

# How to plot spectral profiles using Fv

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With this brief tutorial you just learn how to plot spectral profiles from fit files that you have generated from photos of spectra.

You need:

1. Fv program
2. Some fit files

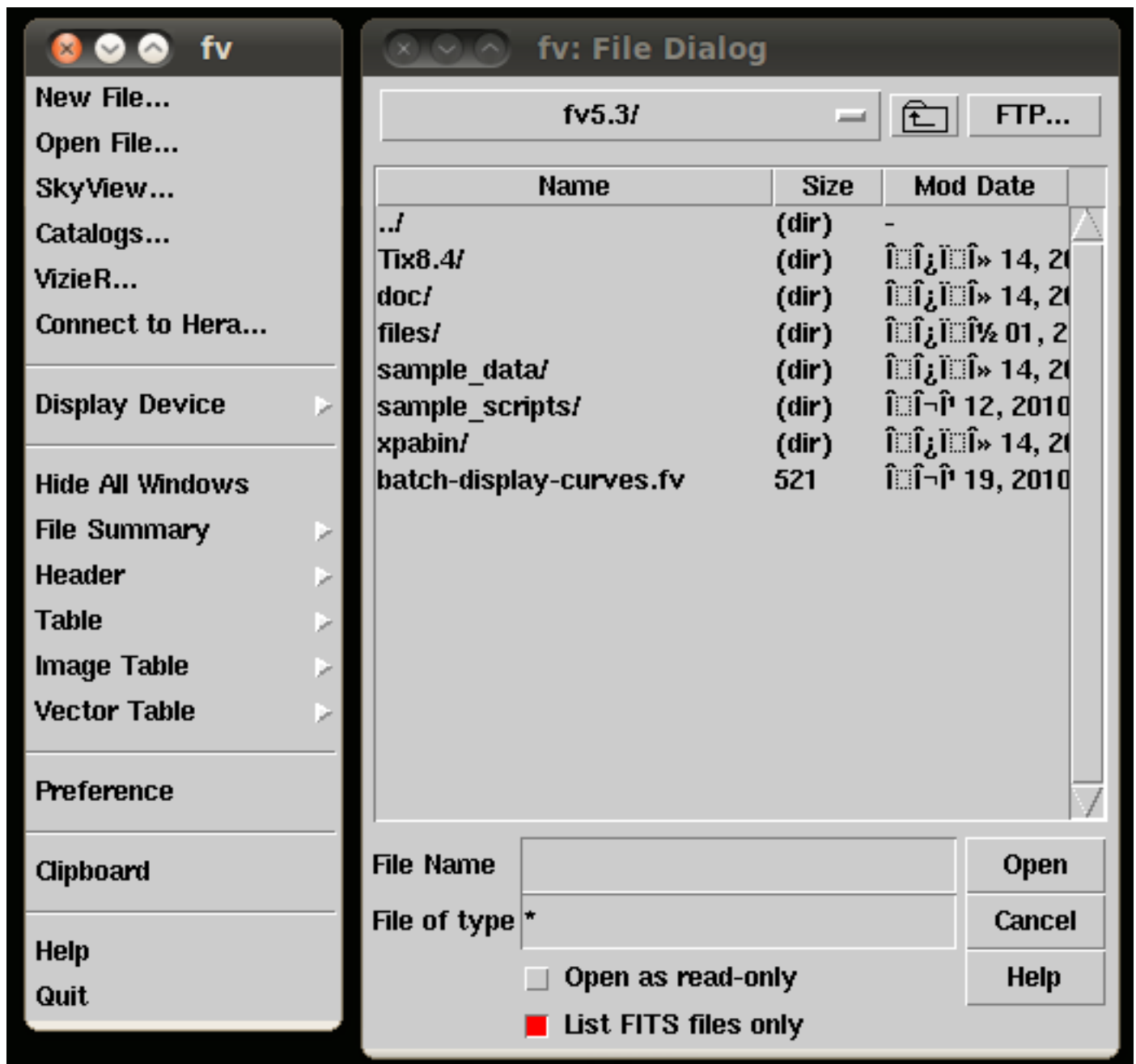
This tutorial is completed in 6 steps.

## Step 1

Run Fv and you see two windows.

