Re-Window an XRF map

What this does:

To produce the XRF maps during an experiment you specify the elements you're interested in and the software sums N data channels around the XRF peak in your data.

If you've forgotten to include a peak or want to adjust the number of channels used in generating a map you can re-process your data.

Note that windowing does not deconvolute overlapping XRF peaks so should be treated with caution. For example in the case of Fe and Co the Fe Kb-transition occurs close to the energy of the Co Ka, windowing for Co.

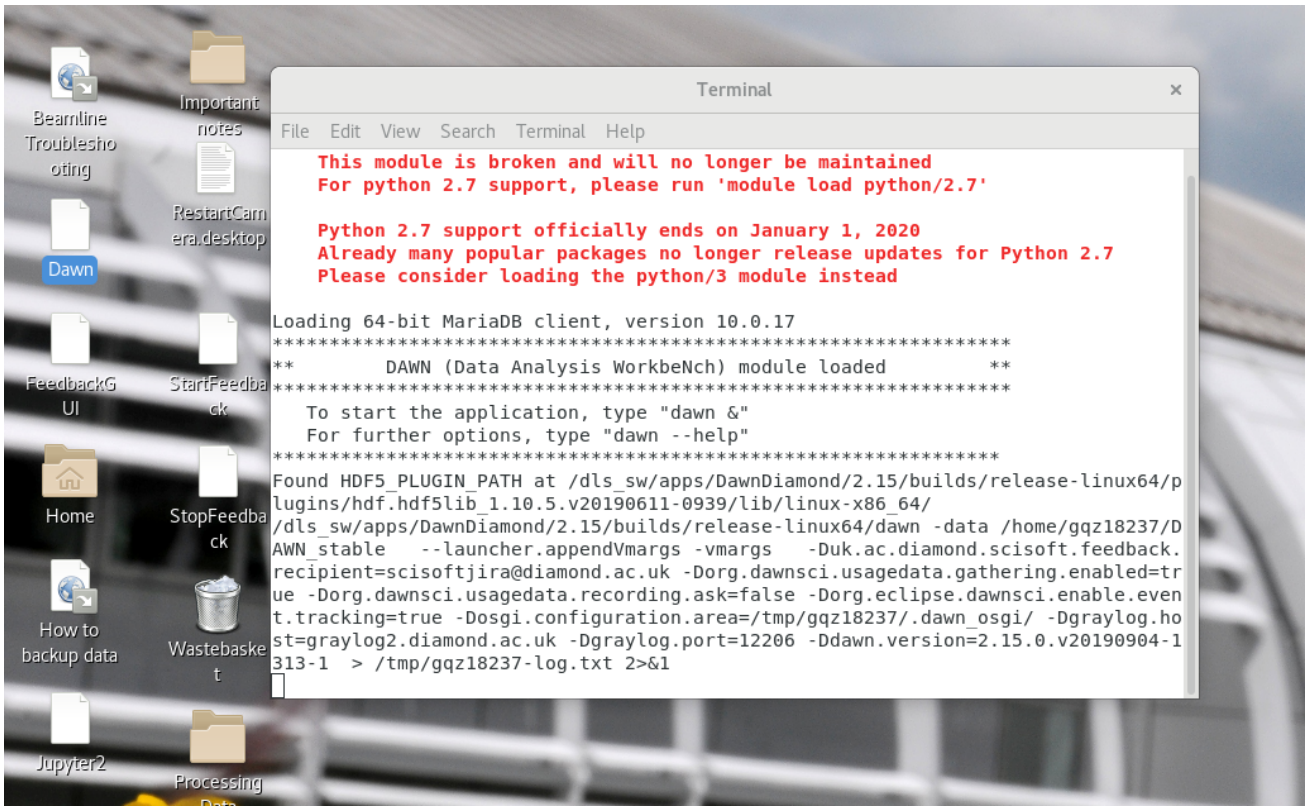
Open Dawn

In Linux - Open a terminal then type:

```
module load dawn
dawn&
```

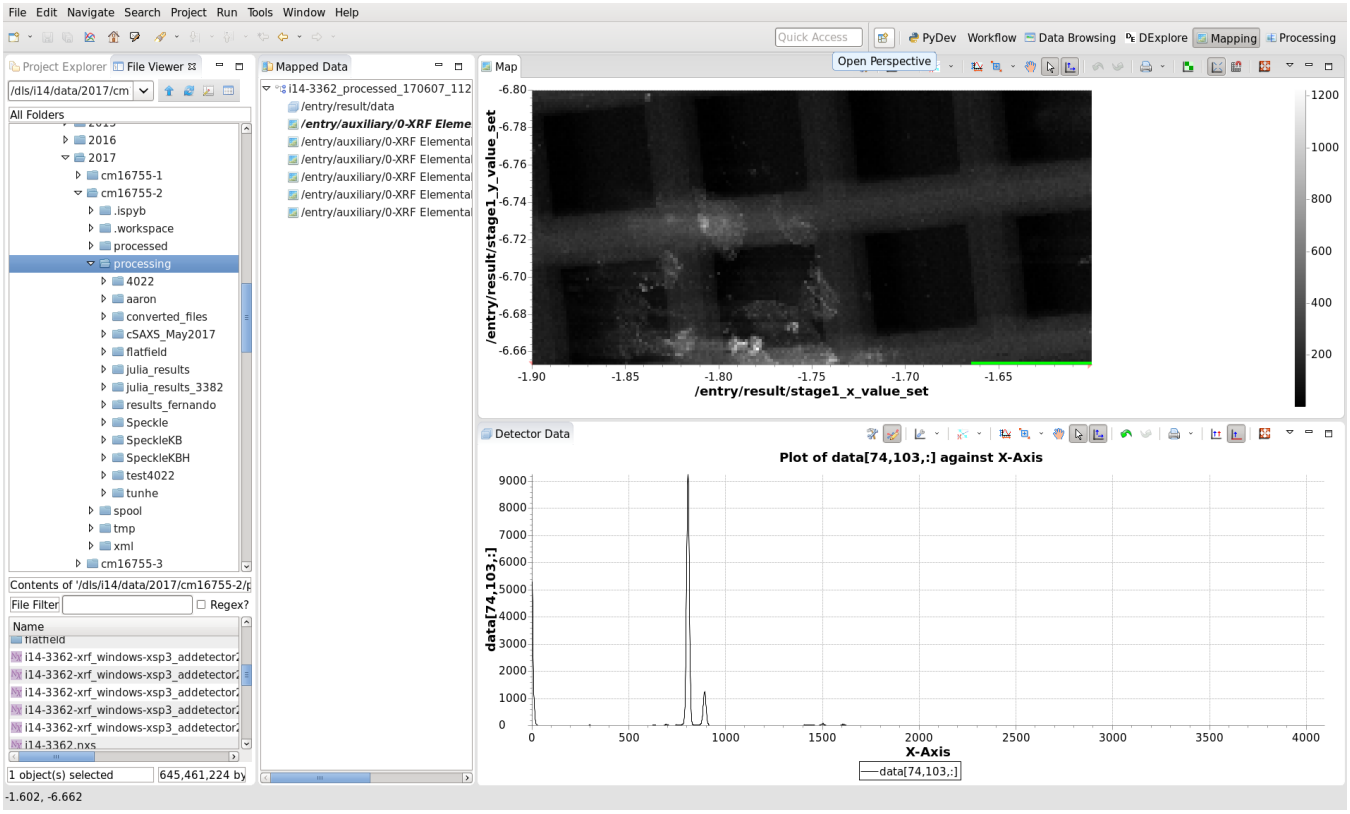
Alternatively, you can open Dawn double-clicking the corresponding "script-shorcut" present in the desktop if you have previously set-up the desktop configuration

(typing in Terminal: "cd /dls_sw/i14/scripts/user_setup/configure_desktop/" — "Enter" — Then typing: "./setup_user.sh")

