Graph1
Layer1
[Book1]Sheet1! B(Y) [1*:100*]
Pattern
Spacing
Type
Dots
Single Block Barplot
Snap Points To Bin
Automatic Binning
Bin Size
3
Number of Bins
20
Begin
80
End
140
Bin Height (0-100)
100
Preview
Bin Worksheet
Add Distribution Curves
Go
The Counts column in the Bin Worksheet can be used for fitting.
Distribution Curve
Type
Normal
None
Normal
Lognormal
Poisson
Exponential
Laplace
Lorentz
Weibull
Workbook
OK
Cancel
Apply
Book1
BinCenters
Counts
CumulativeSum
Long Name
Bin Centers
Counts
Cumulative Sum
Units
Comments
Bins
Sheet1
Book1_B Bins
Count
B
[Book1]Sheet1!B
AU : ON
Dark Colors & Light Grids
1:[Book1]Sheet1!Col(B)[1:100]
1:[Graph1]1!1
Radian
9/23/2013

Histogram with Gaussian Overlay



Example of axis labels for the Geiger-Müller experiment

Histogram Fit Sheet

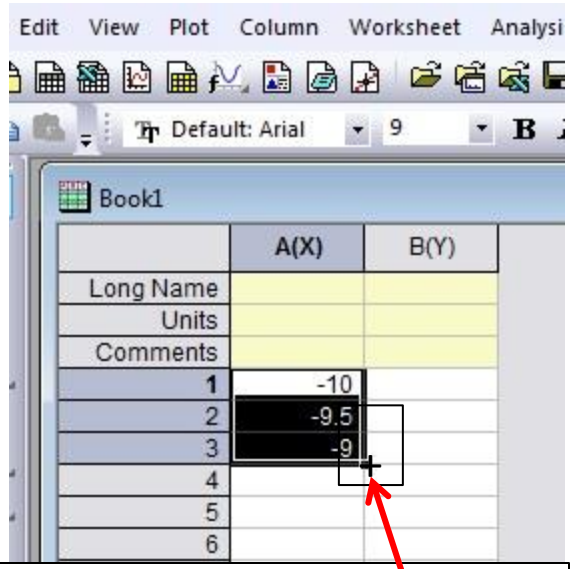


Generating a Function

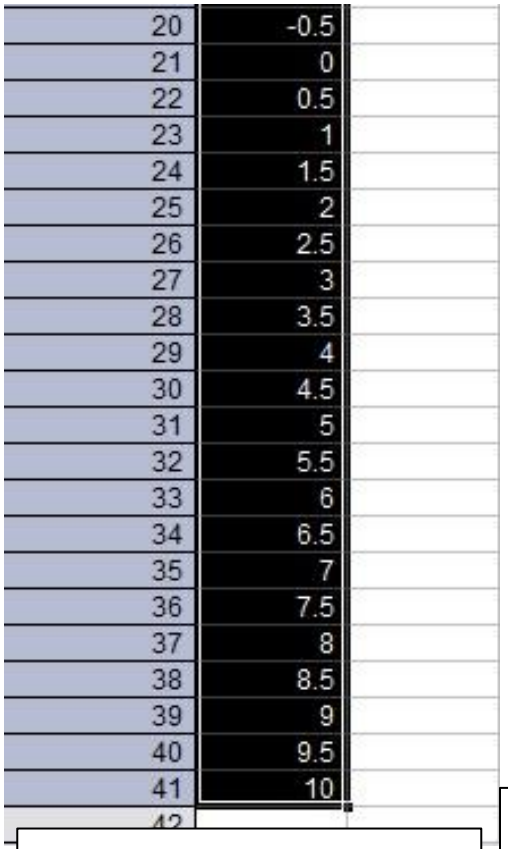
Sometimes you want to plot a function over some interval

- Enter the first few values of the independent variable (next slide)
- Block those values
- Set the cursor at the bottom right of the column until the cursor becomes a plus sign (next slide)
- Drag the cursor down for the number of rows corresponding to the range of x that you want to plot
  - To increase the number of rows, click on the bottom cell and hit Enter
- Block column to be used for dependent values
- Set column values: enter expression for function to be plotted
- Plot!
- Adjust axes, titles and legend to suit taste.

Example: $Y = X^3$ for -10<X<10

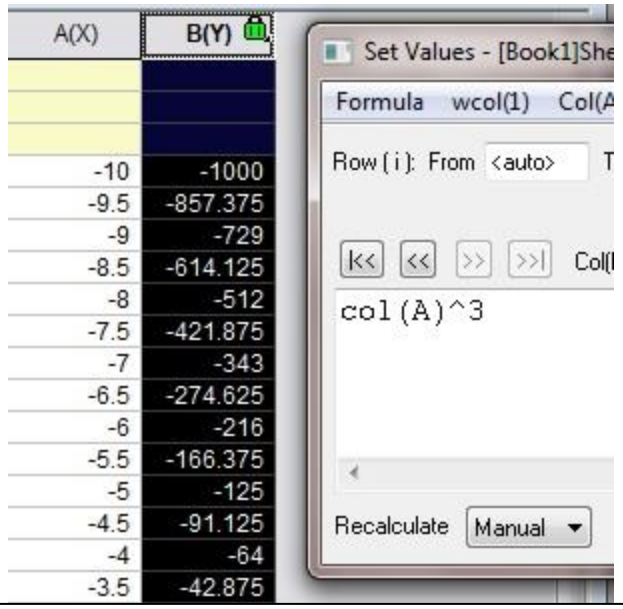


Enter 2-3 values and block
Move cursor to bottom right corner of cell (+)



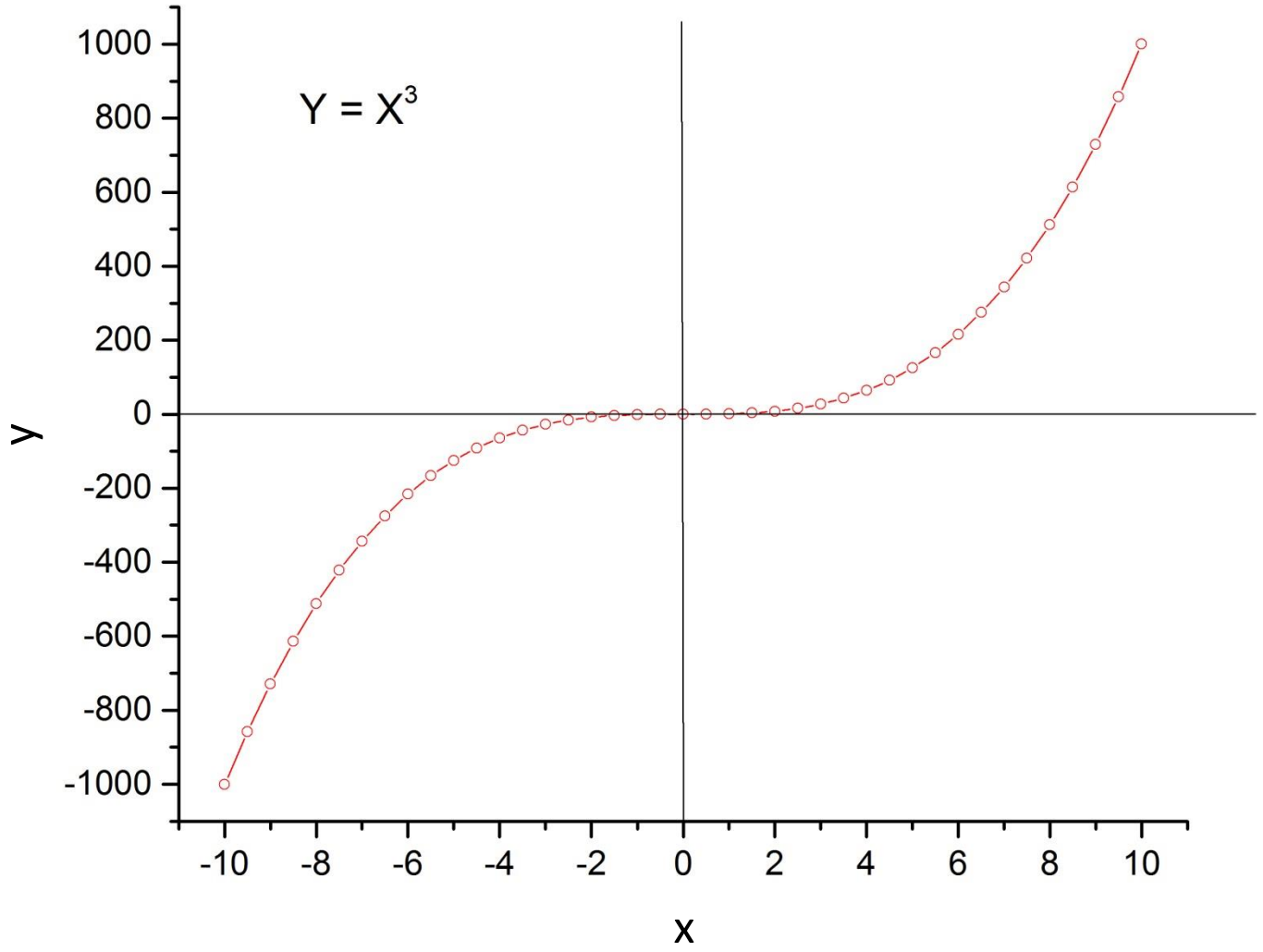
Drag cursor to last x-value

Set values



Enter the cube of the value in col(A) in the blocked column

Voilà!