1: The main window (captioned fv)

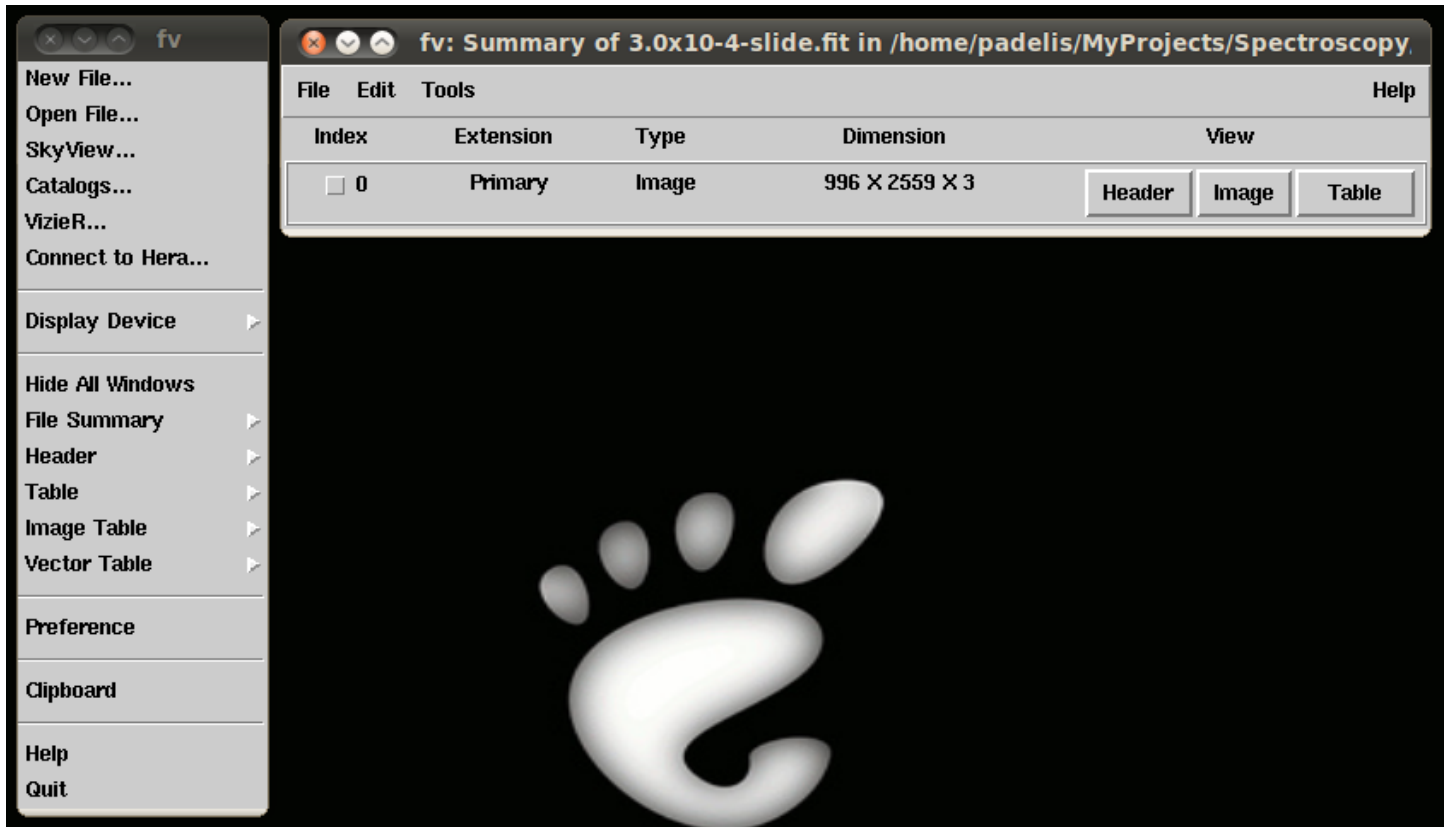
2: The File Dialog window



Navigate through File Dialog window to where you have put your fit files and select a file to open.

## Step 2

Open a fit file and you see a Summary window.

