

X-ray Fluorescence

Using CASSY-2

The screenshot displays the CASSY Lab 2 software interface. The main window shows a table with columns for channel number (n) and event count (N). A dialog box titled "CASSYs" is open, prompting the user to "Click on a channel to activate." An orange arrow points from a text box "First: Click on a channel to activate" to the "N..." button in the dialog. To the right, the "Settings" panel is visible, showing a tree view of measurement parameters. The "Events N " section is expanded, showing a "Gain" slider and a "Factor" field set to -2.5. An orange arrow points from a text box "2. make sure that gain box (or factor) is -2.5" to the "Factor: -2.5" field. The bottom of the screen shows the Windows taskbar with icons for Internet Explorer, File Explorer, and Microsoft Word, along with the system clock showing 8:57 AM on 4/18/2016.

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CASSY Lab 2


File Measurement Table Diagram Window Help

Measuring time: 180.0 s remaining

Standard

n	N	N	10																	

CASSYs



N ...

Click on a channel to activate.

Close Show Measuring Parameters Load Example Help

Settings

- CASSYs
 - Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
 - Calculator
 - Displays
 - Standard

Global for all spectra of this input

Channel: Energy:

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger:

Meas. condition: 1

Stop condition: 0

Repeating measurement Acoustic signal

Help

3. 180 s for measurement time

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8:58 AM
4/18/2016

Energy Calibration

The screenshot displays the CASSY Lab 2 software interface. On the left, a table lists channel numbers (n) and their corresponding counts (N). The table is as follows:

n	N
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62
113	35
114	15
115	10
116	7
117	16
118	13
119	9
120	8
121	10
122	13
123	38
124	71
125	125
126	227
127	370
128	466
129	507
130	524

The central plot shows a spectrum with a prominent peak at approximately 102 channels. A context menu is open over the plot, with the 'Calculate Peak Center' option highlighted. An orange box with an arrow points to this option, containing the text: "Right-click on the graph and scroll to".

The right-hand side of the interface shows the 'Settings' panel. Under 'Energy Calibration', the 'Global for all spectra of this input' checkbox is checked. The 'Channel' and 'Energy' fields are empty. Below this, there are fields for 'Meas. time: 180 s', 'Interval: 1 s', and 'Number: 181'. The 'Stop condition' is set to 0.

The bottom of the screen shows the Windows taskbar with the system clock displaying 9:12 AM on 4/18/2016.

CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining

Standard

n	N
81	21
82	17
83	19
84	26
85	20
86	14
87	10
88	26
89	21
90	23
91	35
92	54
93	79
94	197
95	346
96	663
97	930
98	1126
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62

Settings

- CASSYs
 - Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R

Negative pulses: -2000 mV Factor: -2.50

Energy Calibration

- Global for all spectra of this input
- Channel: 98.689 Energy:
- Channel: Energy:

Note: determine channel values by marking a vertical line in the diagram, axis switching by drag & drop of n or E .

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger:

Meas. condition: 1

Stoo condition: 0

$n = 98.7; \sigma = 2.1$

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9:16 AM 4/18/2016

CASSY wrote your peak Ch.
Then you should find the Energy

CASSY Lab 2

File Measurement Table Diagram Window Help

Measuring time: 180.0 s remaining

$N^* n^* E^* R^*$

n	N
81	21
82	17
83	19
84	26
85	20
86	14
87	10
88	26
89	21
90	23
91	35
92	54
93	79
94	197
95	346
96	663
97	930
98	1126
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62

Settings

- CASSYs
 - Pocket-CASSY (MCA box, t)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
 - 1460 keV K40
- Displays
 - Standard
 - 609.31 keV Po214
 - 351.92 keV Bi214
 - 295.21 keV Bi214
 - 241.98 keV Bi214
 - 186.10 keV Rn222
 - 53.23 keV Bi214
 - 911.20 keV Th228
 - 583.19 keV Pb208
 - 338.32 keV Th228
 - 238.63 keV Bi212

Energy Calibration

Global for all spectra of this input

Channel: 98.689 Energy: 6.40 keV Fe

Channel: Energy: 7.06 keV Fe

Channel: Energy: 8.64 keV Zn

Channel: Energy: 9.57 keV Zn

Note: determine channel values by marking a vertical line in the diagram, axis switching by drag & drop of n or E .

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger: Meas. condition: 1 Stop condition: 0

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9:17 AM 4/18/2016

$n = 98.7; \sigma = 2.1$

Repeat previous steps for Zn..

The screenshot displays the CASSY Lab 2 software interface. The main window is titled "Standard" and contains a data table on the left and a spectrum plot on the right. A context menu is open over the plot, with "Calculate Peak Center" selected. The settings panel on the right shows various measurement parameters.

n	N
81	21
82	17
83	19
84	26
85	20
86	14
87	10
88	26
89	21
90	23
91	35
92	54
93	79
94	197
95	346
96	663
97	930
98	1126
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62

Measuring time: 180.0 s remaining

Settings:

- CASSYs
 - Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard

Negative pulses: -2000 mV Factor: -2.50

Energy Calibration

- Global for all spectra of this input
- Channel: 98.689 Energy: 6.40 keV Fe
- Channel: Energy:

Note: determine channel values by marking a vertical line in the diagram, axis switching by drag & drop of n or E .

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger: Meas. condition: 1 Stop condition: 0

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CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining

Standard

n	N
81	21
82	17
83	19
84	26
85	20
86	14
87	10
88	26
89	21
90	23
91	35
92	54
93	79
94	197
95	346
96	663
97	930
98	1126
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62

Settings

- CASSYs
 - Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard

Negative pulses: -2000 mV Factor: -2.50

Energy Calibration

- Global for all spectra of this input
- Channel: 98.689 Energy: 6.40 keV Fe
- Channel: 129.21 Energy:

Note: determine channel values by marking a vertical line in the diagram, axis switching by drag & drop of n or E .

