XAS data acquisition at IPE

V3.0

XAS overview

At the Ipe beamline you can measure X-ray absorption spectra in two modes at the same time: Total Electron Yield (TEY) and Fluoresce Yield (FY).

All XAS data, photon energy, TEY, FY and mirror current intensity (used as i0) are written in the same file.
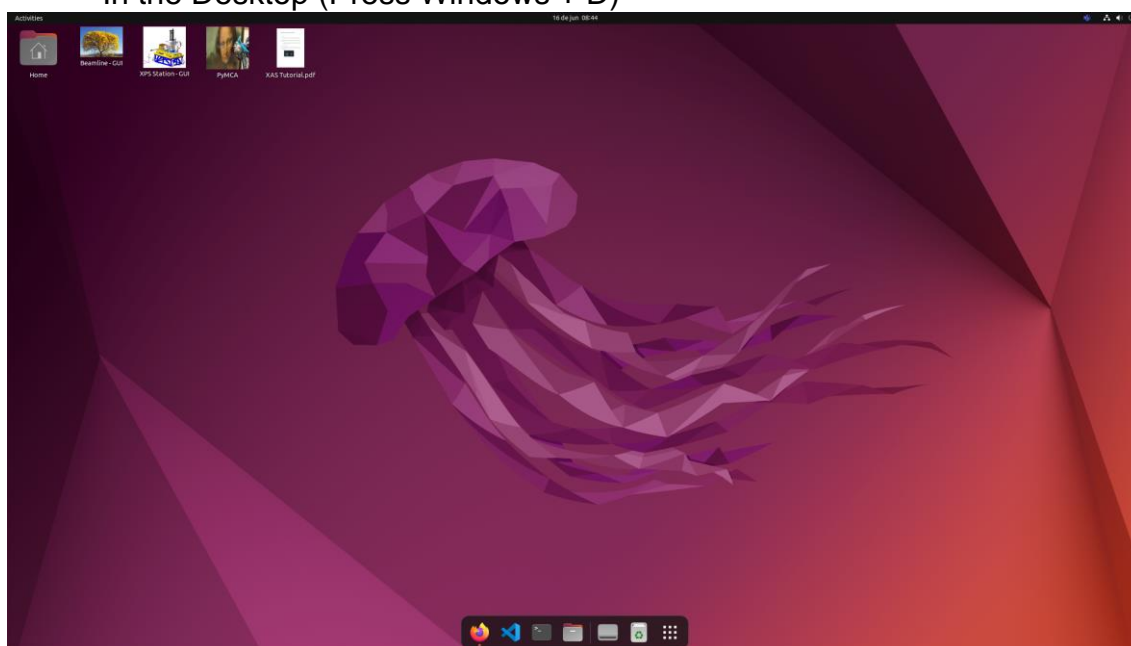
XAS data is saved .dat (SpecFile) format with the measurement and Metadata. It is stored at ibirá storage, the user will have access during and after the beamtime using the credentials provided by SAU.
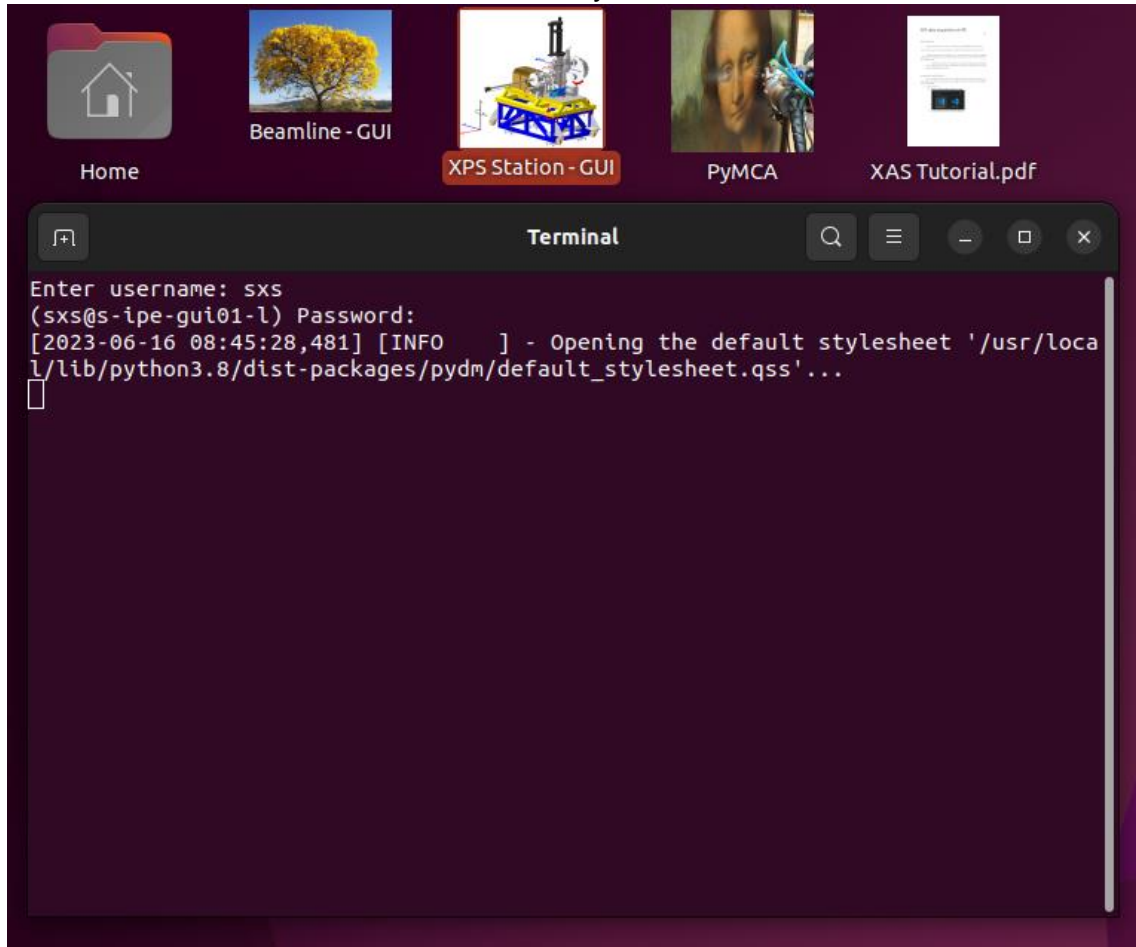
User: up.<first_name_letter><last_name><maybe_a_number>