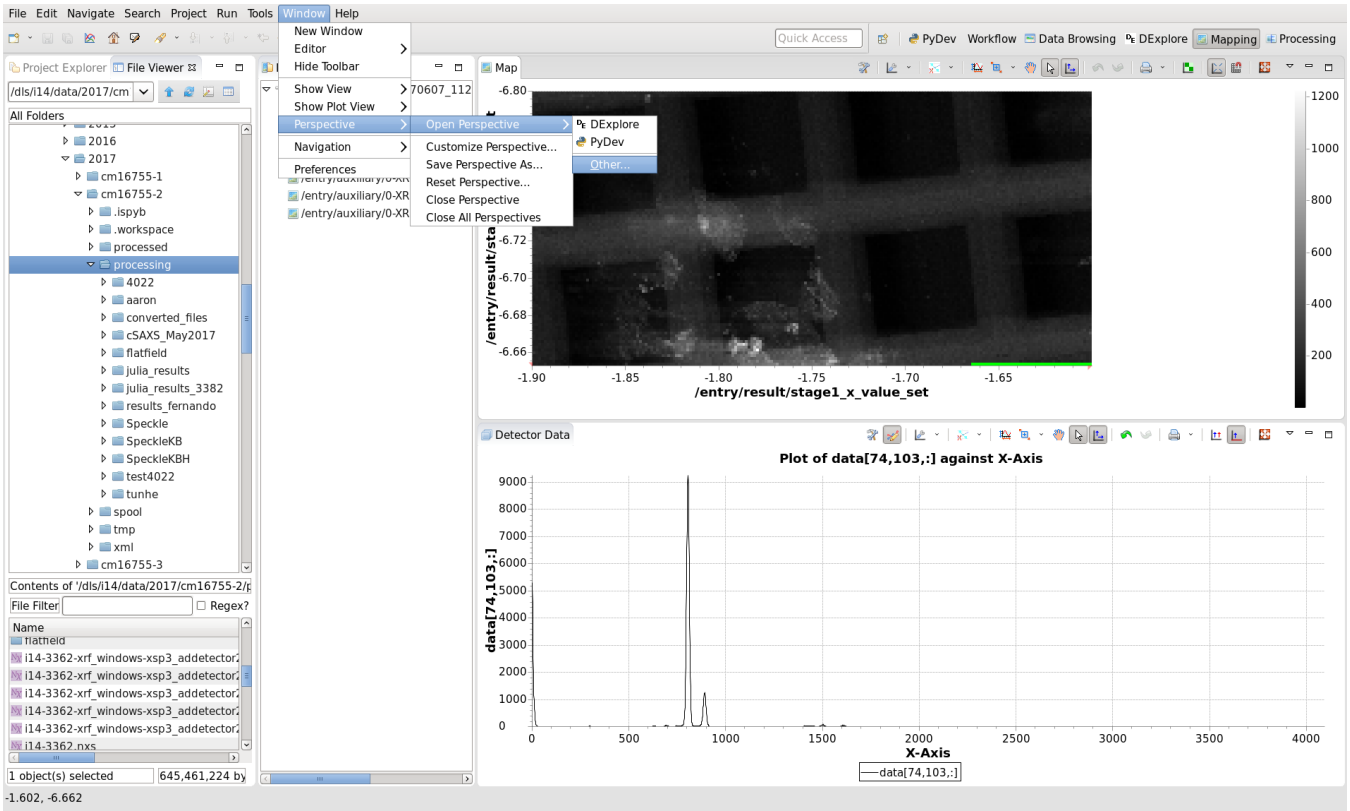


In Windows - launch dawn from your start menu

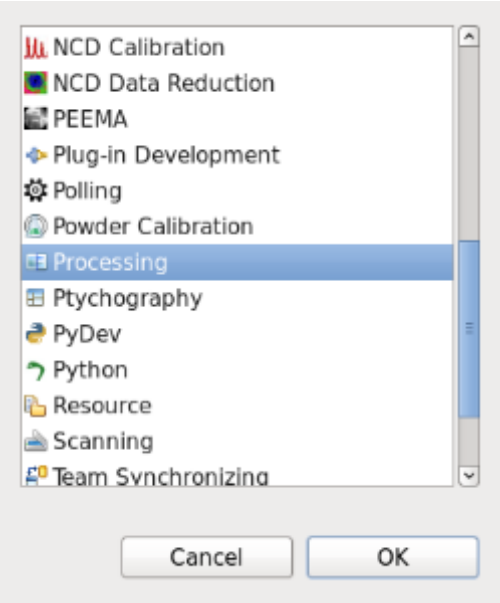