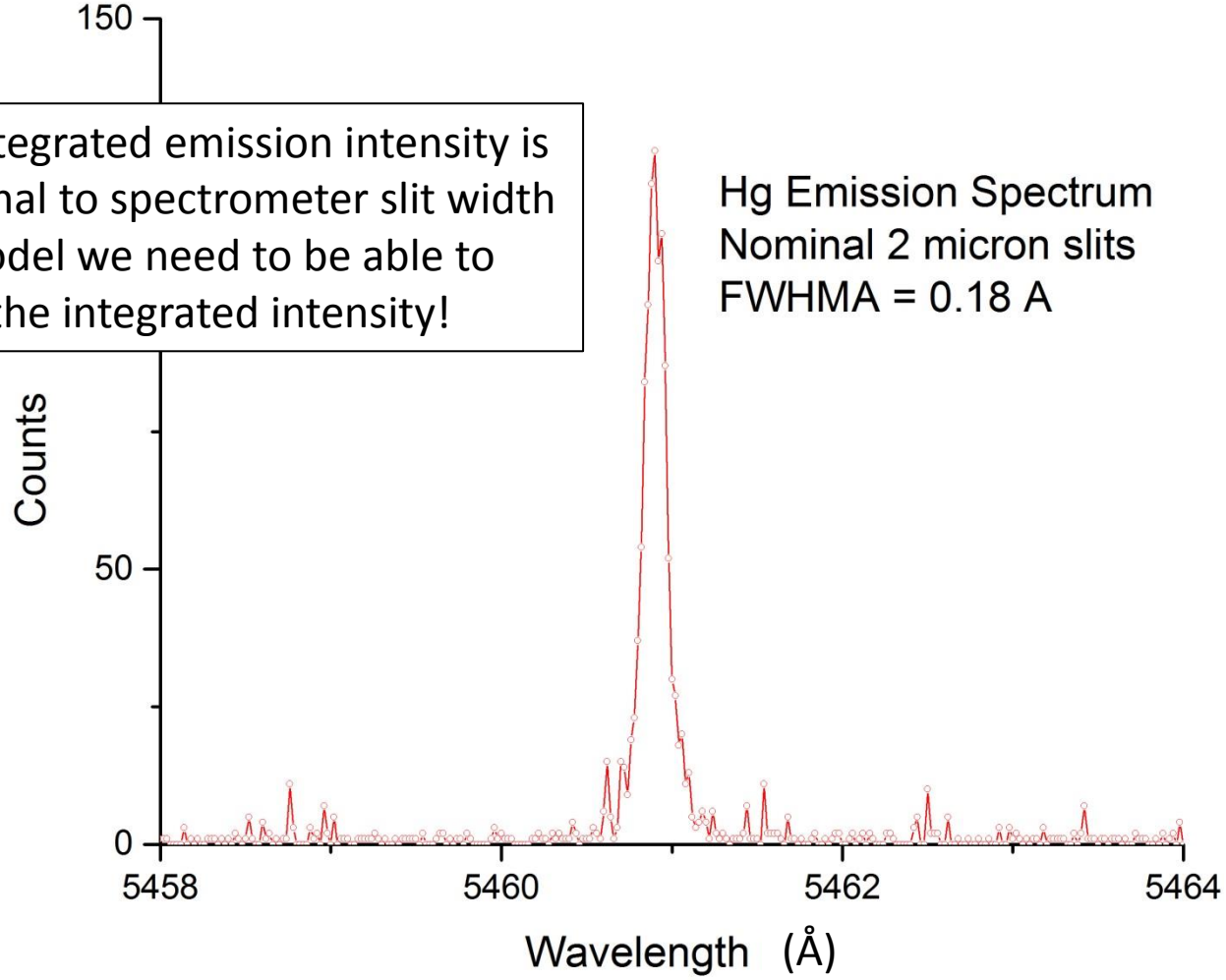

Y = X3
1000
800
600
400
200
0
-200
-400
-600
-800
-1000
y
-10
-8
-6
-4
-2
0
2
4
6
8
10
x