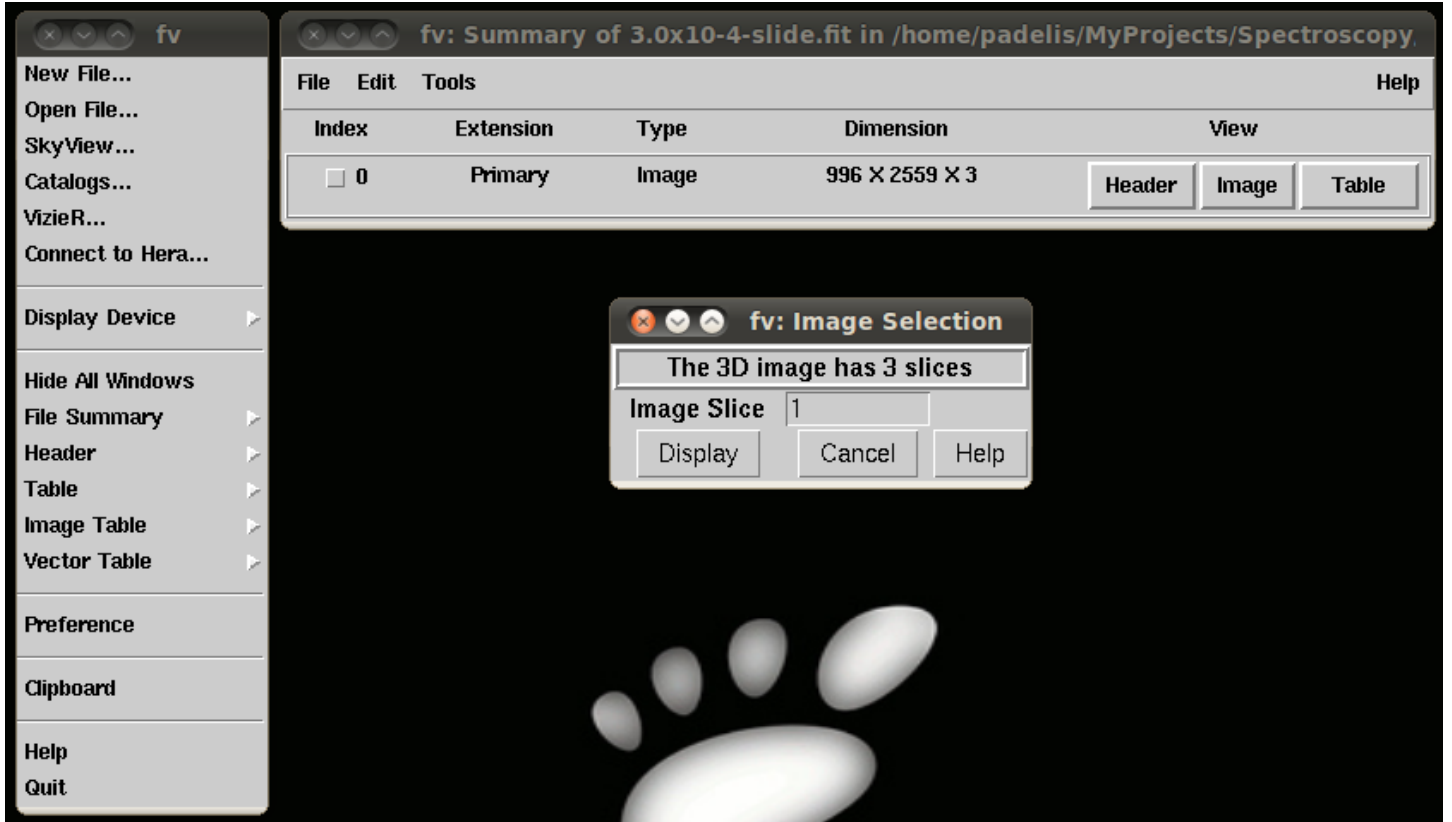


Summary window display informations about the opened file, but you don't need to worry if don't understand these.