Open the Processing perspective:



or



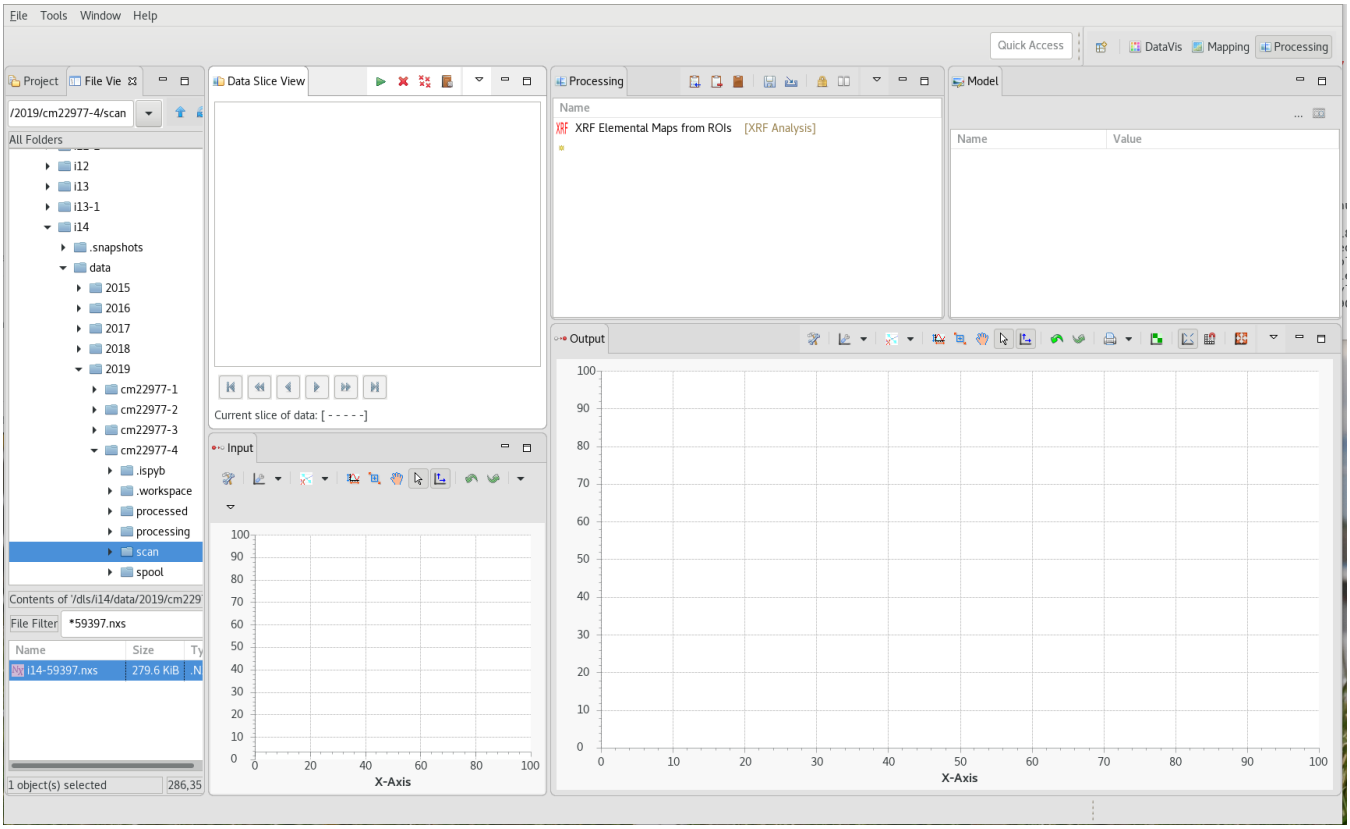
Select the processing perspective:



Load your data set:

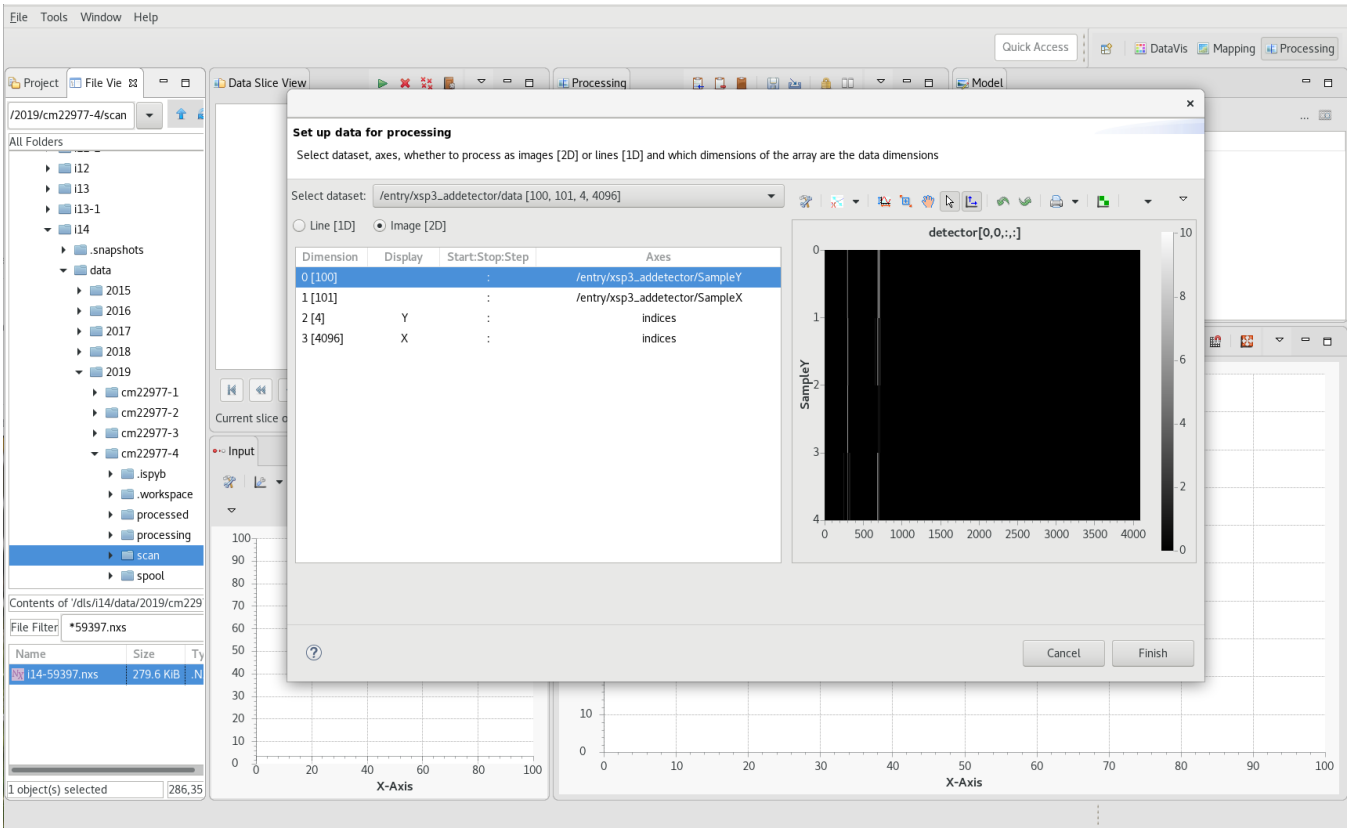
In the top-left side of the program, select the "File Viewer" tab. Scroll down and select your experimental folder (e.g. cm22977-4) in the corresponding path (e.g. /dls/i14/data/2019/).

Then, go to the "scan" folder and click the file which need reprocessing. The "File Filter" option can be used to find a specific scan easier, by typing the scan number and extension (*59397.nxs).