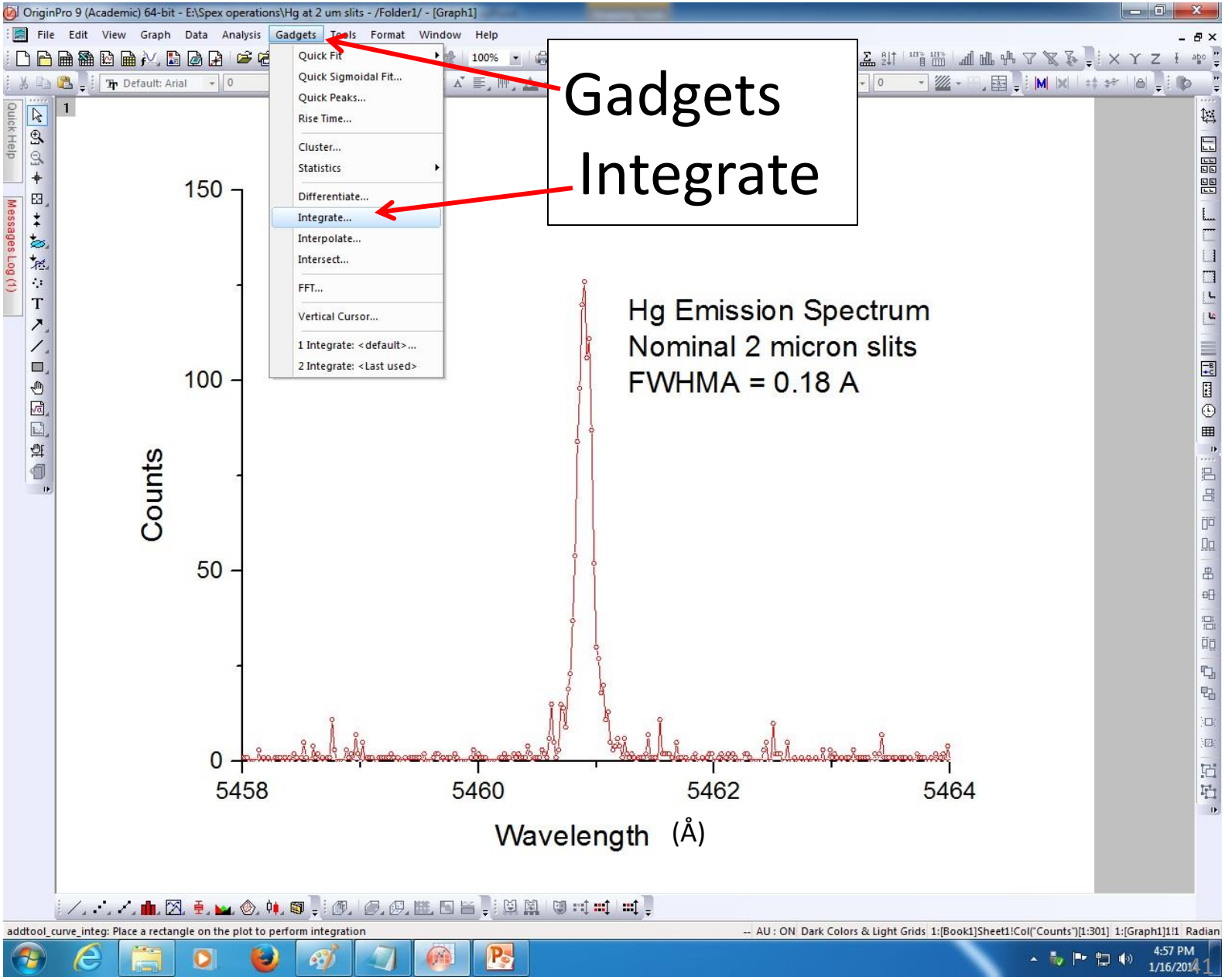
Integrating with Origin

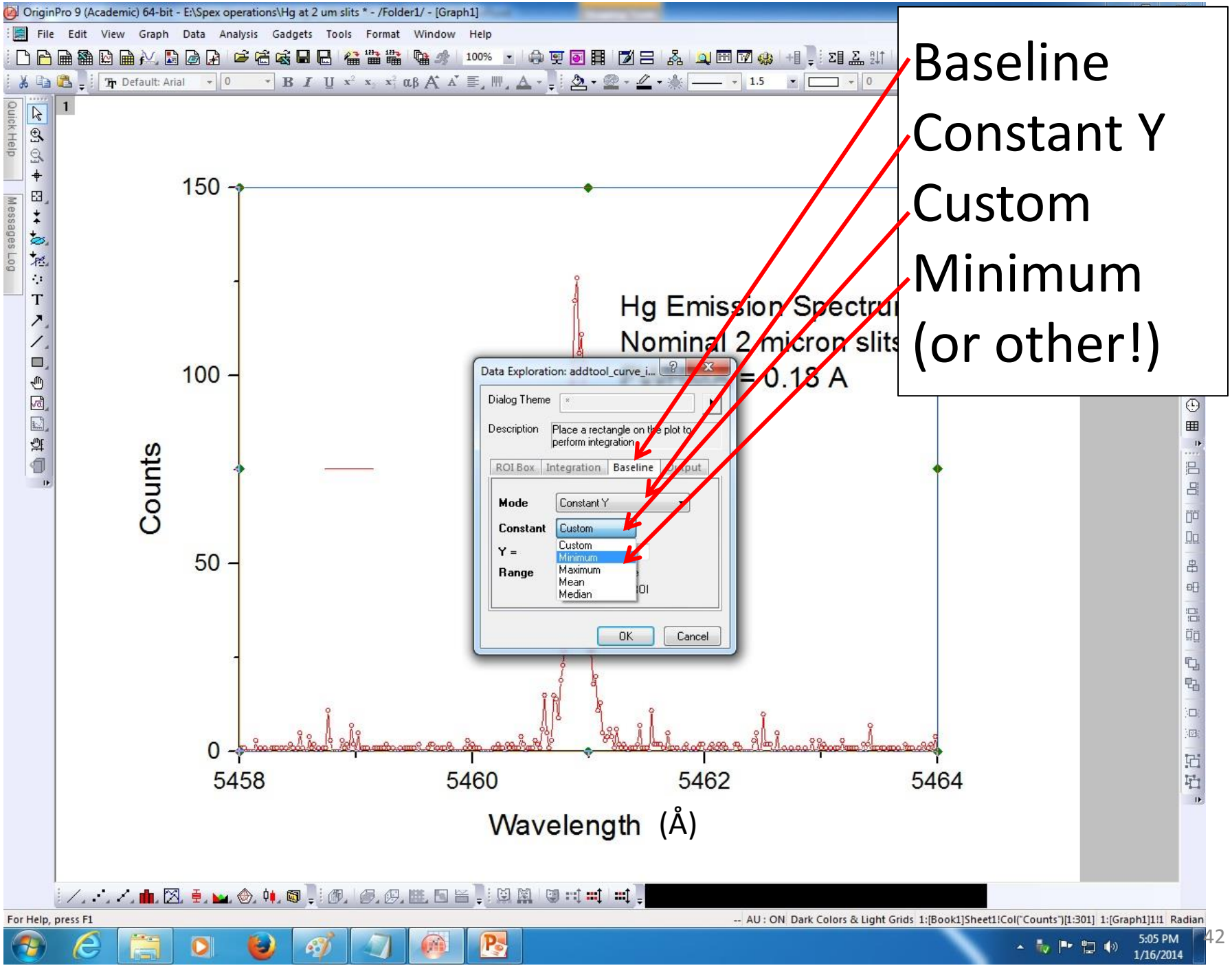
- Useful analyzing optical data
  - Integrated intensity of an emission peak
- Chemical analysis: finding the total amount of material from an absorption curve
  - Beer's Law
  - Concentration is proportional to absorbance
- Easier and more accurate than olden times when Professor Lüty plotted data an paper, cut out curve with scissors and weighed paper!

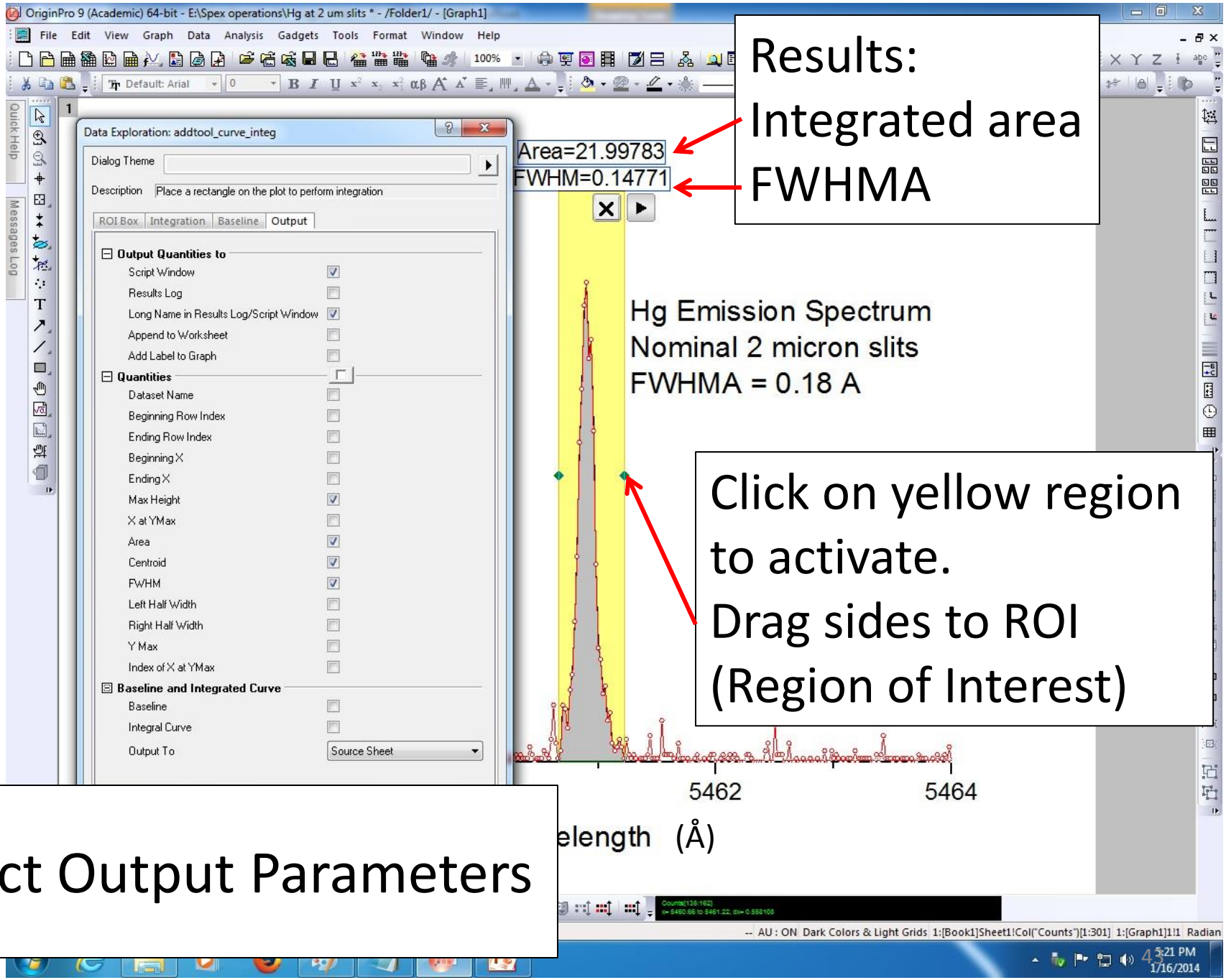
Mercury Emission Spectrum

Model: Integrated emission intensity is proportional to spectrometer slit width
To test model we need to be able to calculate the integrated intensity!




Gadgets
Integrate
Hg Emission Spectrum
Nominal 2 micron slits
FWHMA = 0.18 A
Counts
Wavelength (Å)
150
100
50
0
5458
5460
5462
5464
File Edit View Graph Data Analysis Gadgets Tools Format Window Help
Quick Fit
Quick Sigmoidal Fit...
Quick Peaks...
Rise Time...
Cluster...
Statistics
Differentiate...
Integrate...
Interpolate...
Intersect...
FFT...
Vertical Cursor...
1 Integrate: <default>...
2 Integrate: <Last used>
addtool_curve_integ: Place a rectangle on the plot to perform integration


Baseline
Constant Y
Custom
Minimum
(or other!)
OriginPro 9 (Academic) 64-bit - E:\Spex operations\Hg at 2 um slits * - /Folder1/ - [Graph1]
File Edit View Graph Data Analysis Gadgets Tools Format Window Help
Hg Emission Spectru
Nominal 2 micron slits
= 0.18 A
Counts
Wavelength (Å)
150
100
50
0
5458
5460
5462
5464
Data Exploration: addtool_curve_i...
Dialog Theme
Description
Place a rectangle on the plot to perform integration
ROI Box
Integration
Baseline
Mode
Constant Y
Constant
Custom
Y =
Range
Custom
Minimum
Maximum
Mean
Median
OK
Cancel
For Help, press F1
5:05 PM
1/16/2014