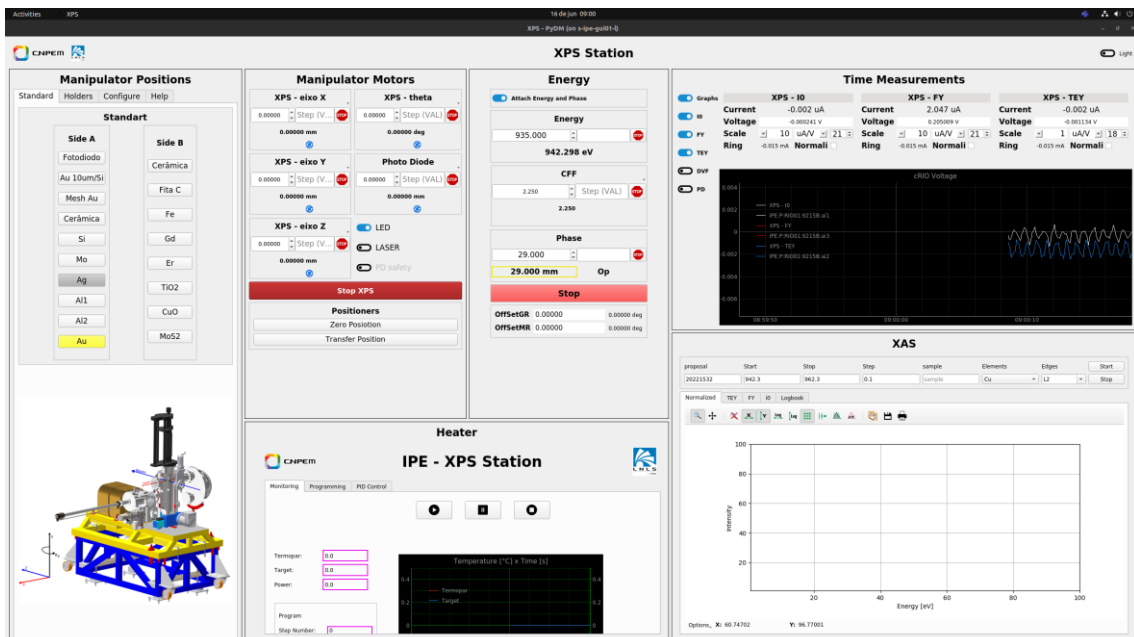Password: same as SAU password

XAS Acquisition

In the Desktop (Press Windows + D)

Execute XPS Station – GUI. Write your User and Password

At bottom-right of the GUI you can do the XAS Acquisition

Fill in the fields with your Proposal Number and Sample Name without symbols. Choose the Element and Edges.