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger:

Meas. condition: 1

Stoo condition: 0

$n = 129.2; \sigma = 2.4$

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4/18/2016

CASSY Lab 2

File Measurement Table Diagram Window Help

Measuring time: 180.0 s remaining

$N^* n^* E^* R^*$

n	N
81	21
82	17
83	19
84	26
85	20
86	14
87	10
88	26
89	21
90	23
91	35
92	54
93	79
94	197
95	346
96	663
97	930
98	1126
99	1232
100	1128
101	855
102	579
103	354
104	208
105	179
106	204
107	201
108	217
109	182
110	145
111	95
112	62

Settings

- CASSYs
 - Pocket-CASSY (MCA box, t)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
 - 1460 keV K40
- Displays
 - Standard
 - 609.31 keV Po214
 - 351.92 keV Bi214
 - 295.21 keV Bi214
 - 241.98 keV Bi214
 - 186.10 keV Rn222
 - 53.23 keV Bi214
 - 911.20 keV Th228
 - 583.19 keV Pb208
 - 338.32 keV Th228
 - 238.63 keV Bi212
 - 6.40 keV Fe
 - 7.06 keV Fe
 - 8.64 keV Zn
 - 9.57 keV Zn

Energy Calibration

Global for all spectra of this input

Channel: 98.689 Energy: 7.06 keV Fe

Channel: 129.21 Energy: 8.64 keV Zn

Note: determine channel values by marking a vertical line in the diagram, axis switching by drag & drop of n or E .

Recording: Automatic Append new meas. series

Meas. time: 180 s Number: 181

Interval: 1 s Pre-trigger: 0

Trigger: [dropdown]

Meas. condition: 1

Stop condition: 0

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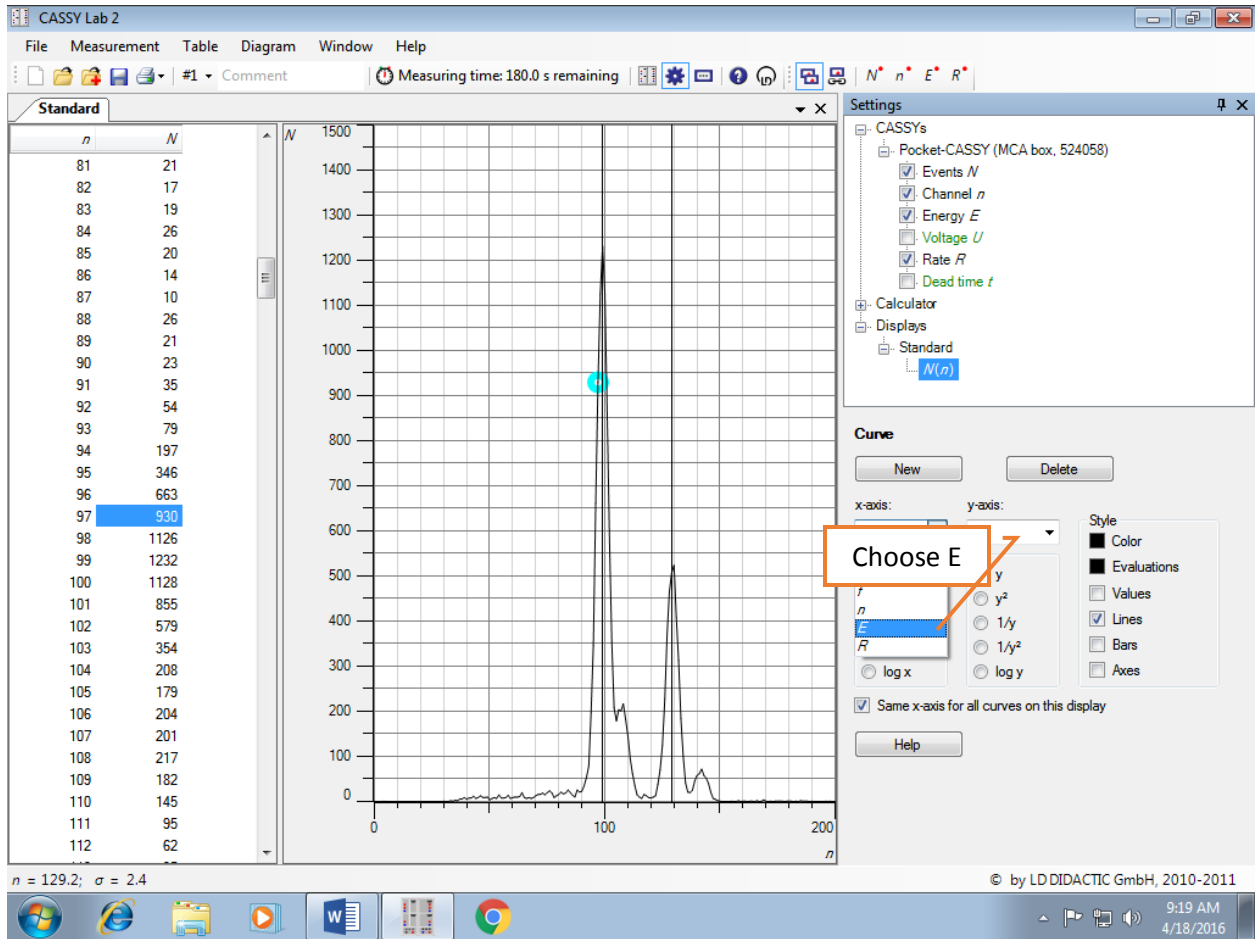
$n = 129.2; \sigma = 2.4$