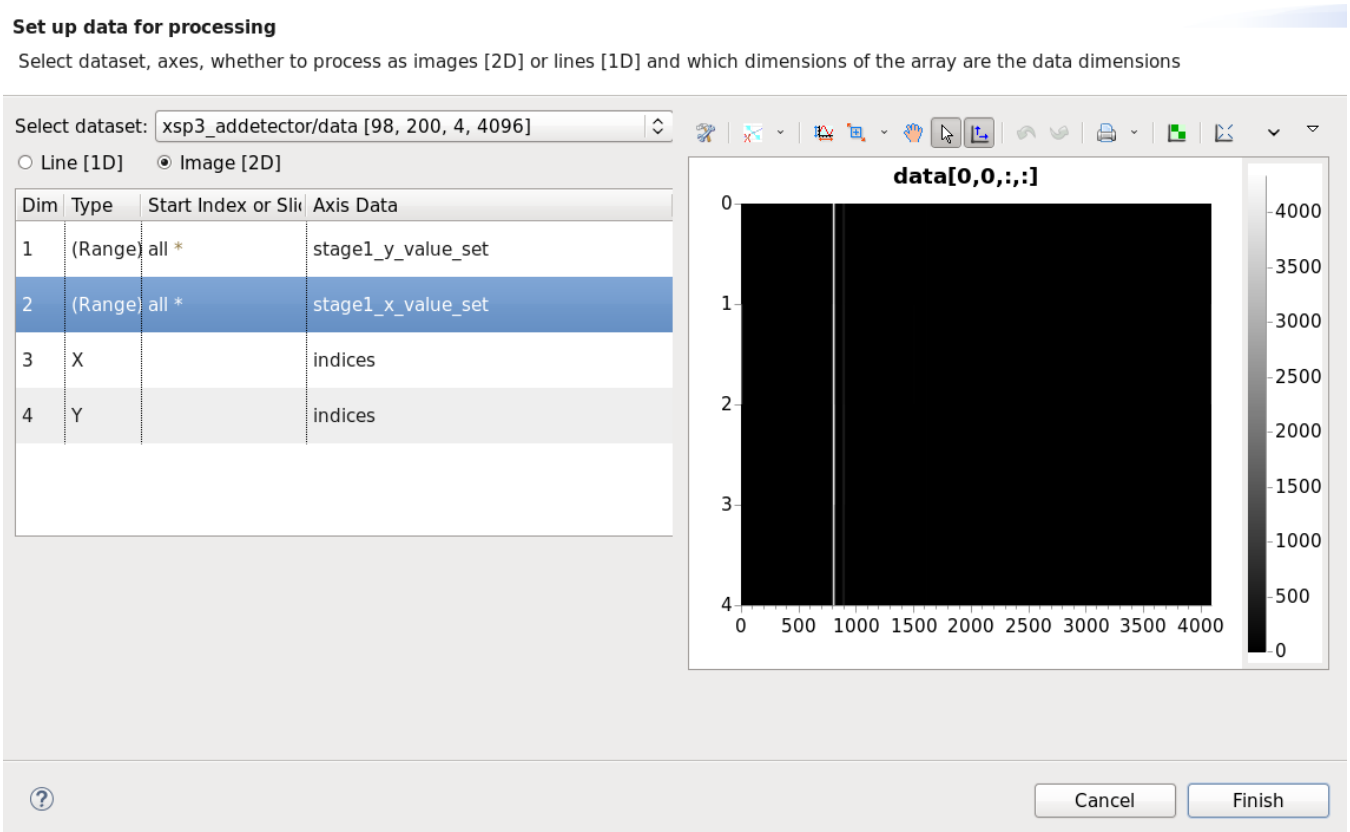


Select the file you want and double-click it or drag it into the Data Slice View window. A dialog will open with a drop-down menu where you have to select the "/entry/xsp3_detector/data"option.

This menu should have selected the detector data and X and Y values correctly.

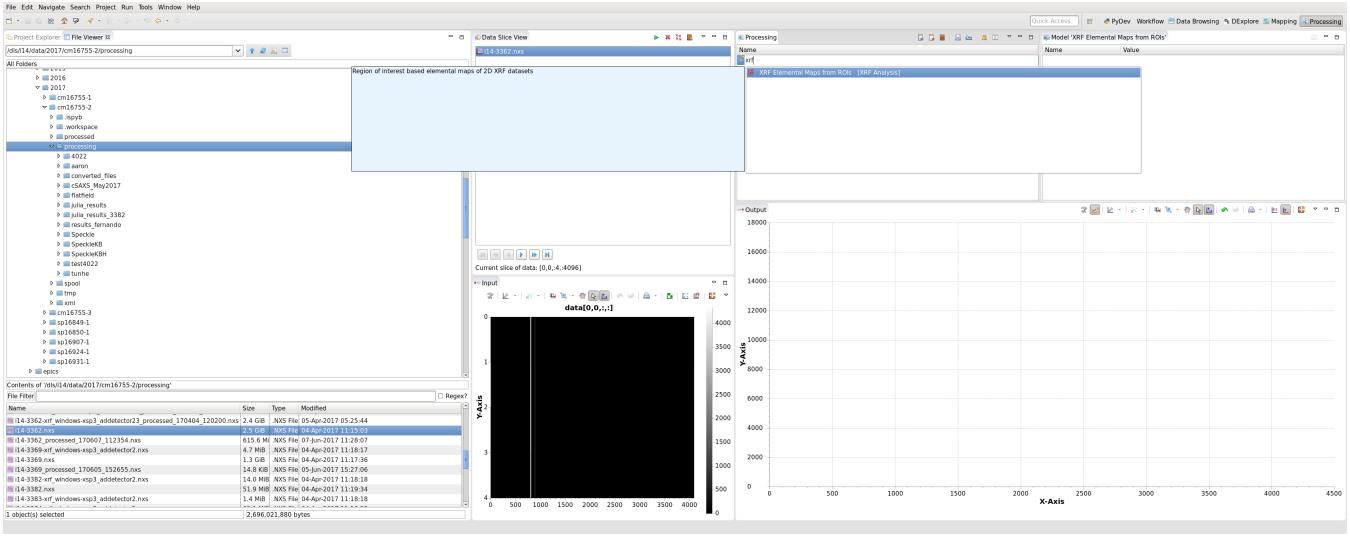


However - **The type of the DIM1 and DIM2 values may need to be "RANGE"** in some cases, as shown in the screenshot below.