The Element and Edge will pre-set the start and stop energy value. But you can set your own values. Elements and Edges are displaced in alphabetic order.
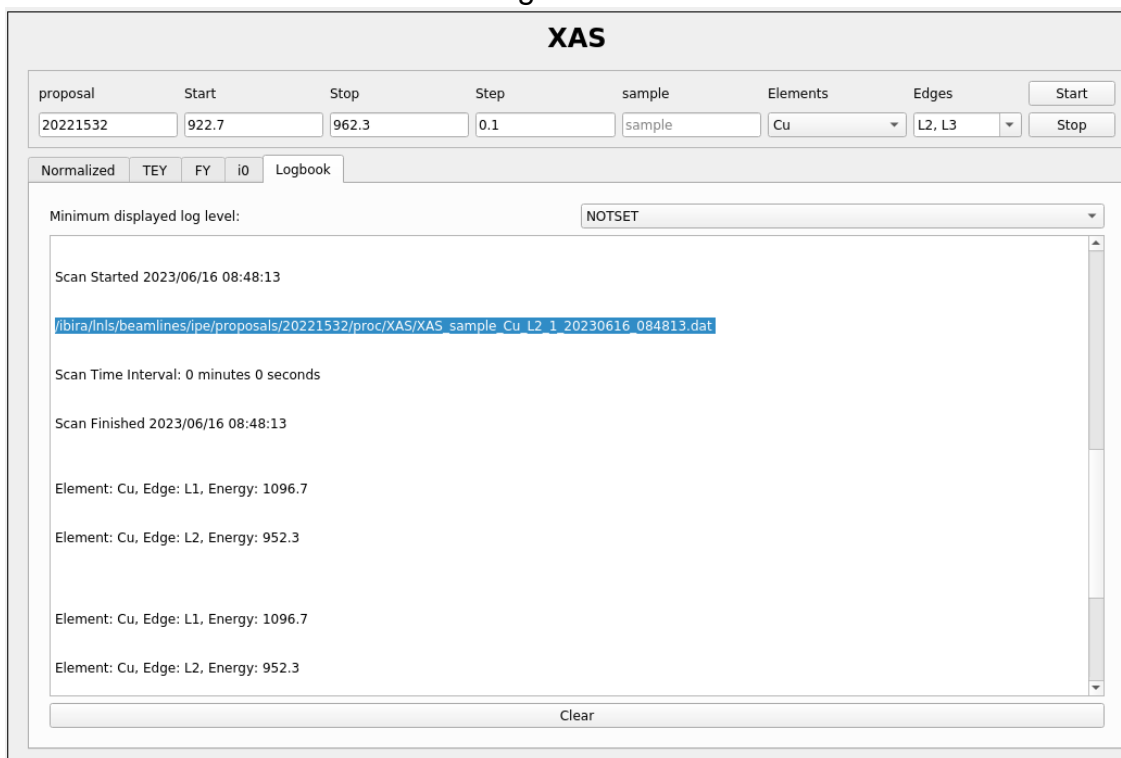
After that you can start the scan.