9:18 AM
4/18/2016

To change the axes go to Diagram then

The screenshot shows the CASSY Lab 2 software interface. A 'Change Axis Assignment' menu is open, listing various options like 'Display Coordinates', 'Select Font Size', 'Zoom', etc. The main plot area shows a spectrum with a green curve overlaid. The x-axis is labeled 'n' and the y-axis is labeled 'N'. The 'Settings' panel on the right shows 'Energy Calibration' options, with 'Channel: 98.689 Energy: 6.40 keV Fe' and 'Channel: 129.21 Energy: 8.64 keV Zn' circled in red. The status bar at the bottom shows 'n = 129.2; σ = 2.4'.

We did the EC but the X-axis is still for Ch. (n)



For a new measurement.

The screenshot shows the CASSY Lab 2 software interface. The main window displays a spectrum plot with energy E in keV on the x-axis (0 to 30) and counts N on the y-axis (0 to 1500). A prominent peak is visible at approximately 6.3 keV, marked with a cyan dot. To the left of the plot is a data table with columns E / keV and N . The table contains the following data:

E / keV	N
5.1	21
5.2	17
5.2	19
5.3	26
5.4	20
5.5	14
5.5	10
5.6	26
5.7	21
5.8	23
5.8	35
5.9	54
6.0	79
6.1	197
6.1	346
6.2	663
6.3	930
6.3	1126
6.4	1232
6.5	1128
6.6	855
6.6	579
6.7	354
6.8	208
6.9	179
6.9	204
7.0	201
7.1	217
7.2	182
7.2	145
7.3	95
7.4	62

The interface also includes a 'Settings' panel on the right with a tree view containing 'CASSYs', 'Pocket-CASSY (MCA box, 524058)', 'Events N ', 'Channel n ', 'Energy E ', 'Voltage U ', 'Rate R ', 'Dead time t ', 'Calculator', 'Displays', and 'Standard'. The 'Displays' folder is highlighted with a yellow box and the number '1'. Below the 'Displays' section, there are 'New' and 'Help' buttons, with the 'New' button also highlighted by a yellow box and the number '2'. The status bar at the bottom shows 'Measuring time: 180.0 s remaining', 'n = 129.2; σ = 2.4', and the copyright notice '© by LD DIDACTIC GmbH, 2010-2011'. The system tray shows the date and time as 9:20 AM on 4/18/2016.

CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining $N^* n^* E^* R^*$

Standard New Display

Settings

- CASSYs
 - Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
 - Calculator
 - Displays
 - Standard
 - $N(E)$
 - New Display

Display

New Delete

Name: New Display **3**

Type: cartesian

Add new Curve **4**

Help

$n = 129.2; \sigma = 2.4$

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9:21 AM
4/18/2016

CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining N n E R

Standard New Display

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N(E)$
 - New Display
 - t

Curve

New Delete

x-axis: y-axis: Style

t off Color

n y Evaluations

t y^2 Values

f $1/y$ Lines

n $1/y^2$ Bars

R log x log y Axes

Same x-axis for all curves on this display

Help

5

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining $N^* n^* E^* R^*$

Standard New Display

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N(E)$
 - New Display
 - (E)

Curve

New Delete

x-axis: E

y-axis: off

Style

- Color
- Lines
- Bars
- Axes

Same x-axis for all curves on this display

Help

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#1 Comment Measuring time: 180.0 s remaining $N \cdot n \cdot E \cdot R$

E / keV	N
-0.8	0
-0.8	0
-0.7	0
-0.6	0
-0.5	1
-0.5	0
-0.4	0
-0.3	0
-0.3	0
-0.2	0
-0.1	0
0.0	0
0.0	0
0.1	0
0.2	0
0.3	0
0.3	0
0.4	0
0.5	0
0.6	0
0.6	0
0.7	0
0.8	0
0.8	0
0.9	0
1.0	0
1.1	0
1.1	0
1.2	0
1.3	0
1.4	1
1.4	0

Color

Basic colors:

Custom colors:

Define Custom Colors >>

OK Cancel

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N(E)$
 - New Display
 - $N(E)$

Curve

New Delete

x-axis: E y-axis: N

Style: **Color** (7)

- x
- x^2
- $1/x$
- $1/x^2$
- log x

- y
- y^2
- $1/y$
- $1/y^2$
- log y

- Evaluations
- Values
- Lines
- Bars
- Axes

Same x-axis for all curves on this display

Help

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#2 Comment Measuring time: 118.4 s remaining

Standard New Display

E#1 / keV	N#1	E#2 / keV	N#1	N#2
5.1	21	5.1		
5.2	17	5.1		
5.2	19	5.1		
5.3	26	5.1		
5.4	20	5.1		
5.5	14	5.1		
5.5	10	5.1		
5.6	26	5.1		
5.7	21	5.1		
5.8	23	5.1		
5.8	35	5.1		
5.9	54	5.1		
6.0	79	6.1		
6.1	197	6.1		
6.1	346	6.1		
6.2	663	6.1		
6.3	930	6.1		
6.3	1126	6.1		
6.4	1232	6.1		
6.5	1128	6.1		
6.6	855	6.1		
6.6	579	6.1		
6.7	354	6.1		
6.8	208	6.1		
6.9	179	6.1		
6.9	204	6.1		
7.0	201	7.1		
7.1	217	7.1		
7.2	182	7.1		
7.2	145	7.1		
7.3	95	7.1		

Settings

- Channel n
- Energy E
- Voltage U
- Rate R
- Dead time t

Calculator

Displays

- Standard
- N#1(E)**
- N#2(E)**
- New Display
- N#1(E)
- N#2(E)

Curve

New Delete

x-axis: E y-axis: $N\#2$

Style

- Color
- Evaluations
- Values
- Lines
- Bars
- Axes

Same x-axis for all curves on this display

Help

For keep one curve on each page, delete the unwanted curve from each display!