**\*\*\* Just click on Table button. \*\*\***

## Step 3

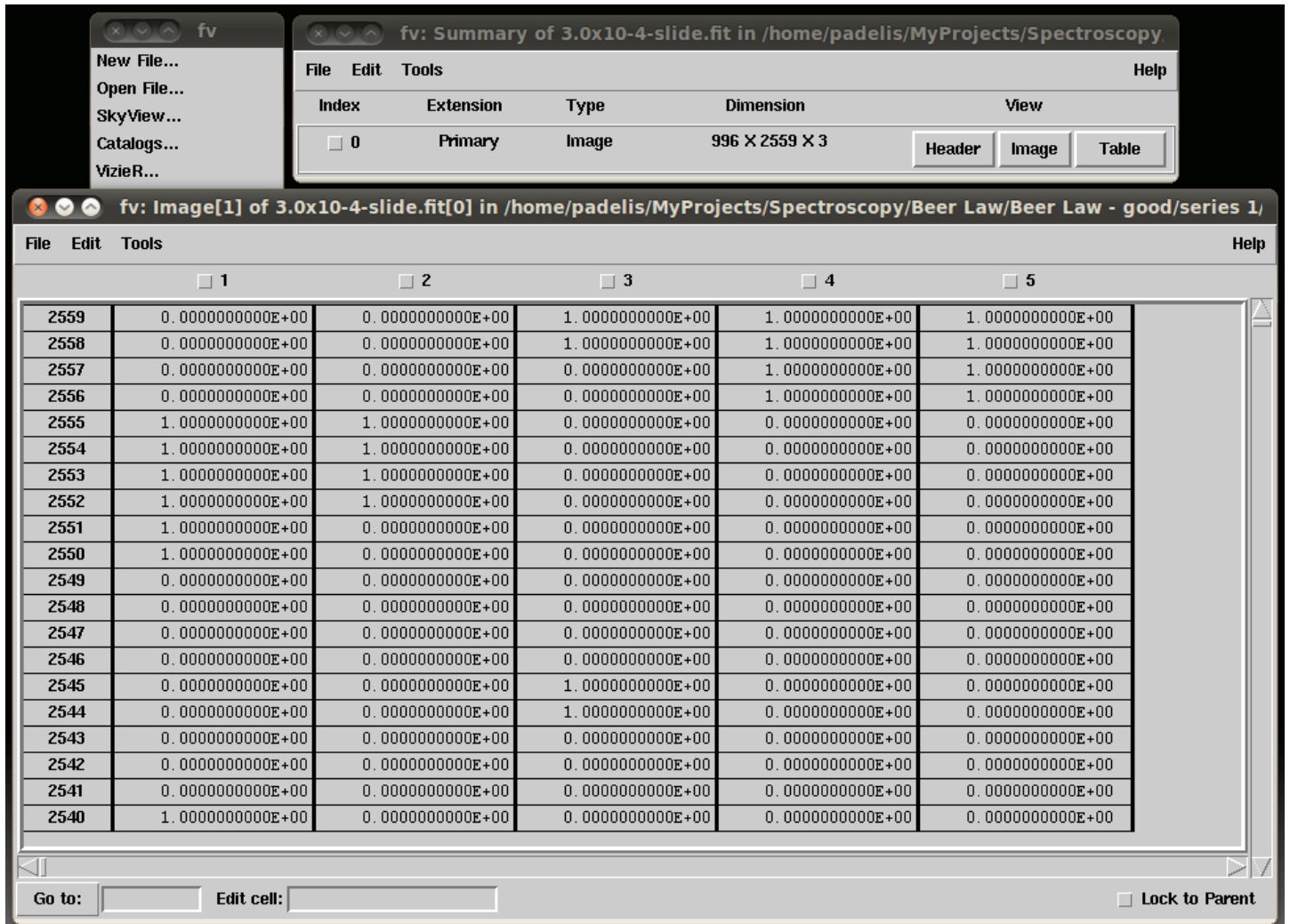
Clicking on Table button opens an Image Selection dialog.



Leave everything as is and just click on **Display** button.

## Step 4

Clicking on Display button opens a big table with dimensions equal to dimensions the image of spectrum had before saved as fit file.



The screenshot shows two windows from a software application. The top window, titled "fv: Summary of 3.0x10-4-slide.fit in /home/padelis/MyProjects/Spectroscopy", displays a summary table with the following columns: Index, Extension, Type, Dimension, and View. The table shows a single entry with Index 0, Extension Primary, Type Image, and Dimension 996 X 2559 X 3. The View column has buttons for Header, Image, and Table. The bottom window, titled "fv: Image[1] of 3.0x10-4-slide.fit[0] in /home/padelis/MyProjects/Spectroscopy/Beer Law/Beer Law - good/series 1", displays a large table with 6 columns and 10 rows of data. The columns are labeled 1 through 5. The data values are in scientific notation, ranging from 0.000000000E+00 to 1.000000000E+00. The table is scrollable, and there are navigation buttons at the bottom.