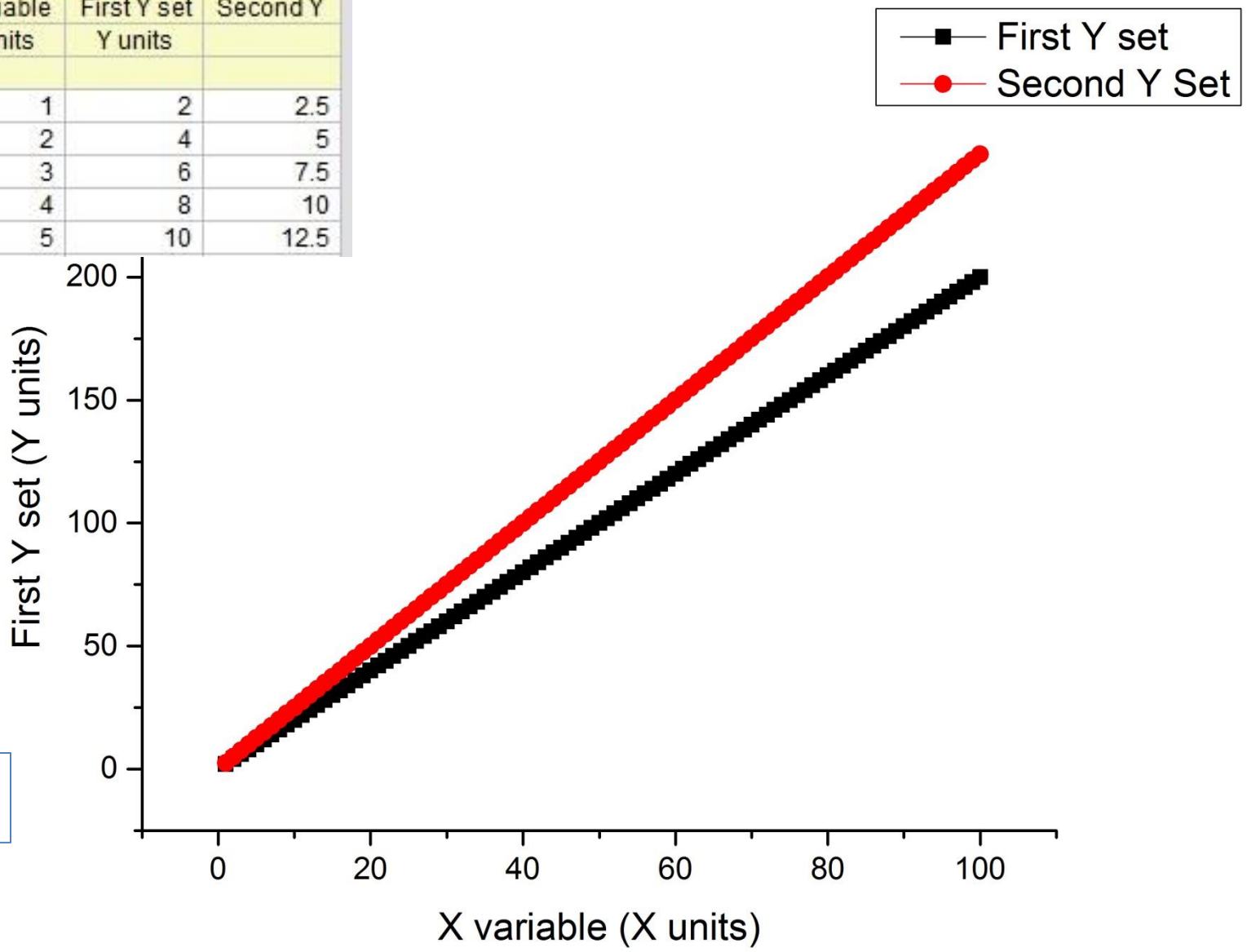

OriginPro 9 (Academic) 64-bit - E:\Spex operations\Hg at 2 um slits * - /Folder1/ - [Graph1]
File Edit View Graph Data Analysis Gadgets Tools Format Window Help
Data Exploration: addtool_curve_integ
Dialog Theme
Description Place a rectangle on the plot to perform integration
ROI Box Integration Baseline Output
Output Quantities to
Script Window
Results Log
Long Name in Results Log/Script Window
Append to Worksheet
Add Label to Graph
Quantities
Dataset Name
Beginning Row Index
Ending Row Index
Beginning X
Ending X
Max Height
X at YMax
Area
Centroid
FWHM
Left Half Width
Right Half Width
Y Max
Index of X at YMax
Baseline and Integrated Curve
Baseline
Integral Curve
Output To
Source Sheet
Area=21.99783
FWHM=0.14771
Hg Emission Spectrum
Nominal 2 micron slits
FWHMA = 0.18 A
5462
5464
elength (Å)
Results:
Integrated area
FWHMA
Click on yellow region
to activate.
Drag sides to ROI
(Region of Interest)
Select Output Parameters

Multiple Plots on a Graph

- Most common: several values of y with a common x
  - Import data
    - Simply block copy and import from Excel
    - File:Import:Multiple ASCII
      - Assumes data are in ASCII format!
      - Requires manipulation of columns after importing
  - You will have multiple columns with one headed by X and the others Y1, Y2…
  - Label each column and give units
  - Block contents of each column to be plotted (click above)
  - Plot: Line and symbol: Line and symbol

Book1

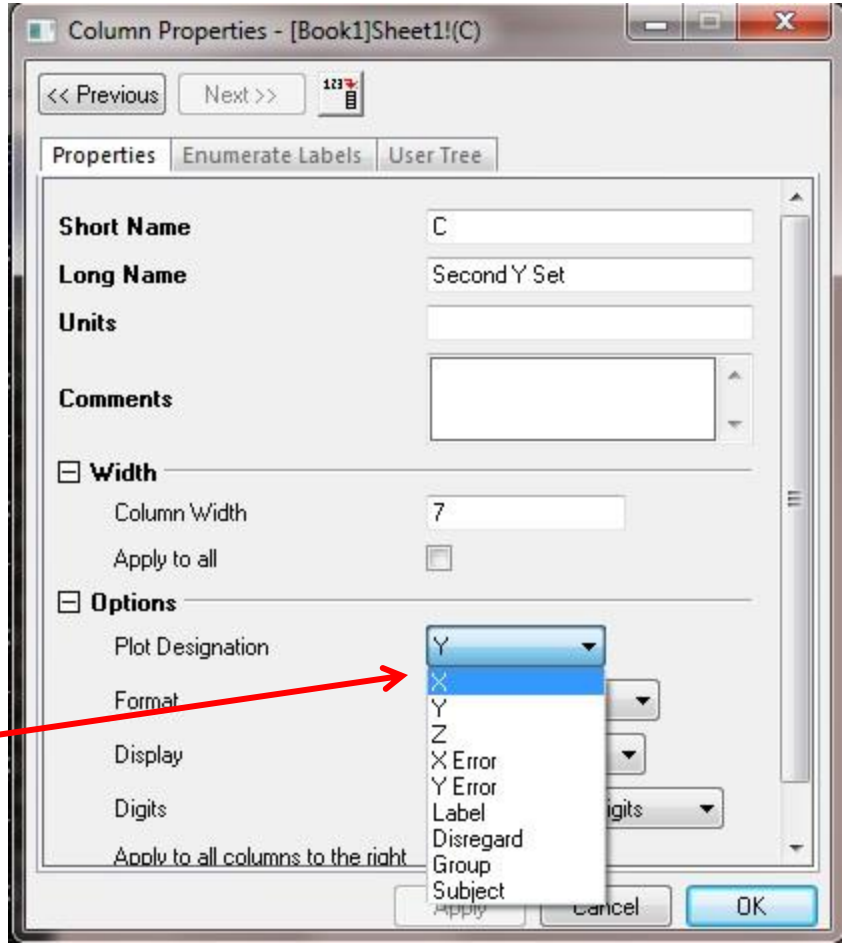
	A(X)	B(Y)	C(Y)
Long Name	X variable	First Y set	Second Y
Units	X units	Y units	
Comments			
1	1	2	2.5
2	2	4	5
3	3	6	7.5
4	4	8	10
5	5	10	12.5



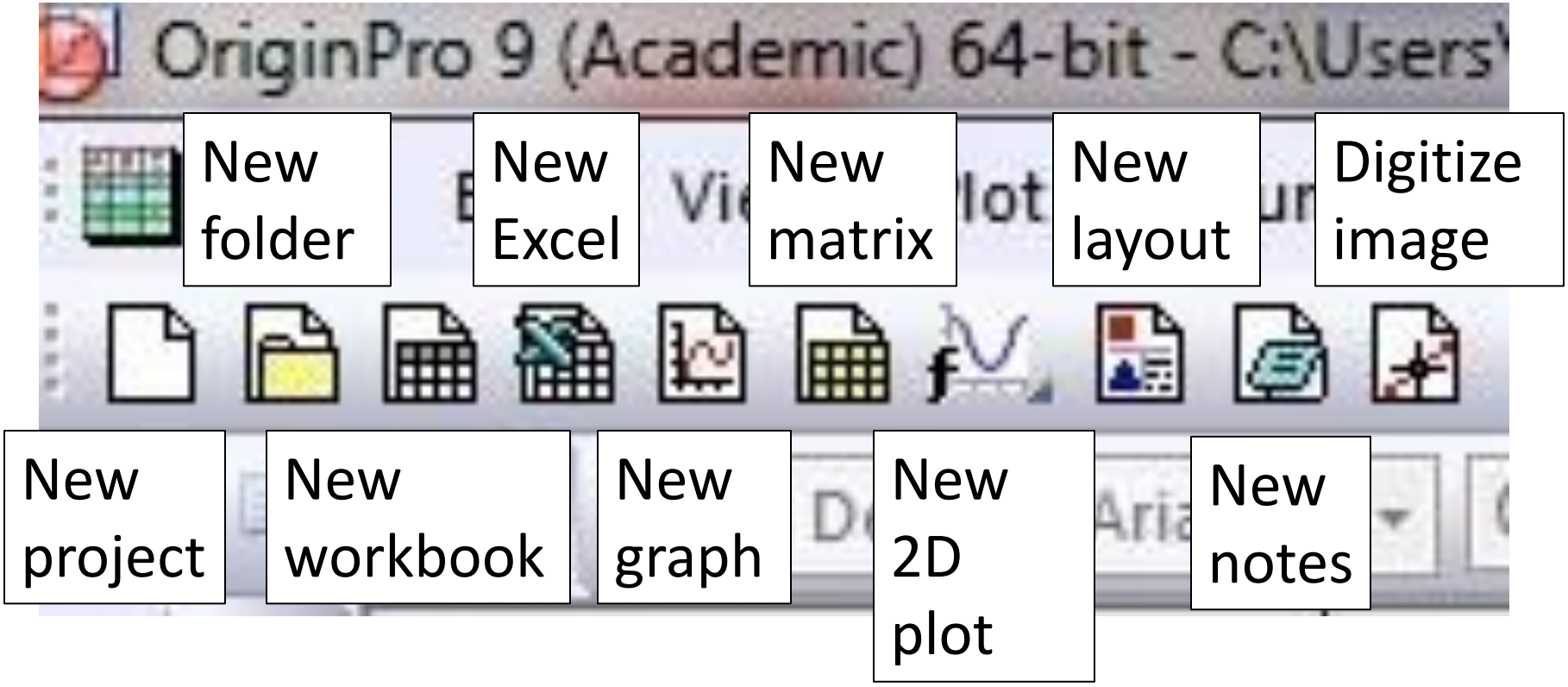
Voilà!