$n = 129.2; \sigma = 2.4$

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9:24 AM 4/18/2016

CASSY Lab 2

File Measurement Table Diagram Window Help

#2 Comment Measuring time: 76.1 s remaining

Standard New Display

E#1 / keV	N#1	E#2 / keV	N#1	N#2
-0.8	0	-0.8	0	0
-0.8	0	-0.8	0	0
-0.7	0	-0.7	0	0
-0.6	0	-0.6	0	0
-0.5	1	-0.5	0	0
-0.5	0	-0.5	0	0
-0.4	0	-0.4	0	0
-0.3	0	-0.3	0	0
-0.3	0	-0.3	0	0
-0.2	0	-0.2	0	0
-0.1	0	-0.1	0	0
0.0	0	0.0	0	0
0.0	0	0.0	0	0
0.1	0	0.1	0	0
0.2	0	0.2	0	0
0.3	0	0.3	0	0
0.3	0	0.3	0	0
0.4	0	0.4	0	0
0.5	0	0.5	0	0
0.6	0	0.6	0	0
0.6	0	0.6	0	0
0.7	0	0.7	0	0
0.8	0	0.8	0	0
0.8	0	0.8	0	0
0.9	0	0.9	0	0
1.0	0	1.0	0	1
1.1	0	1.1	0	1
1.1	0	1.1	0	1
1.2	0	1.2	0	1
1.3	0	1.3	0	1
1.4	1	1.4	1	1

Settings

- Events N
- Channel n
- Energy E
- Voltage U
- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - New Display
 - N#1(E)
 - N#2(E)

Curve

New Delete

x-axis: E y-axis: $N\#1$

Style

- x y
- x^2 y^2
- $1/x$ $1/y$
- $1/x^2$ $1/y^2$
- $\log x$ $\log y$
- Color
- Evaluations
- Values
- Lines
- Bars
- Axes

Same x-axis for all curves on this display

Help

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

Measuring time: 46.0 s remaining

E#2 / keV	N#2
-0.8	0
-0.8	0
-0.7	0
-0.6	0
-0.5	0
-0.5	1
-0.4	0
-0.3	0
-0.3	0
-0.2	0
-0.1	0
0.0	0
0.0	0
0.1	0
0.2	0
0.3	0
0.3	0
0.4	0
0.5	0
0.6	0
0.6	0
0.7	0
0.8	0
0.8	0
0.9	0
1.0	0
1.1	0
1.1	0
1.2	0
1.3	0
1.4	0
1.4	0

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - N#1(E)
 - New Display
 - N#2(E)

Good job 😊

$n = 129.2; \sigma = 2.4$

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9:25 AM
4/18/2016

CASSY Lab 2

File Measurement Table Diagram Window Help

#2 Comment Measuring time: 180.0 s remaining

E#2 / keV	N#2
-0.8	0
-0.8	0
-0.7	0
-0.6	0
-0.5	0
-0.5	1
-0.4	0
-0.3	0
-0.3	0
-0.2	0
-0.1	0
0.0	0
0.0	0
0.1	0
0.2	0
0.3	0
0.3	0
0.4	0
0.5	0
0.6	0
0.6	0
0.7	0
0.8	0
0.8	0
0.9	0
1.0	0
1.1	0
1.1	0
1.2	0
1.3	0
1.4	0
1.4	0

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - New Display
 - $N\#2(E)$

Energy E

Conversion

x x^2 $1/x$ $1/x^2$ $\log x$

Applies to all axes with this unit

Minimum: 0 keV

Maximum: 36.66 keV

Find Minimum and Maximum

Right-click on the axis for change the scale

$n = 129.2; \sigma = 2.4$

GmbH, 2010-2011

9:27 AM
4/18/2016

CASSY Lab 2

File Measurement Table Diagram Window Help

#2 Comment Measuring time: 180.0 s remaining

E#2 / keV	N#2
5.7	24
5.8	24
5.8	21
5.9	28
6.0	19
6.1	27
6.1	26
6.2	42
6.3	29
6.3	41
6.4	26
6.5	25
6.6	33
6.6	30
6.7	32
6.8	32
6.9	28
6.9	34
7.0	37
7.1	36
7.2	33
7.2	41
7.3	39
7.4	22
7.5	53
7.5	59
7.6	140
7.7	234
7.7	455
7.8	860
7.9	1240
8.0	1579