The tab Normalized will show a preprocessed value of TEY and FY signal divided by I0 signal. The Tabs TEY, FY and I0 will show the signal value [V] versus energy [eV] without any modification.
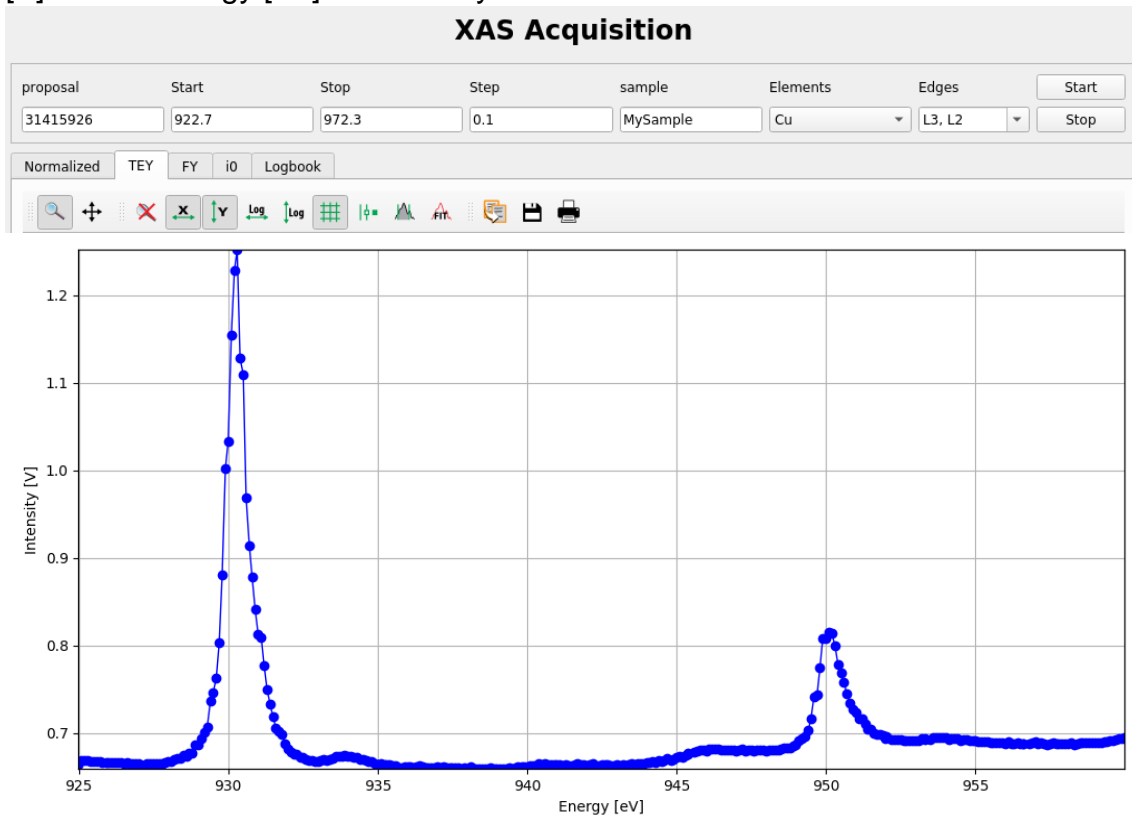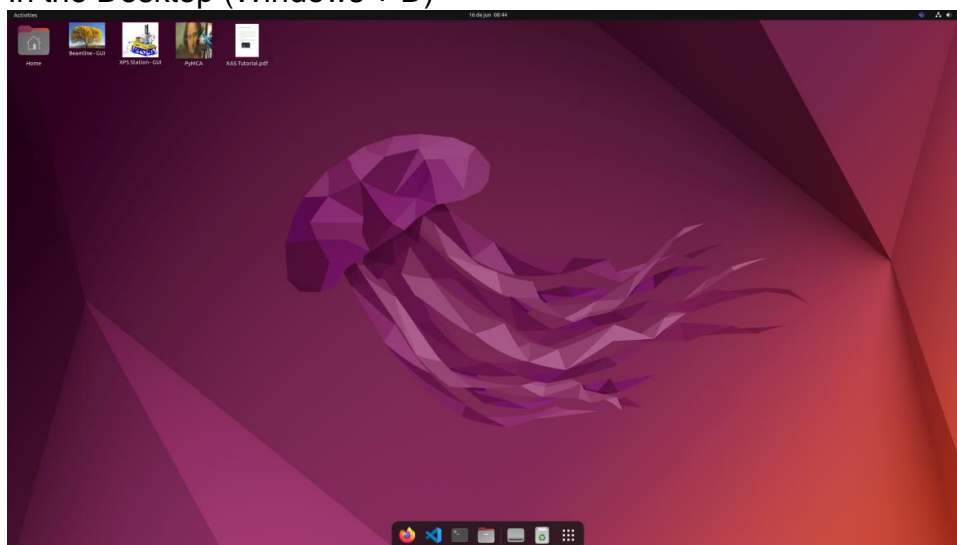