Multiple Plots, Continued

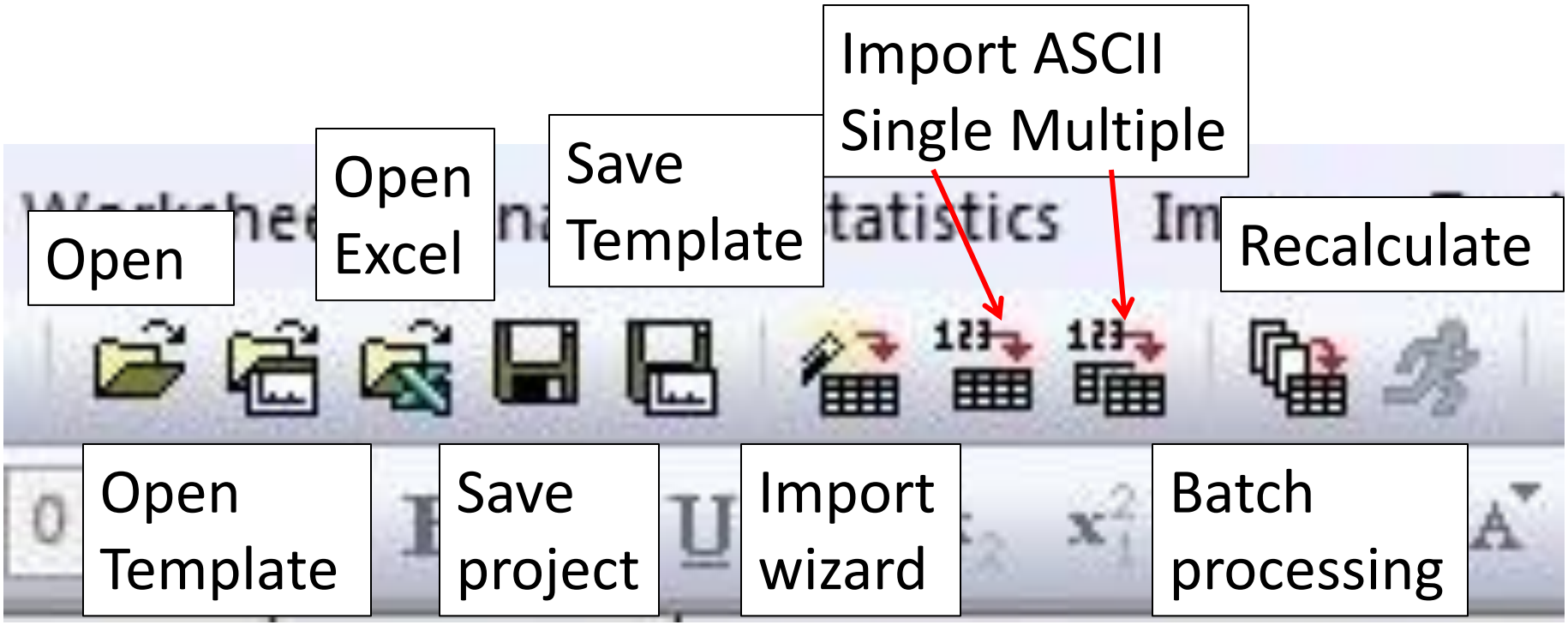
- If multiple plots have different x values
  - Obviously now you have at least four columns of data
  - Double click on the header cell of your second set of x-values
  - Designate second column as x