Settings

- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - New Disp
 - $N\#2(E)$

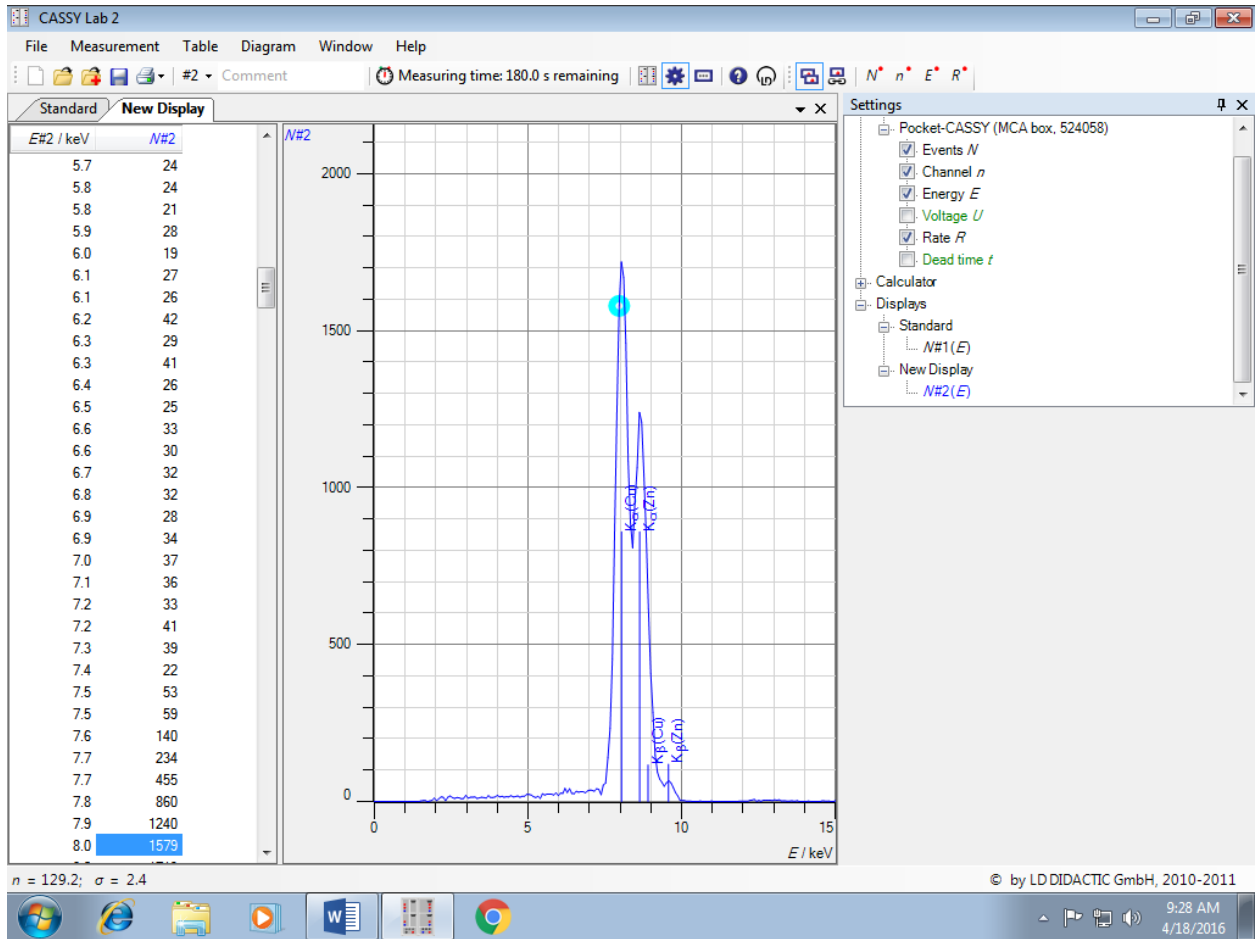
To determine the suitable elements right-click on the graph then...

- Change Axis Assignment
- Display Coordinates Alt+C
- Select Font Size
- Select Line Width
- Select Value Display
- Select Rulers
- Show Grid
- Zoom Alt+Z
- Zoom Off Alt+O
- Set Marker**
 - ABC Text Alt+T
 - Vertical Line Alt+V
 - Horizontal Line Alt+H
 - Measure Difference Alt+D
 - keV X-ray Energies Alt+X**
- Draw Mean
- Calculate Peak Center
- Fit Function
- Calculate Integral
- Other Evaluations
- Delete Last Evaluation
- Delete All Evaluations
- Delete Range (only measured values)
- Copy Diagram
- Copy Window

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#2 Comment Measuring time: 180.0 s remaining

E#2 / keV	N#2
5.7	24
5.8	24
5.8	21
5.9	28
6.0	19
6.1	27
6.1	26
6.2	42
6.3	29
6.3	41
6.4	26
6.5	25
6.6	33
6.6	30
6.7	32
6.8	32
6.9	28
6.9	34
7.0	37
7.1	36
7.2	33
7.2	41
7.3	39
7.4	22
7.5	53
7.5	59
7.6	140
7.7	234
7.7	455
7.8	860
7.9	1240
8.0	1579