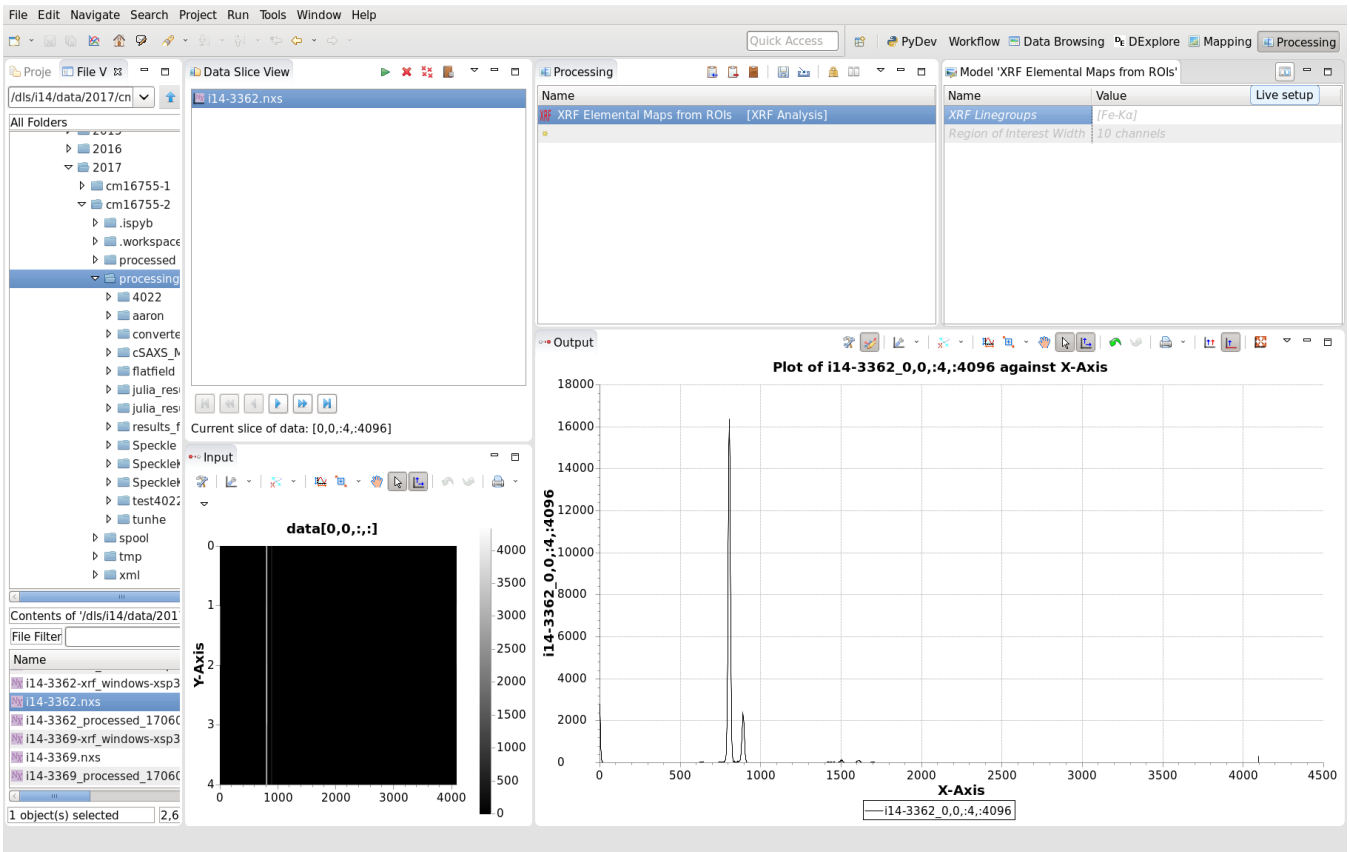


Press Finish

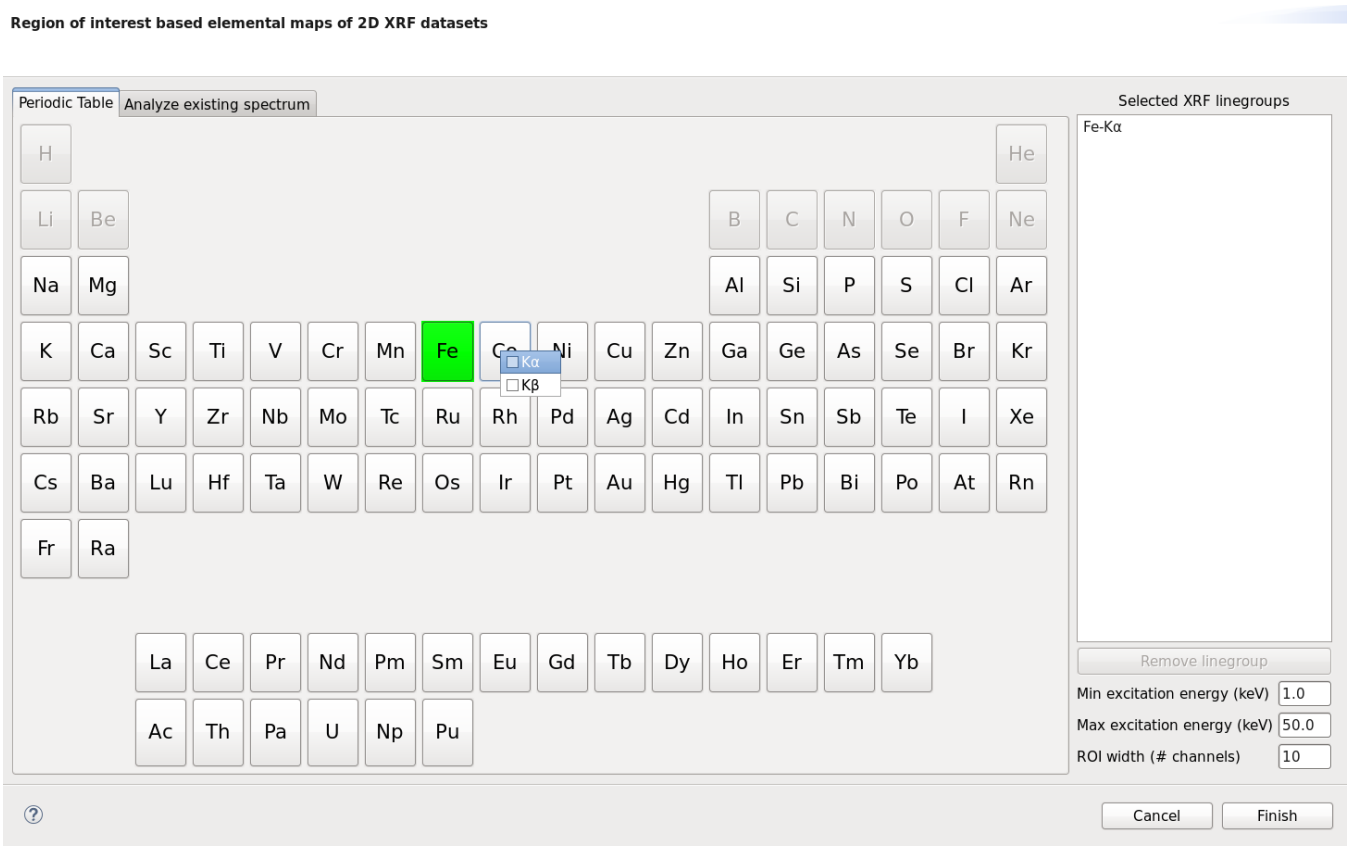
In the processing window click on the start and type XRF - this should sleected the 'XRF Elemental Maps from ROIs' tool and press return.