Index	Extension	Type	Dimension	View
0	Primary	Image	996 X 2559 X 3	Header Image Table

	1	2	3	4	5
2559	0.000000000E+00	0.000000000E+00	1.000000000E+00	1.000000000E+00	1.000000000E+00
2558	0.000000000E+00	0.000000000E+00	1.000000000E+00	1.000000000E+00	1.000000000E+00
2557	0.000000000E+00	0.000000000E+00	0.000000000E+00	1.000000000E+00	1.000000000E+00
2556	0.000000000E+00	0.000000000E+00	0.000000000E+00	1.000000000E+00	1.000000000E+00
2555	1.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2554	1.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2553	1.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2552	1.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2551	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2550	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2549	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2548	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2547	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2546	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2545	0.000000000E+00	0.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00
2544	0.000000000E+00	0.000000000E+00	1.000000000E+00	0.000000000E+00	0.000000000E+00
2543	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2542	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2541	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00
2540	1.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00	0.000000000E+00

Each table cell represents a pixel of image of spectrum and its value corresponds to the light intensity in that point in an arbitrary way.

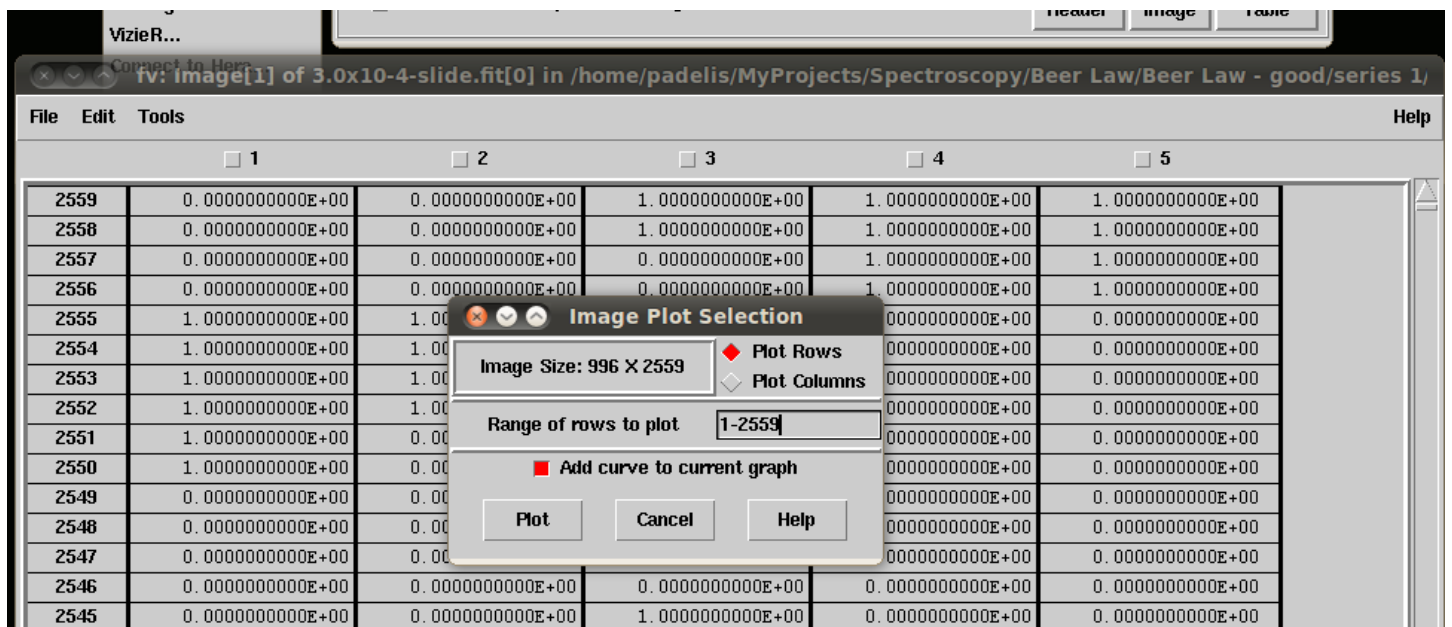
**\*\*\* From Tools menu, select Plot command \*\*\***

## Step 5

Selecting Plot command opens the Image Plot Selection dialog. What you do next, it depends on the spectrum orientation before the image saved as fit file.

For horizontal orientation, you should have checked **Plot Rows** and input the overall range of rows (eg. 1-2559).

For vertical orientation, you should have checked **Plot Columns** and input the overall range of columns (eg. 1-996).