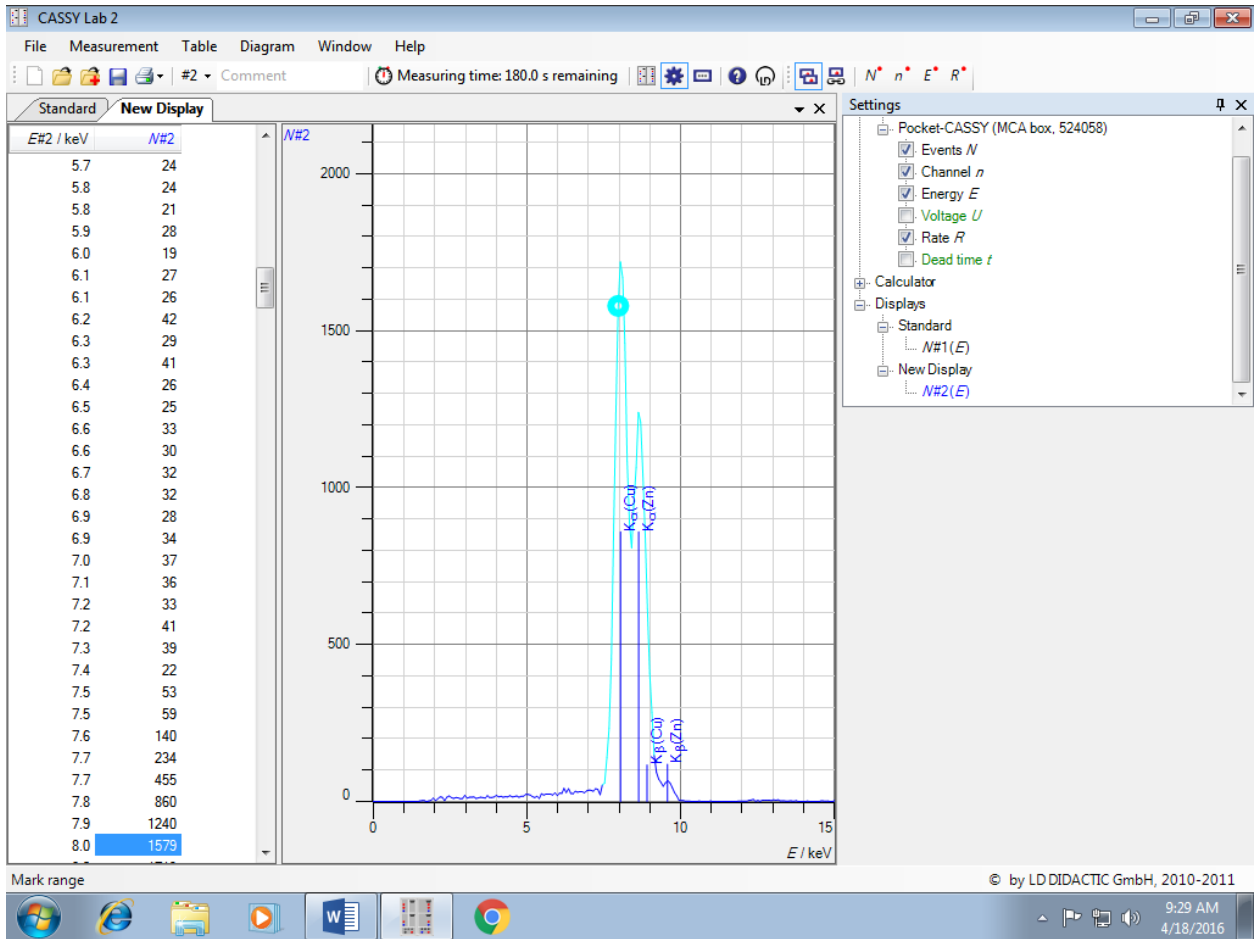
Settings

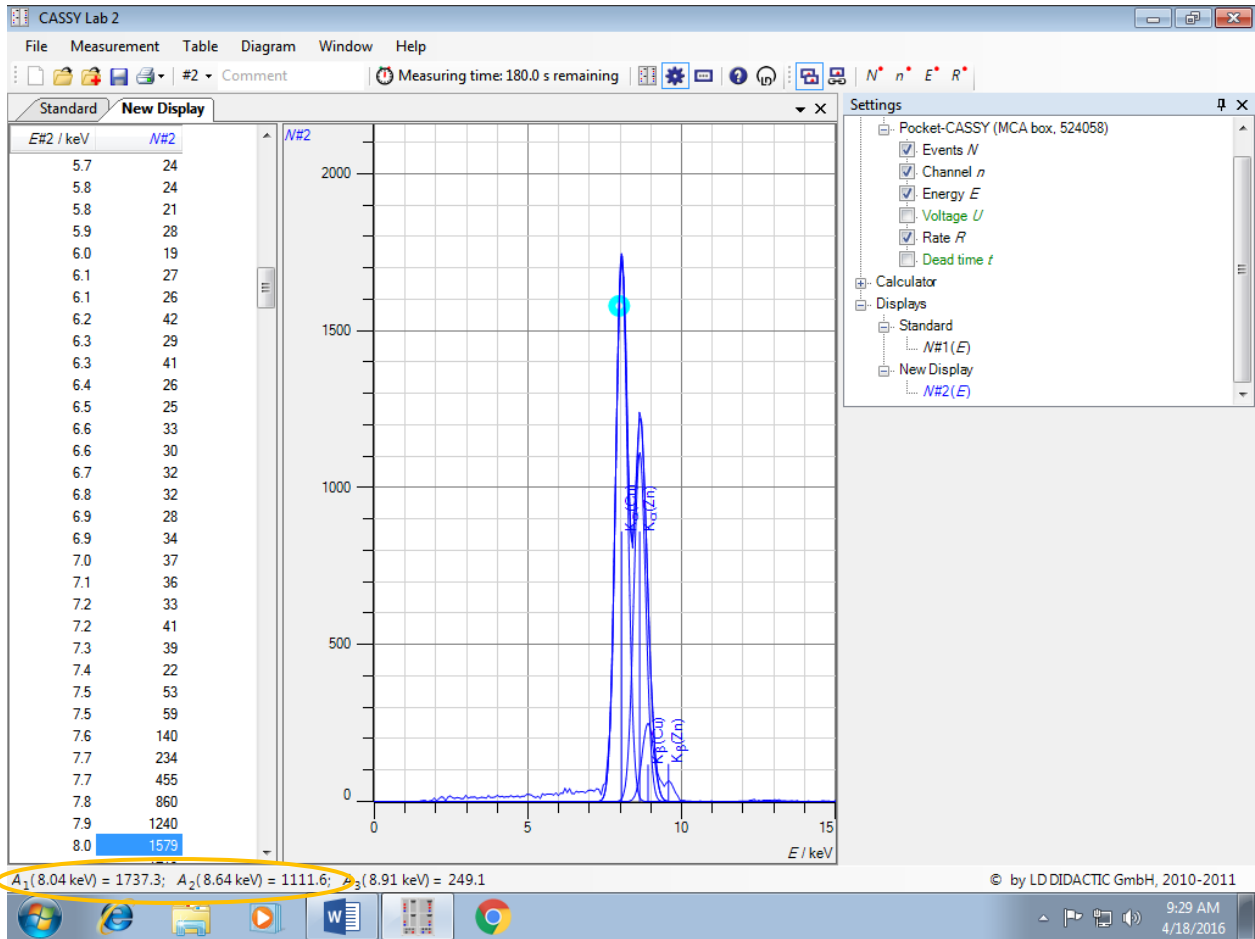
- Pocket-CASSY (MCA box, 524058)
 - Events N
 - Channel n
 - Energy E
 - Voltage U
 - Rate R
 - Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - New Display
 - $N\#2(E)$