Press the live setup option at the top-right corner:



Select the elements and lines you want and set the ROI width as needed. Beforehand, remember to add the value '20' as ROI width (# channels) at the bottom right, and to select the excitation energy used so only the excited elemental transitions can be selected.

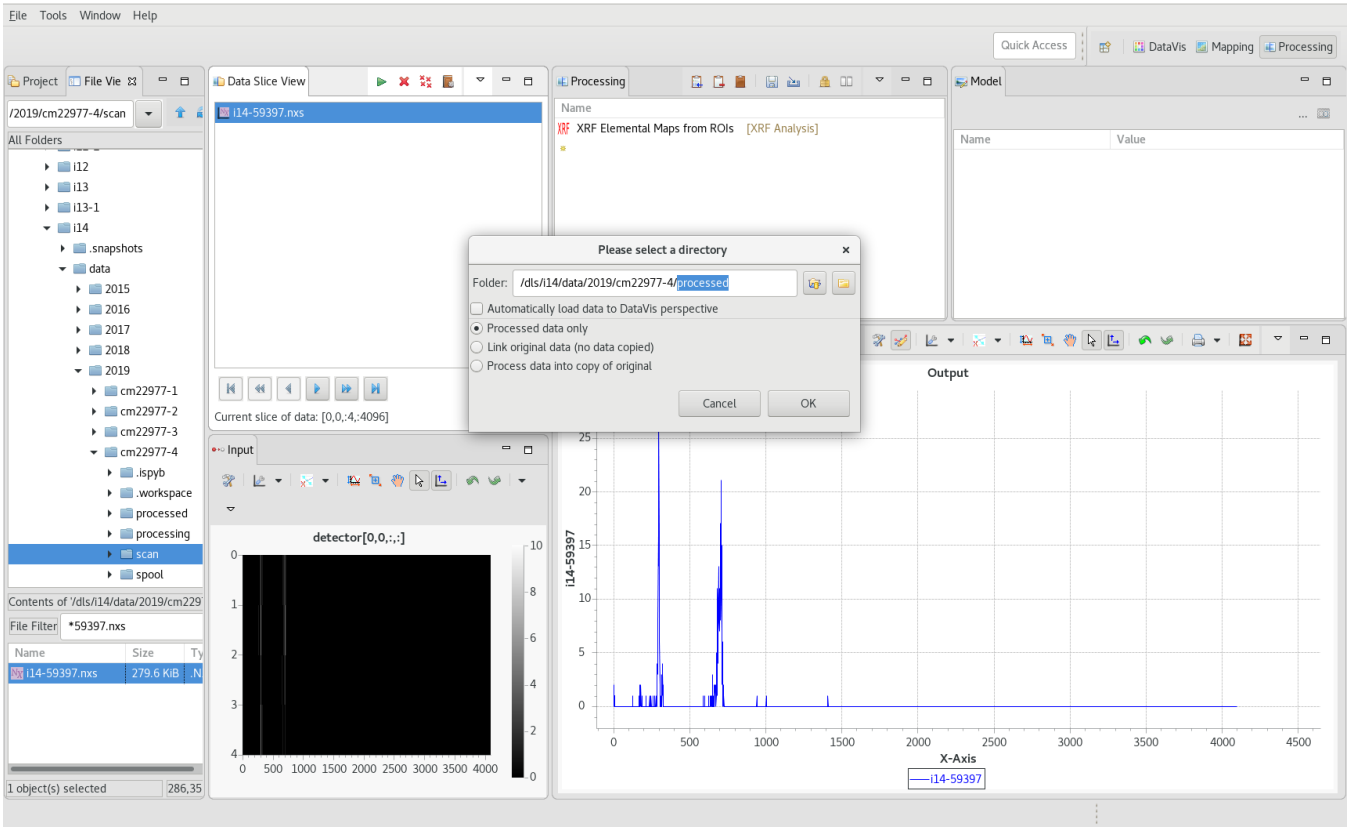


You can examine the ROI width and raw MCA in the Analyze Tab

Press finish once you have set it up.

Then press the green play button - "Process all files" - on the "Data Slice View" tab. This will subsequently open a dialog before processing the selected file.