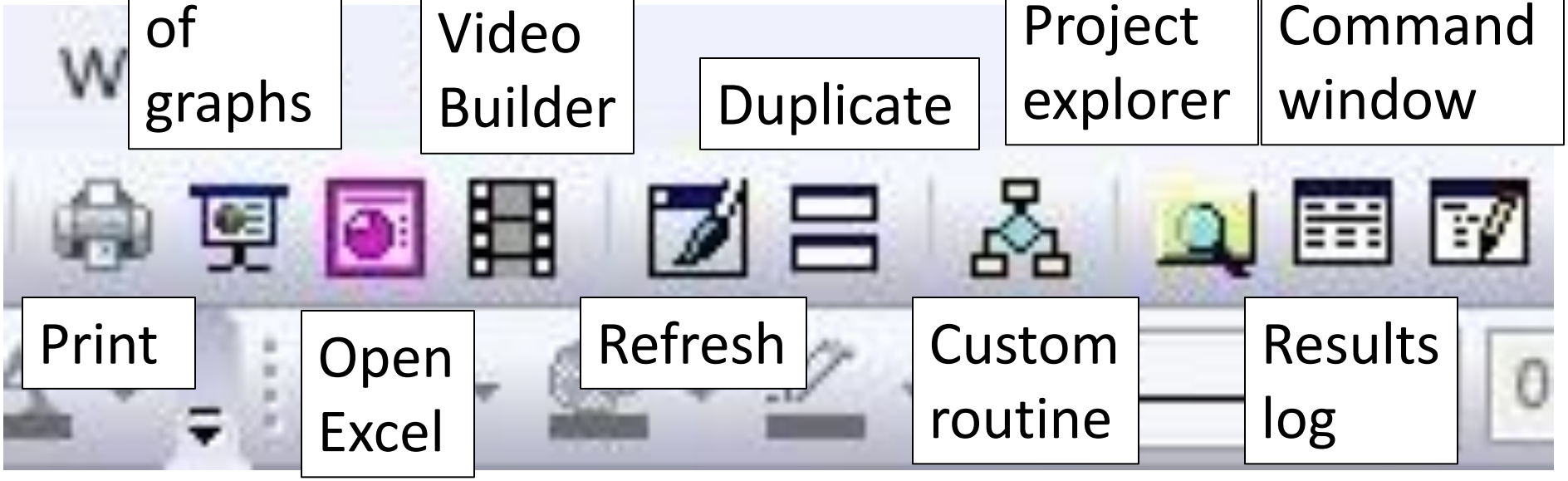
Top Icon Bar: Left



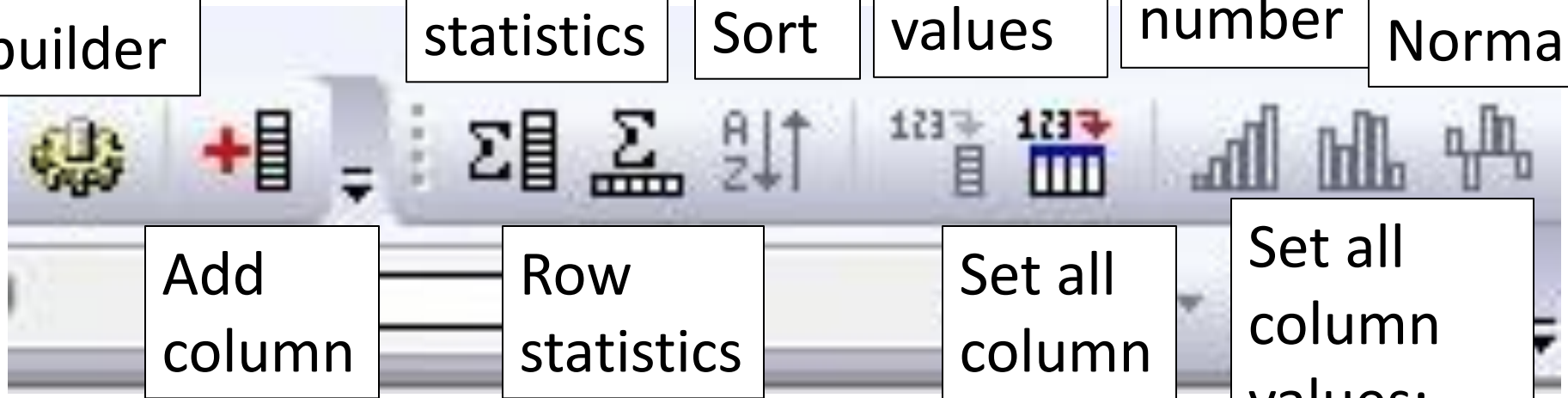
Top Icon Bar: Second from Left



Top Icon Bar: Third from left



Top Icon Bar: Fourth from Left



Code builder

Add column

Column statistics

Row statistics

Sort

Set column values

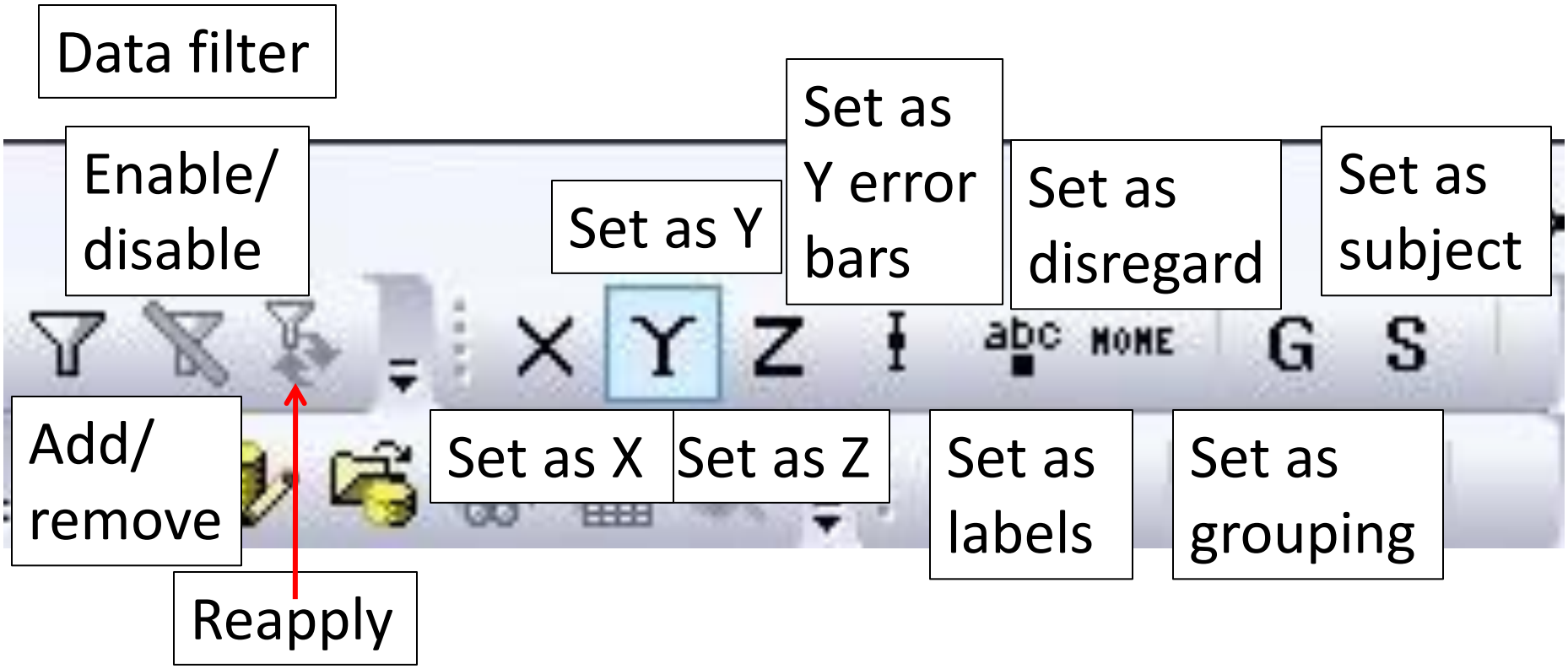
Set all column values

Set all column values from row number

Set all column values: random number

Normal

Top icon Bar: Right



Left Icon Bar: Top

Pointer cursor!