Again right-click on the graph for GOSE of Brass.

$n = 129.2; \sigma = 2.4$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 169.3 s remaining

E#2 / keV	N#2	E#3 / keV	N#2	N#3
-0.8	0	-0.		
-0.8	0	-0.		
-0.7	0	-0.		
-0.6	0	-0.		
-0.5	0	-0.		
-0.5	1	-0.		
-0.4	0	-0.		
-0.3	0	-0.		
-0.3	0	-0.		
-0.2	0	-0.		
-0.1	0	-0.		
0.0	0	0.		
0.0	0	0.		
0.1	0	0.		
0.2	0	0.		
0.3	0	0.		
0.3	0	0.		
0.4	0	0.		
0.5	0	0.		
0.6	0	0.		
0.6	0	0.		
0.7	0	0.		
0.8	0	0.		
0.8	0	0.		
0.9	0	0.		
1.0	0	1.		
1.1	0	1.		
1.1	0	1.		
1.2	0	1.		
1.3	0	1.		
1.4	0	1.		

Settings

- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - $N\#3(E)$
 - Brass
 - $N\#2(E)$
 - $N\#3(E)$
 - Cu
 - $N\#2(E)$
 - $N\#3(E)$

New display for a new element Cu.

Curve

New Delete

x-axis: E y-axis: $N\#2$

Style

- x y
- x^2 y^2
- $1/x$ $1/y$
- $1/x^2$ $1/y^2$
- log x log y

Color Evaluations Values Lines Bars Axes

Same x-axis for all curves on this display

Help

$A_1(8.04 \text{ keV}) = 1737.3; A_2(8.64 \text{ keV}) = 1111.6; A_3(8.91 \text{ keV}) = 249.1$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 153.6 s remaining

Standard Brass C...

E#1 / keV	N#1	E#3 / keV	N#1	N#3
5.1	21	5.		
5.2	17	5.		
5.2	19	5.		
5.3	26	5.		
5.4	20	5.		
5.5	14	5.		
5.5	10	5.		
5.6	26	5.		
5.7	21	5.		
5.8	23	5.		
5.8	35	5.		
5.9	54	5.		
6.0	79	6.		
6.1	197	6.		
6.1	346	6.		
6.2	663	6.		
6.3	930	6.		
6.3	1126	6.		
6.4	1232	6.		
6.5	1128	6.		
6.6	855	6.		
6.6	579	6.		
6.7	354	6.		
6.8	208	6.		
6.9	179	6.		
6.9	204	6.		
7.0	201	7.		
7.1	217	7.		
7.2	182	7.		
7.2	145	7.		
7.3	95	7.		

Settings

- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - N#1(E)
 - N#3(E) ←
 - Brass
 - N#2(E)
 - N#3(E)
 - Cu
 - N#2(E)
 - N#3(E)

Curve

New Delete ←

x-axis: E y-axis: N#3

Style

- x y
- x² y²
- 1/x 1/y
- 1/x² 1/y²
- log x log y

Same x-axis for all curves on this display

Help

Style

- Color
- Evaluations
- Values
- Lines
- Bars
- Axes

$A_1(8.04 \text{ keV}) = 1737.3; A_2(8.64 \text{ keV}) = 1111.6; A_3(8.91 \text{ keV}) = 249.1$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 139.7 s remaining

Standard Brass C...

E#2 / keV	N#2	E#3 / keV	N#2	N#3
5.7	24	5.7		
5.8	24	5.8		
5.8	21	5.8		
5.9	28	5.9		
6.0	19	6.0		
6.1	27	6.1		
6.1	26	6.1		
6.2	42	6.2		
6.3	29	6.3		
6.3	41	6.3		
6.4	26	6.4		
6.5	25	6.5		
6.6	33	6.6		
6.6	30	6.6		
6.7	32	6.7		
6.8	32	6.8		
6.9	28	6.9		
6.9	34	6.9		
7.0	37	7.0		
7.1	36	7.1		
7.2	33	7.2		
7.2	41	7.2		
7.3	39	7.3		
7.4	22	7.4		
7.5	53	7.5		
7.5	59	7.5		
7.6	140	7.6		
7.7	234	7.7		
7.7	455	7.7		
7.8	860	7.8		
7.9	1240	7.9		

Settings

- Voltage U
- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - N#1(E)
 - Brass
 - N#2(E)
 - N#3(E)
 - Cu
 - N#2(E)
 - N#3(E)