The filename will be:
XAS_<sample>_<element>_<edges>_<file_number>_<date>_<time>.dat
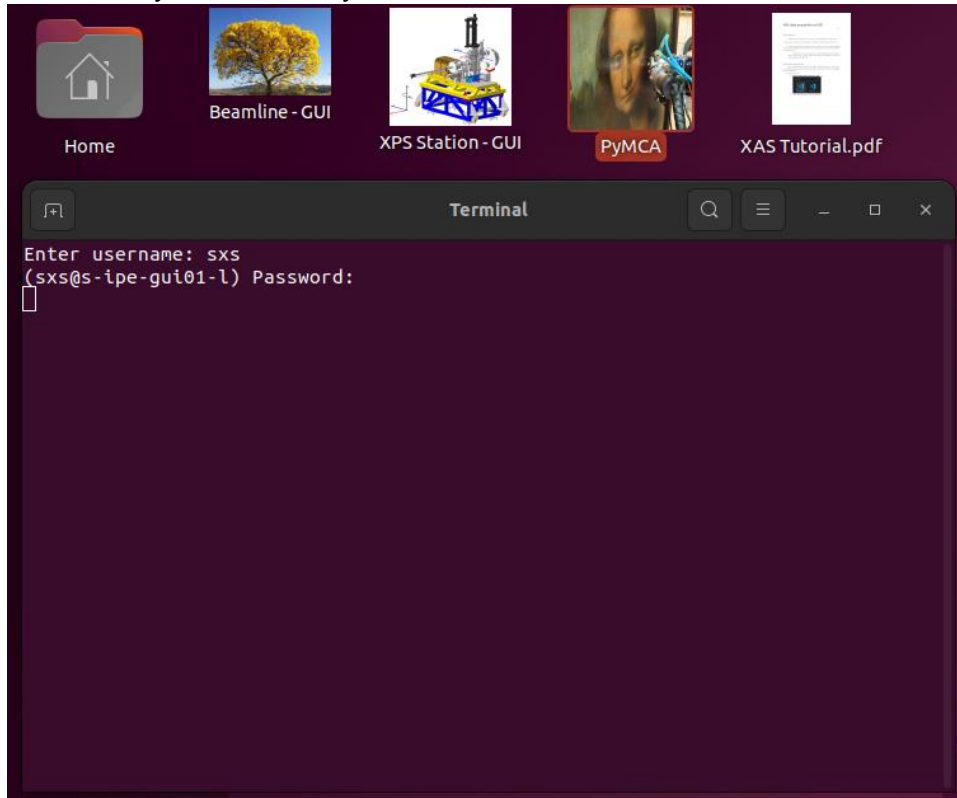
And it will be written at the Logbook tab
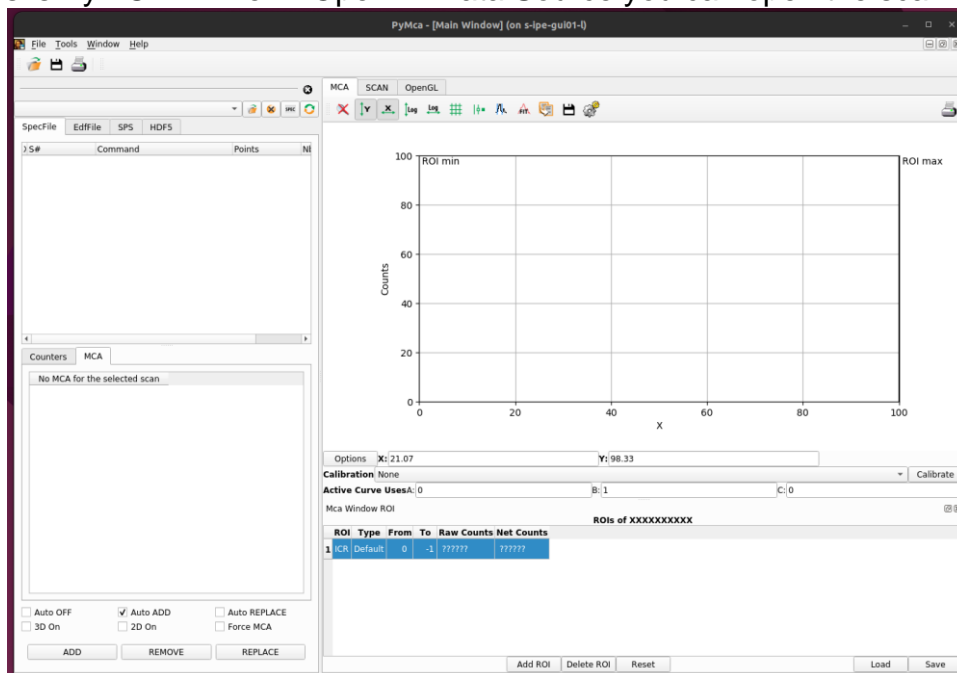