Ensure that the copy directory is the "processing" folder of your visit (NOT in the 'processed' as shown in the image below, since this saving files to this folder is restricted). Select the type of processing data required, 'processed data only' would generate a lighter file with the new data only, but you can either 'link the original data' in the new file or create a new file with all the information (last option available, which will take longer because of the heavier file to be created).



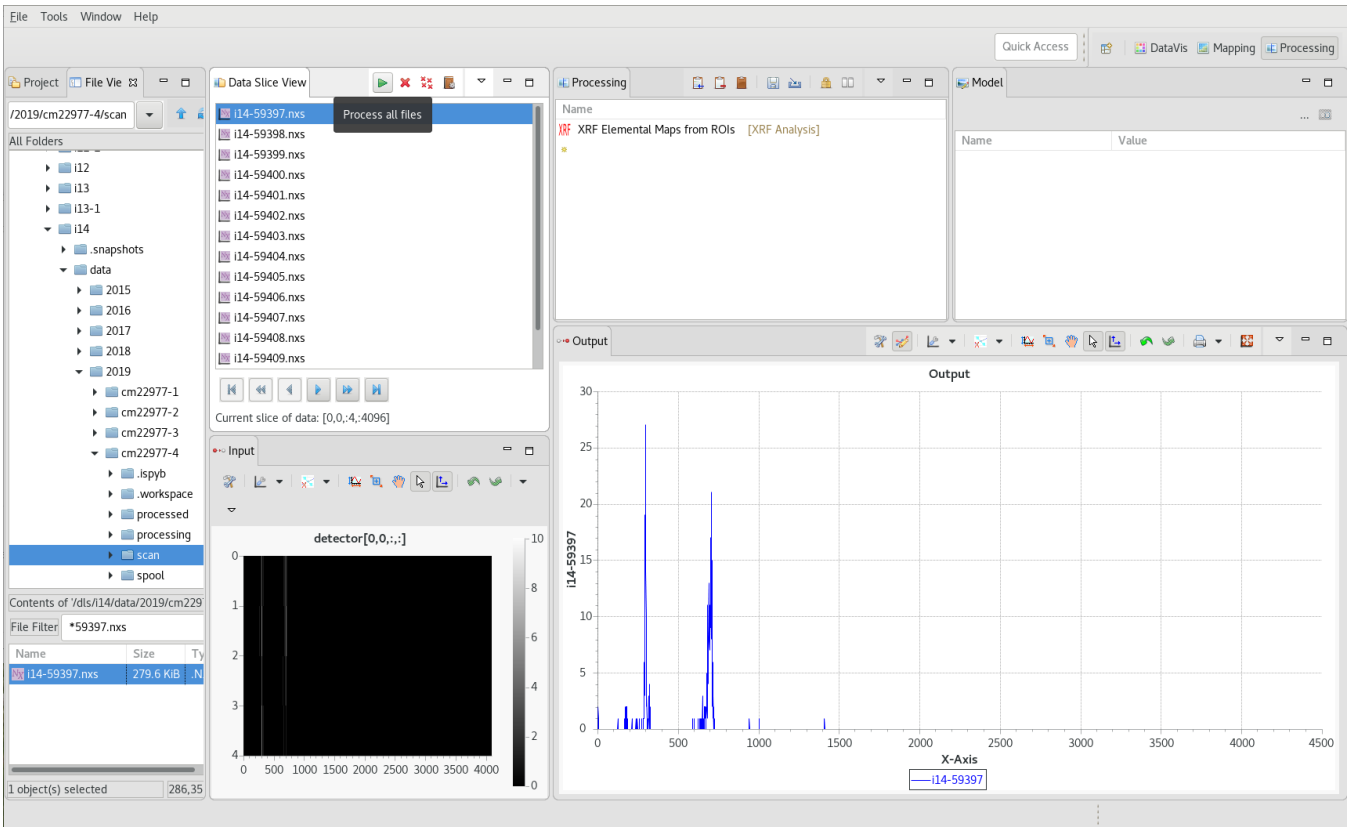
Subsequently click OK.

Processing more files or examining your processed data:

If you want to run lots of files you can drag them into the "Data Slice View" tab.

Alternatively - once you have setup a processing chain and run it one - double clicking on any file in processing perspective will automatically process that file in the same manner.

The processing perspective is to process files it is not for viewing the results. You would need to look at your data in the "Mapping" perspective.


File Tools Window Help
Quick Access
DataVis Mapping Processing
Project File Vie
/2019/cm22977-4/scan
All Folders
i12
i13
i13-1
i14
.snapshots
data
2015
2016
2017
2018
2019
cm22977-1
cm22977-2
cm22977-3
cm22977-4
.ispyb
.workspace
processed
processing
scan
spool
Contents of '/dls/i14/data/2019/cm229
File Filter
*59397.nxs
Name
Size
i14-59397.nxs
279.6 KiB
1 object(s) selected
286,35
Data Slice View
Process all files
i14-59397.nxs
i14-59398.nxs
i14-59399.nxs
i14-59400.nxs
i14-59401.nxs
i14-59402.nxs
i14-59403.nxs
i14-59404.nxs
i14-59405.nxs
i14-59406.nxs
i14-59407.nxs
i14-59408.nxs
i14-59409.nxs
Current slice of data: [0,0,:4,:4096]
Input
detector[0,0,:,:]
Processing
Name
XRF Elemental Maps from ROIs
[XRF Analysis]
Model
Name
Value
Output
Output
i14-59397
X-Axis
i14-59397