Curve

New Delete

x-axis: E y-axis: N#3

Style

- x y
- x² y²
- 1/x 1/y
- 1/x² 1/y²
- log x log y

Same x-axis for all curves on this display

Help

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9:32 AM 4/18/2016

$A_1(8.04 \text{ keV}) = 1737.3$; $A_2(8.64 \text{ keV}) = 1111.6$; $A_3(8.91 \text{ keV}) = 249.1$

CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 108.0 s remaining

Standard Brass Cu

E#2 / keV	N#2	E#3 / keV	N#2	N#3
-0.8	0	-0.		
-0.8	0	-0.		
-0.7	0	-0.		
-0.6	0	-0.		
-0.5	0	-0.		
-0.5	1	-0.		
-0.4	0	-0.		
-0.3	0	-0.		
-0.3	0	-0.		
-0.2	0	-0.		
-0.1	0	-0.		
0.0	0	0.		
0.0	0	0.		
0.1	0	0.		
0.2	0	0.		
0.3	0	0.		
0.3	0	0.		
0.4	0	0.		
0.5	0	0.		
0.6	0	0.		
0.6	0	0.		
0.7	0	0.		
0.8	0	0.		
0.8	0	0.		
0.9	0	0.		
1.0	0	1.		
1.1	0	1.		
1.1	0	1.		
1.2	0	1.		
1.3	0	1.		
1.4	0	1.		

Settings

- Energy E
- Voltage U
- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - Brass
 - $N\#2(E)$
 - Cu
 - $N\#2(E)$
 - $N\#3(E)$

Curve

New Delete

x-axis: E y-axis: $N\#2$

Style

- x y
- x^2 y^2
- $1/x$ $1/y$
- $1/x^2$ $1/y^2$
- log x log y

Color Evaluations Values Lines Bars Axes

Same x-axis for all curves on this display

Help

$A_1(8.04 \text{ keV}) = 1737.3; A_2(8.64 \text{ keV}) = 1111.6; A_3(8.91 \text{ keV}) = 249.1$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 180.0 s remaining

Standard Brass Cu

E#3 / keV	N#3
-0.8	0
-0.8	0
-0.7	0
-0.6	0
-0.5	0
-0.5	0
-0.4	0
-0.3	0
-0.3	0
-0.2	0
-0.1	0
0.0	0
0.0	0
0.1	0
0.2	0
0.3	0
0.3	0
0.4	0
0.5	0
0.6	0
0.6	0
0.7	0
0.8	0
0.8	0
0.9	0
1.0	0
1.1	0
1.1	0
1.2	0
1.3	0
1.4	0
1.4	0

Settings

- Channel n
- Energy E
- Voltage U
- Rate R
- Dead time t
- Calculator
- Displays
 - Standard
 - $N\#1(E)$
 - Brass
 - $N\#2(E)$
 - Cu
 - $N\#3(E)$

$A_1(8.04 \text{ keV}) = 1737.3$; $A_2(8.64 \text{ keV}) = 1111.6$; $A_3(8.91 \text{ keV}) = 249.1$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 180.0 s remaining

Standard Brass Cu

Settings

- Channel n
- Energy E
- Voltage U
- Rate R
- Dead time t

Calculator

Displays

- Standard
 - $N\#1(E)$
- Brass
 - $N\#2(E)$
- Cu
 - $N\#3(E)$

Periodic Table

${}_{29}\text{Cu}$: $K_{\alpha} = 8.04 \text{ keV}$, $K_{\beta} = 8.91 \text{ keV}$, $L_{\alpha} = 0.93 \text{ keV}$, $L_{\beta} = 0.95 \text{ keV}$

$E\#3 / \text{keV}$ $N\#3$ 4500

E / keV

$A_1(8.04 \text{ keV}) = 1737.3$; $A_2(8.64 \text{ keV}) = 1111.6$; $A_3(8.91 \text{ keV}) = 249.1$

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CASSY Lab 2

File Measurement Table Diagram Window Help

#3 Comment Measuring time: 180.0 s remaining

Standard Brass Cu

E#3 / keV	N#3
-0.8	0
-0.8	0
-0.7	0
-0.6	0
-0.5	0
-0.5	0
-0.4	0
-0.3	0
-0.3	0
-0.2	0
-0.1	0
0.0	0
0.0	0
0.1	0
0.2	0
0.3	0
0.3	0
0.4	0
0.5	0
0.6	0
0.6	0
0.7	0
0.8	0
0.8	0
0.9	0
1.0	0
1.1	0
1.1	0
1.2	0
1.3	0
1.4	0
1.4	0

N#3

Settings

- Channel *n*
- Energy *E*
- Voltage *U*
- Rate *R*
- Dead time *t*
- Calculator
- Displays
- Standard
 - N#1(*E*)

Change Axis Assignment

- x,y Display Coordinates Alt+C
- Select Font Size
- Select Line Width
- Select Value Display
- Select Rulers
- Show Grid
- Zoom Alt+Z
- Zoom Off Alt+O
- Set Marker
- Draw Mean
- Calculate Peak Center
- f(x) Fit Function**
 - Straight Line through Origin
 - Best-fit Straight Line
 - Tangent
 - Normal Parabola
 - Parabola
 - Hyperbola 1/x
 - Hyperbola 1/x²
 - Exponential Function e^x
 - Envelope e^{-x}
 - Gaussians of equal Width**
 - Gaussians of specified Energy
 - f(x) Free Fit f(x,A,B,C,D) Alt+F
- Calculate Integral
- Other Evaluations
- Delete Last Evaluation
- Delete All Evaluations
- Delete Range (only measured values)
- Copy Diagram
- Copy Window

A₁(8.04 keV) = 1737.3; A₂(8.64 keV) = 1111.6; A₃(8.91 keV) = 249.1

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