Scale in

Scale out

Screen reader

Data reader

Data selector

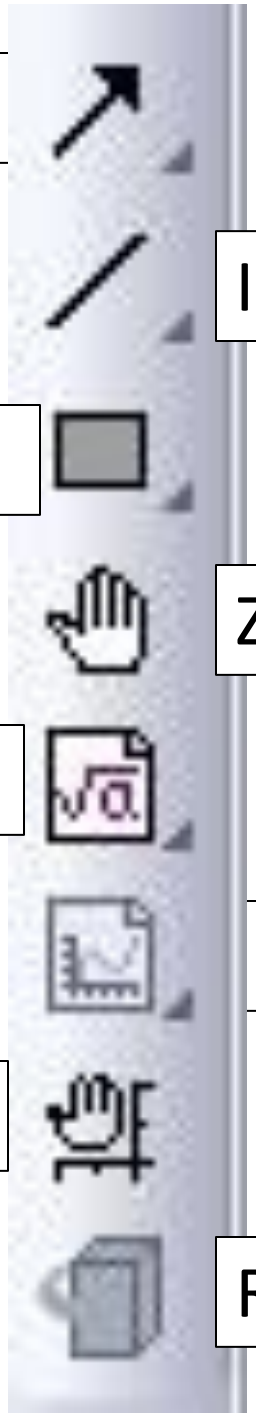
Regional data selector

Regional mask tool

Draw data

Insert text

Left Icon Bar: Bottom



Insert arrow

Insert line

Insert rectangle

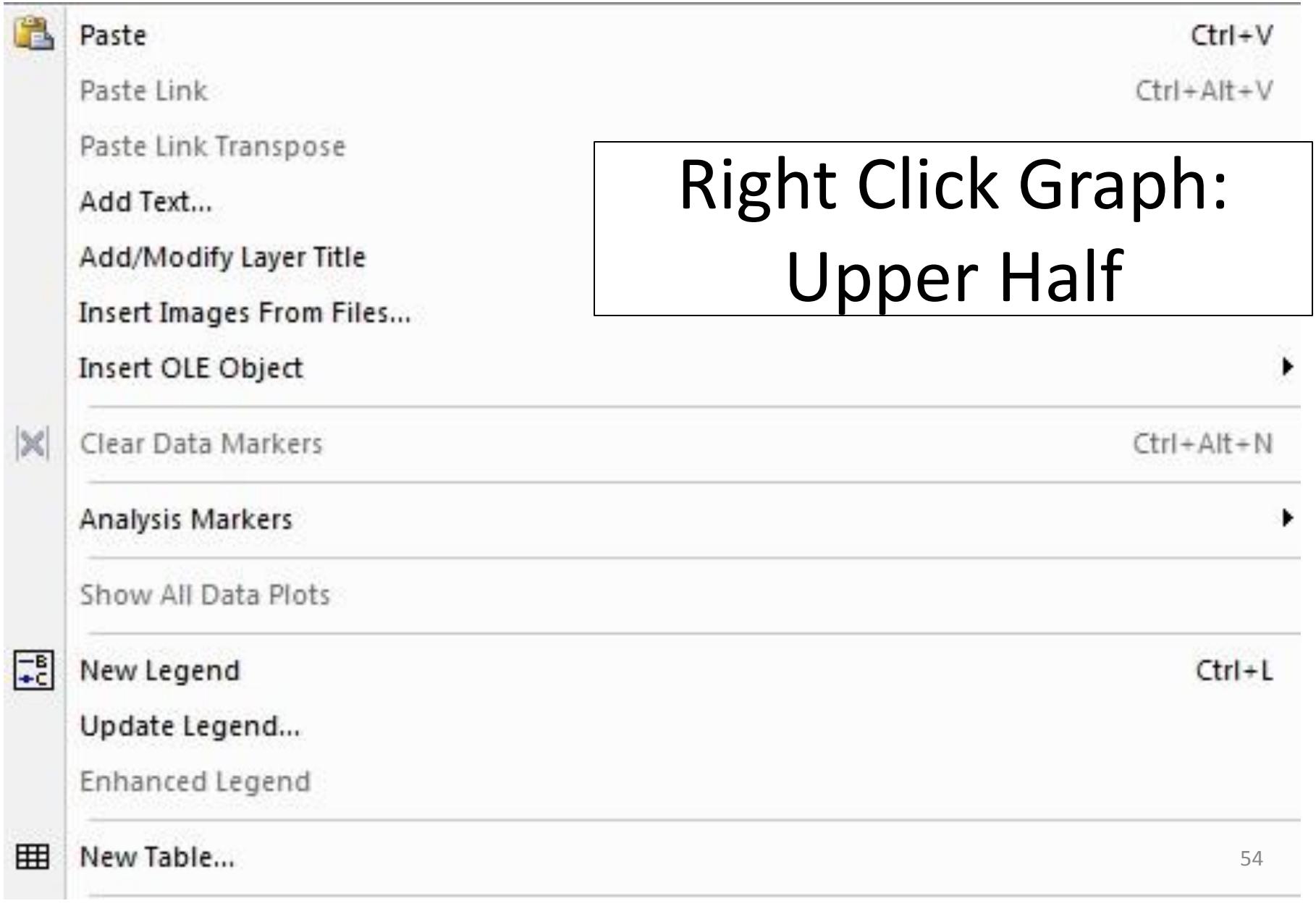
Zoom-panning tool

Insert equation

Insert graph

Rescale tool

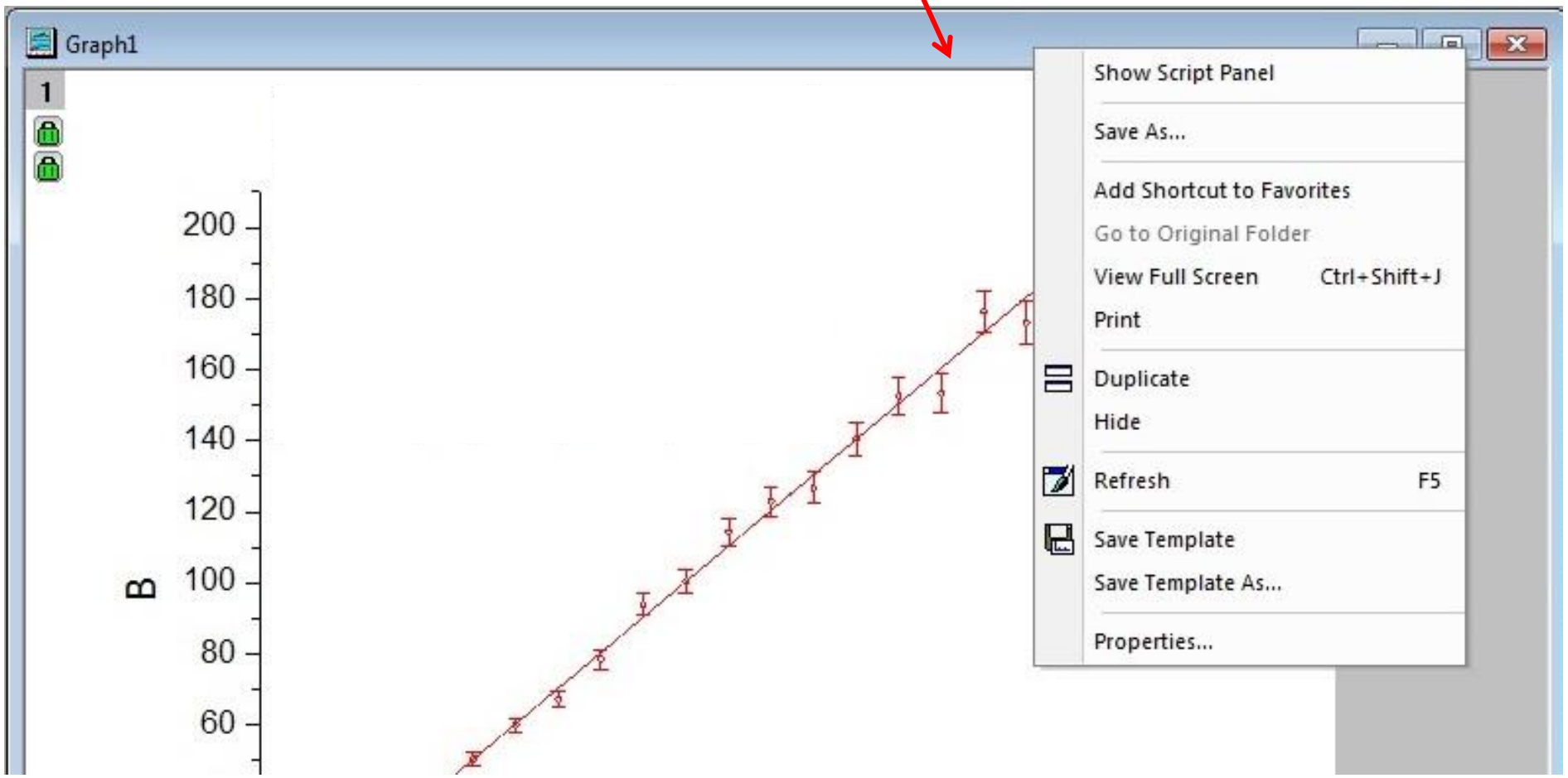
Rotate tool

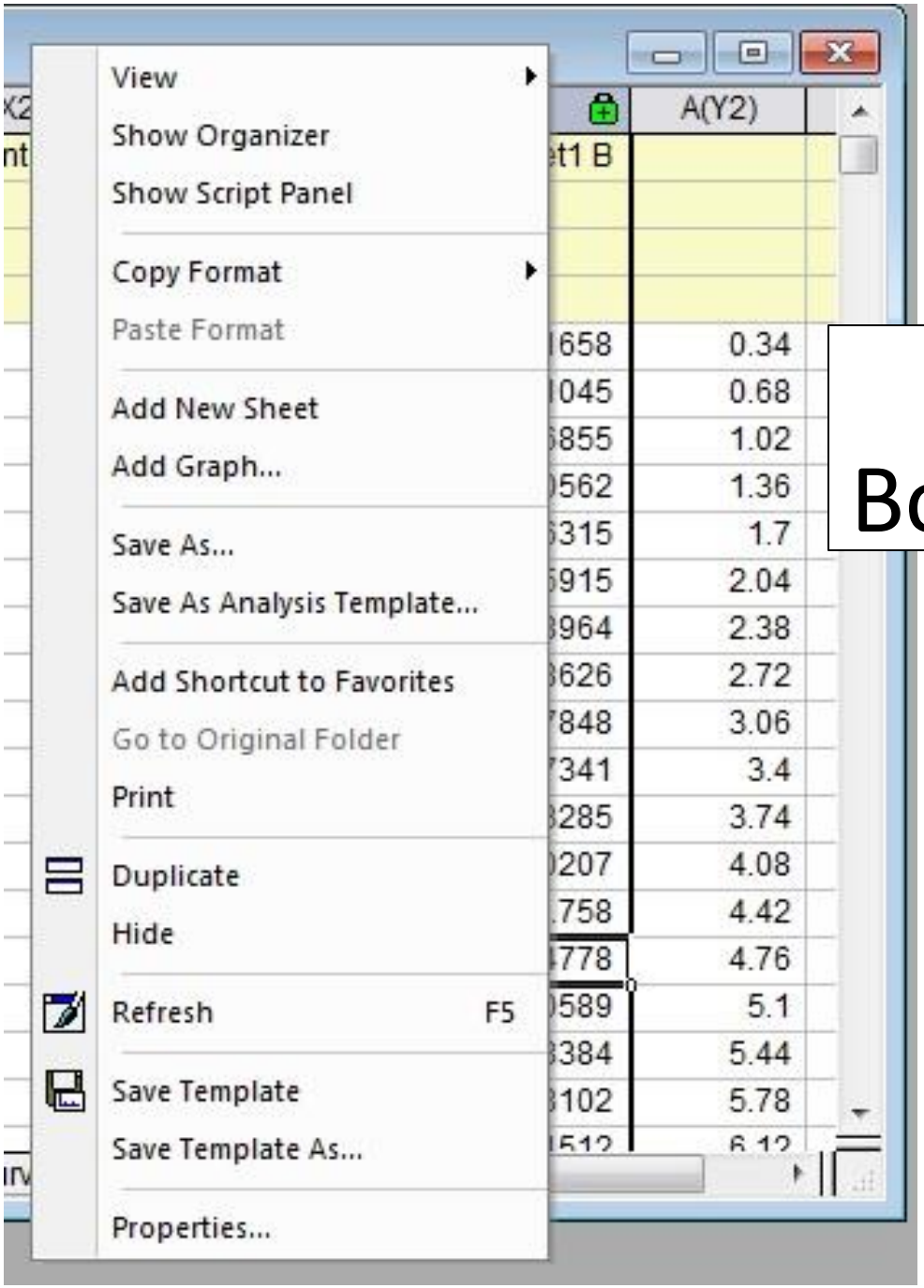


Right Click Graph: Upper Half

Right Click Graph: Lower Half

Right Click Upper Border of Graph





Right Click
Book Upper Border

Miscellany and Minutiae

- Huge amounts of stuff can be accessed by right clicking
  - The menu you get depends on where the cursor is pointed when you right click
- If your graph fills the screen you can reduce it and access the book/worksheet by clicking the expand/contract icon in the upper right
- What else belongs here? Lots!

- To add Greek or other special characters to a text box
  - CTRL M
  - Note that there is only one page of options

Module: English **Level: L2_L3_M1**
Year: 2021-2022

Information and Communication Technology (ICT)?

1-What Is Information and Communication Technology (ICT)?

Information and communications technology (ICT) skills refer to one's ability to converse with people through various technologies. Similar to information technology (IT), ICT refers to technology use for regular, everyday tasks: sending an email, making a video call, searching the internet, using a tablet or mobile phone, and more.

ICT skills could also include the ability to use older communication technologies such as telephones, radios, and televisions.

2-Types of ICT Skills

2-1-**Email Management and Setup :**

Being able to effectively and successfully communicate via email is critical to any job. You will need to send emails to colleagues, employers, clients, vendors, and so on. Companies expect their employees to write professional and well-written emails, as well as respond promptly to messages received in their inboxes.

Depending on the level of expertise required by your employer, you may also need to be able to manage settings or set up email accounts on various work devices.

- MS Outlook
- Gmail and G-Suite
- SendinBlue Email
- Groove
- Front
- Zoho Mail
- Written Communication
- Digital Signatures
- Stationary Settings

- Out of the Office Settings
- Spam Settings
- Inbox Management
- Creating Rules

2-2-Online Research

Almost every job requires at least some online research. Whether you are looking up new lesson plans in a subject or checking out the latest news on your company's competitor, you need to be able to sift through all the information online to find what you need. This involves basic online information management skills.

- Search Engine Research
- Checking Sources
- Crediting Sources
- FAQs
- Online Forums

2-3-Social Media Management

Some jobs require you to use social media. For example, many people working in marketing tend to manage or update a company's social media presence. Even if this is not a critical part of your job, employers increasingly look for employees with basic social media literacy. The more you know about the benefits of and limits to social media, the more you can begin to use that media in valuable ways at work.

- Facebook
- LinkedIn
- Pinterest
- Instagram
- YouTube
- Twitter
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- Social Media Groups

2-4-Online Collaboration

Online collaboration is a broad category that refers to any means of sharing information with your coworkers (or supervisors, or clients) online. This includes adding a meeting to a shared online calendar, providing feedback on a document through a web-based document application, and holding an online video conference with colleagues.

- Video Conferencing Software
- Skype
- GoToMeeting
- Instant Messaging
- Google Docs
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- Zoom

2-5-Data Management and Queries

From researchers to administrative assistants to K-12 teachers, almost everyone needs to be able to develop and manage data using spreadsheets. Furthermore, they have to be able to analyze that data and recognize trends and patterns. Fluency in programs like Microsoft Excel is critical in today's job market.

- MS Excel
- Filters
- SQL
- NoSQL
- MySQL
- Quantitative Analysis

2-6-Desktop Publishing

Desktop publishing involves the creation of materials that need to be printed and distributed. These might include fliers, brochures, newsletters, and more. Because you can create so much using desktop publishing software, many jobs require you to have some basic

skills in this field. While people with a creative, artistic eye might be particularly good at desktop publishing, anyone can get better with practice.

- MS Publisher
- MS PowerPoint
- MS Word
- Print Settings
- Adobe Creative Suite
- QuarkXPress

2-7-Smartphones and Tablets

Many employers require that their employees use smartphones and tablets; they might even issue particular phones to employees or state that workers must be accessible by email during certain hours. For these reasons, it is important to know how to use a smartphone.

- iPhone
- Android Devices
- Samsung Smartphones
- Blackberry Devices
- iPad
- Samsung Tablets
- CAT S41
- Panasonic ToughPad

2-8-Word Processing

In this day and age, it is expected that job candidates know how to use word processing technology. Candidates need to be able to produce written documents (including business letters, meeting minutes, and more) using a computer processor such as Microsoft Word.