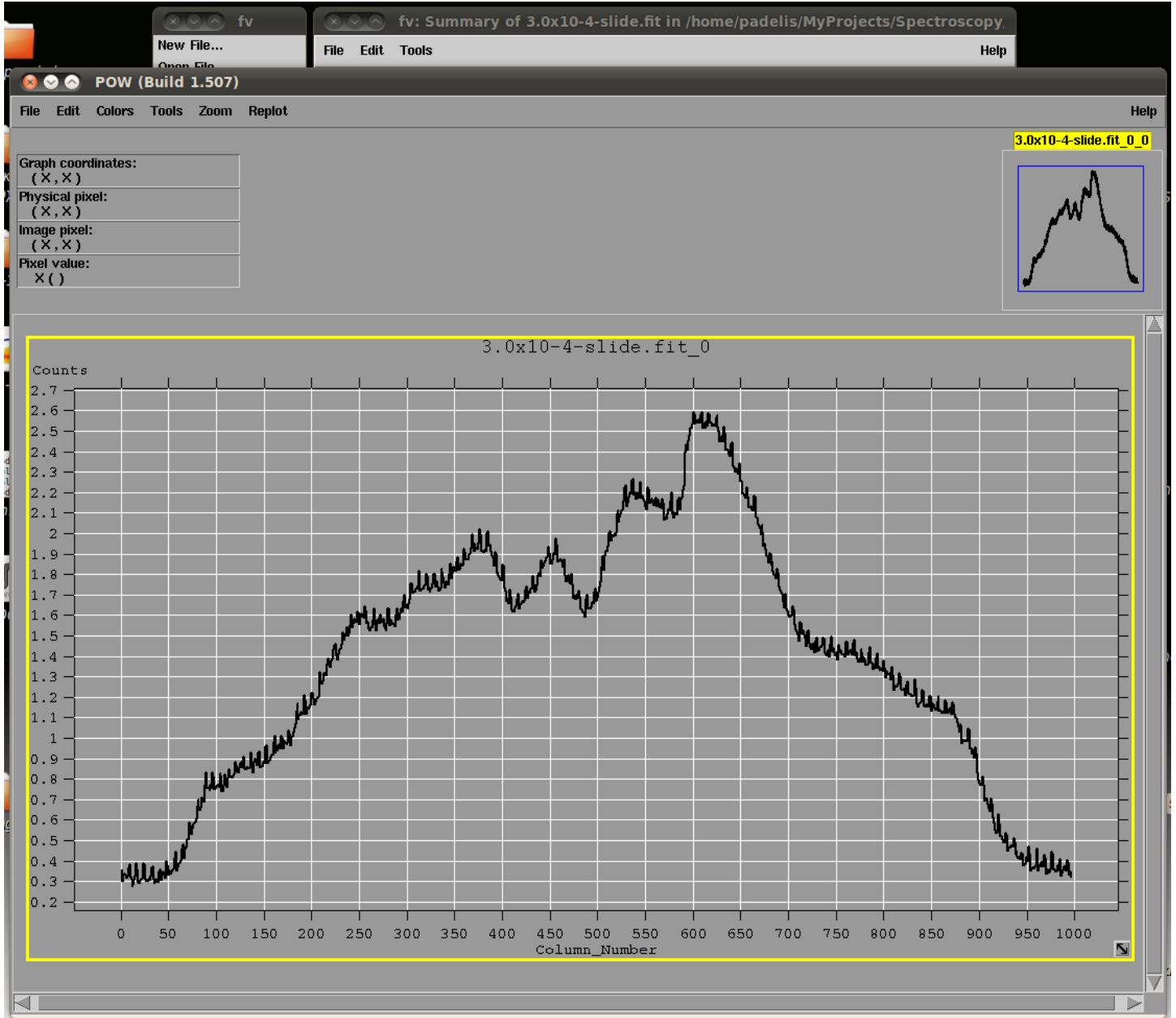
Finally click on **Plot** button to plot the spectral profile.

Remember: Have **Add curve to current graph** checked, to plot curves to the current graph.

**\*\*\* If an error message appears, just skip it \*\*\***

## Step 6

After clicking Plot button, the spectral profile is plotted in the POW window.



- You can zoom in, by selecting any portion of the graph.
- You can zoom out, by double clicking on the graph area.
- If a graph plotted out of the plotting area, double click on the area to fit it.
- From **Edit** menu, you can select **Edit Graph** command to customize your graphs.