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- Transcription
- Typing
- Note Taking

More ICT Skills

- Calendar Management
- Organization
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- Invision
- Prevue
- Mailbird
- Cage
- Viewflux
- Slab
- Airtable
- Yammer
- Chanter
- Scribus
- Zeplin
- Acquire
- Concept Inbox
- I Done This 2.0
- Red Pen
- LaTex
- Iovox
- Realtime Board
- Mural
- GoVisually
- Data Analysis
- Big Data
- Computer Science
- Computer Programming

3-How to Boost Your ICT Skills

Do you feel that your ICT skills are not as good as you want them to be? Is there a particular skill you are struggling with? Here are some tips to boost your skills and get ready for the job market:

- **Practice using technology.** If you already have some of the basic skills listed above, you might consider simply using them more often. For example, if you want to get better at using Skype or Zoom before an interview, simply practice using the video conferencing technology. Ask a friend to pretend to be the interviewer, and do a mock online interview. The more you practice, the more confident you will feel when you use this technology when it counts for the job.
- **Ask a friend.** You could also ask a friend who is more skilled in a particular technology to help you develop your skills. For example, if you aren't comfortable using your smartphone, ask someone you know (who uses their phone a lot) for some basic tips.
- **Watch a (free) tutorial.** There are many free online tutorials on how to use certain technologies. Some of these are on YouTube or can be found via a quick Google search. Others can be found on company sites. For example, check out Microsoft's tutorials and PDFs with tips for using certain products.
- **Attend a (free) class.** Check with your local community college or public library to see if they offer classes on computer literacy or ICT skills. Many of these are free or available at a discount for local residents. However, before you spend money on a class, try some of the free strategies first.

Dr. F.DJAAFAR

Module: English **Level: 2nd Year**

Year: 2021-2022

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- Chanter
- Scribus
- Zeplin
- Acquire
- Concept Inbox
- I Done This 2.0
- Red Pen
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Dr. F.DJAAFAR

Module: English **Level: 2nd Year**
Year: 2021-2022

Motivation Letter for Scholarship (With Examples): Expert's Guidance on Writing a Winning Scholarship Motivation Letter

What Is a Scholarship Motivation Letter?

A motivation letter is like a cover letter you may include with a job application and resume. The goal of the letter is to explain:

- Why you are a good candidate for the scholarship
- What you plan to do with the education you receive.

Review committees often use motivation letters to narrow down their pool of applicants. Then they assess the rest of the application from the candidates they like best.

Motivation letters are usually required for graduate-level scholarships. Sometimes, you may need to write one for specialty programs at a bachelor's level too. If you have the option to include a motivation letter with your scholarship application, take it. This may be the only chance you have to wow the review committee.

A Motivation letter describes why you are a perfect fit for a certain position. The objective of a motivation letter is to explain to the authorities why you should be chosen for the degree program and what plans do you have for the education you will receive. In other words, the letter of motivation speaks out some of the important aspects of your research proposal that connect it up with your academic competence and personality.

Who needs a Motivation Letter?

Generally, motivation letters are required for post-graduation scholarships. However, you may require it sometimes while applying for an undergraduate program.

Significance of Letter of Motivation in Admission and Scholarship Application Process:

The motivation letter is the chance you have to influence the selection panel. To contract the list of candidates, selection panels frequently use motivation letters. Then the candidates considered best are finally selected for the program. The motivation letter is the most

significant part of your application. The success of your application mainly counts on the motivation letter.

Methods of Structuring a Letter of Motivation:

Commonly, two methods are used to structure a motivation letter.

#1 Classical Way of Writing a Motivation Letter:
Classical way guides writing a letter of motivation in three parts; introduction, body, and conclusion. Using the classical way is not a bad idea. You can use it if you want to write the body of the letter as a story. Hence, not breaking the reading flow. No matter what method you chose, the letter basically contains an introduction, a body, and a conclusion.

#1 Modern Way of Writing a Motivation Letter:
While another way of composing a letter of motivation is to use 5-7 paragraphs, where the body is divided into 3-4 paragraphs. It completely depends on your choice. However, dividing the body into more paragraphs is considered beneficial, as each paragraph highlights a completely different point.

Blueprint on Writing a Killer Motivation Letter

Writing your motivation letter can be a painstaking task. The students generally have no answer when asked, “Why do you want this scholarship?” or “What difference can you make after getting it?” You spend hours thinking about and researching on the internet. You are also done by asking your friends for help. But at the end of the day, you are sitting before your laptop and have no answers to the asked questions.

Nonetheless, you know you are a capable person and have a vast knowledge base. The only problem is, it is just difficult to give words to your thoughts. Don’t worry, it happens with almost everyone, and we are here to facilitate you. This article is specially devised to give you the ultimate guide to writing a winning motivation letter and make the process easy for you.

How long should a Motivation Letter be?

Normally, the length of the motivation letter is not specified. But it cannot be too long, or too short. The idea is to succinctly give the best possible arguments. Also, skipping relatively small details is not recommended. Sometimes small specifics make a huge difference. The letter of motivation must contain the most vital educational achievements, details of your resume, your skills, and your long-term plans. Generally, a range of 500-1000 words is recommended for motivation letters. Paragraphing is important, as it makes the letter easy to understand.

Construct a bridge between the intended degree course and scholarship you are applying for:

The motivation letter should connect your academic and professional future plans with the scholarship you are applying for. It should give the reader an understanding that you are really interested in studying a specific field, and your selection is not only beneficial for you, but also for the scholarship source. It manifests reasons why you deserve it more than other aspirants.

Writing 'Introduction' part in Motivation Letter:

In the introduction part, you briefly tell the reader about yourself and the reason behind your application. It includes your name and education. Besides, you also need to tell what program you are applying for. Needless to say, don't forget to write contact information at the top of the letter.

Writing 'Body' part in Motivation Letter:

The body is the most significant part of the motivation letter. It is a voluminous note and manifests your talents, achievements, and skills. It tells your professional experience, whether paid or unpaid. Shows what field you want to pursue a career in and the reasons behind it. Showcases your motivation to bring a positive change in society.

Research Scope 'website' of an organization that requested you to send a motivation letter to fetch an idea on who can be an ideal candidate for them:

Additionally, open the official website that requires you to write a letter of motivation and see what requirements are demanded, then tries to emphasize your eligibility. It makes the reader know how passionate you are for the field you are applying for. However, exaggeration

should be avoided. Try being close to facts and truth as much as possible. The examiners are immensely experienced and can easily detect overstatement.

Writing 'Conclusion' part in Motivation Letter:

You write a conclusion to wrap up the story. In this part, you can sum up your major points and comment on your professional objectives. Stress again why you are a perfect fit for the program. Finally, express your thanks and end the letter.

General Tips on Writing a Letter of Motivation for Scholarship and Admissions:

Remember, there is a line between begging and proving your worth. You should use logical argumentation to prove your merit. Your letter should not contain any grammatical or spelling errors.

The use of slang language should be completely avoided. It should make its reader feel that it is written by a sensible person. In addition, be specific with all the details you provide.

Finally, bear in mind that it is a time-taking process. It is not something you will perfectly do in a single evening. Create an outline and plan the structure before you write. In the end, stick to the basics, follow the given guideline, and make it a success story!

The Structure of a Scholarship Motivation Letter

Scholarship motivation letters vary by award, but they usually consist of three elements:

- An introduction
- Three body paragraphs
- A conclusion

Your introduction should include your name, level of education and the degree program.

Your first body paragraph should include any work-related experience you have. This can include both paid and unpaid internships. You should show the growth of your career in chronological order. Finally, suggest where your professional will go with continued education.

Your second body paragraph should explain what you hope to gain from your education. Think of which problems you aim to solve or uncover.

Your final body paragraph should explain your holistic plans for the future. Some ideas for inspiration:

- You can include extra education you plan to pursue after education.
- You can write about companies or agencies you'd like to work for after graduation. Another idea is including
- You can talk about programs or organizations you would like to develop.

Finally, your conclusion should re-emphasize why you are a good candidate for the scholarship.

If you need help creating a resume or cover letter, start with one of the dozens of professionally-designed resume and cover letter templates that are available in Word. Go to File > New. In the search box, type Resume or Cover Letter. Double-click the template you want to use.

Motivation Letter Example

Owlie McScholar
9876 Smith St.
Stillwater, OK 74074

The Scholarship Committee
123 Learning Rd. Suite 4A
Oklahoma City, OK 73127

To Whom It May Concern:

My name is Owlie McScholar and I am a third year student at Oklahoma State University. I am currently pursuing a five-year Bachelor of Architecture Degree, and I plan to follow up with a one-year master's degree after I graduate.

While in high school, I worked extensively with my local Habitat for Humanity branch to help build homes for low income families. I learned about the construction process from the ground up, and I discovered the importance of function in architectural design. The homes we built during my four years as a volunteer were never extravagant, but they served their purpose and became a beacon of hope for their owners.

My education is largely focused on this mindset: function over form, stability over showmanship. I have enrolled in several classes that crossover to the Architectural Engineering major because I want to have a comprehensive view of how design meets structure. I have worked on three extra-credit residential design projects under the supervision of my architecture professors (Dr. X and Dr. Y) to accelerate my research and education.

I wanted to become an architect to create accessible, affordable housing opportunities in underprivileged communities. Living in a college town, I have seen countless rental properties available, but there are few homes for sale that are priced affordably enough for college students and first-time buyers. This is the case in many towns throughout America, especially areas with a low standard of living. My goal is to build neighborhoods of sufficient starter homes that can help adults build equity, avoid excessive debt, and create financial stability for their futures.

I have an internship scheduled with LMNOP Architectural Firm in the summer, and I will continue my on-the-job training there after my master's degree. After working under acclaimed residential architects Suzan Craft and Peter Wood, I would like to open my own architectural firm focused on developing inexpensive, high-quality housing. Also, I would like to work with Habitat for Humanity again, this time as an architect instead of a general laborer. I believe firmly in their mission to build "a world where everyone has a decent place to live."

I appreciate your consideration. With your assistance, I can continue my schooling in architecture and design to bring accessible homes to those in need.

Sincerely,
Owlie McScholar