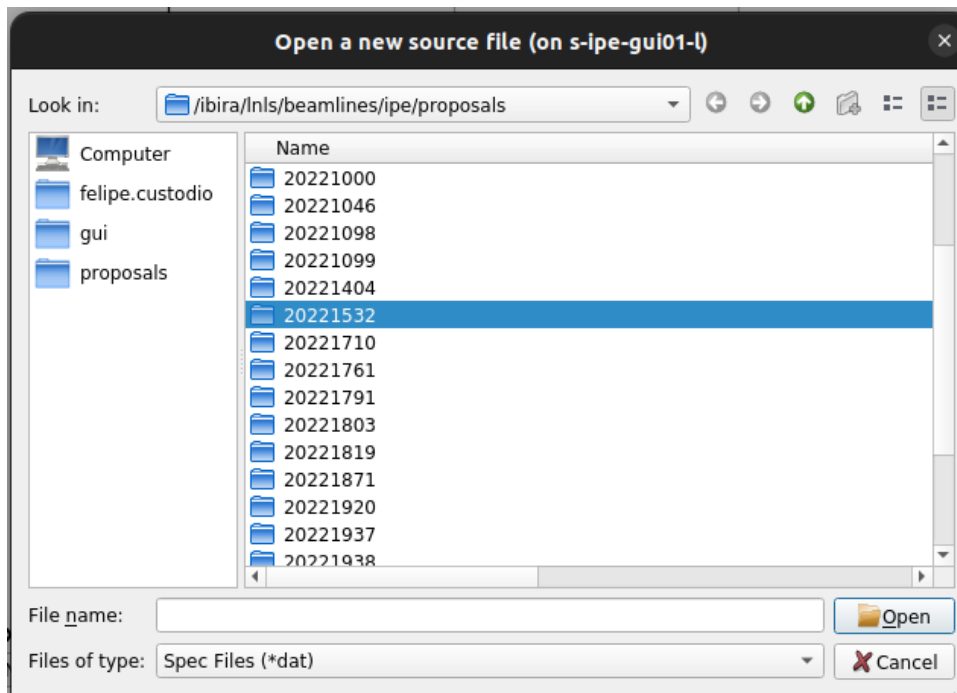## XAS Local Visualization

1. In the Desktop (Windows + D)

1. Execute PyMCA. Write your User and Password

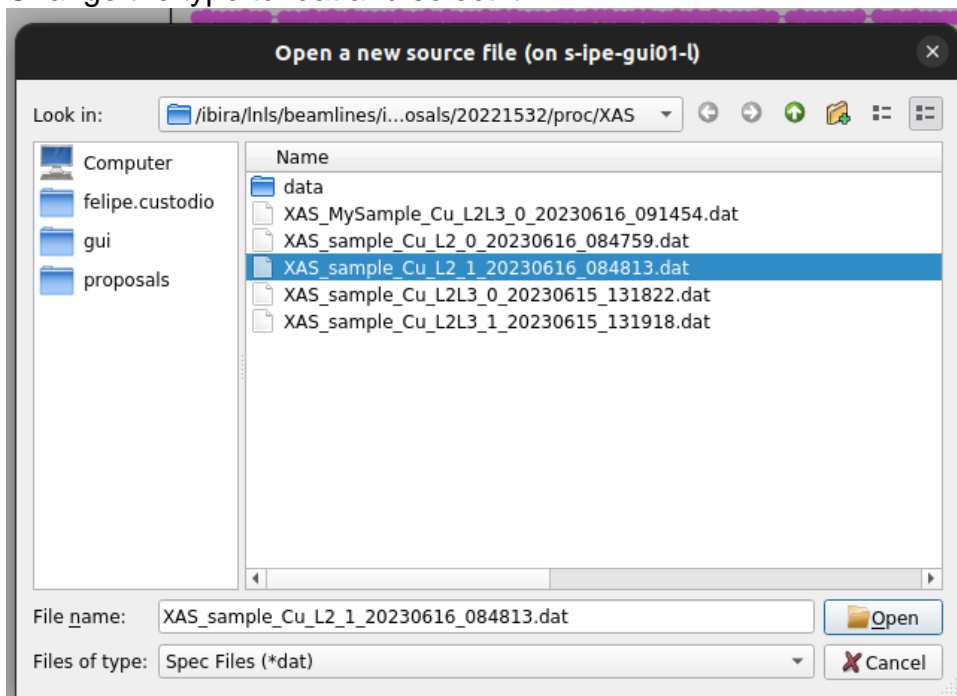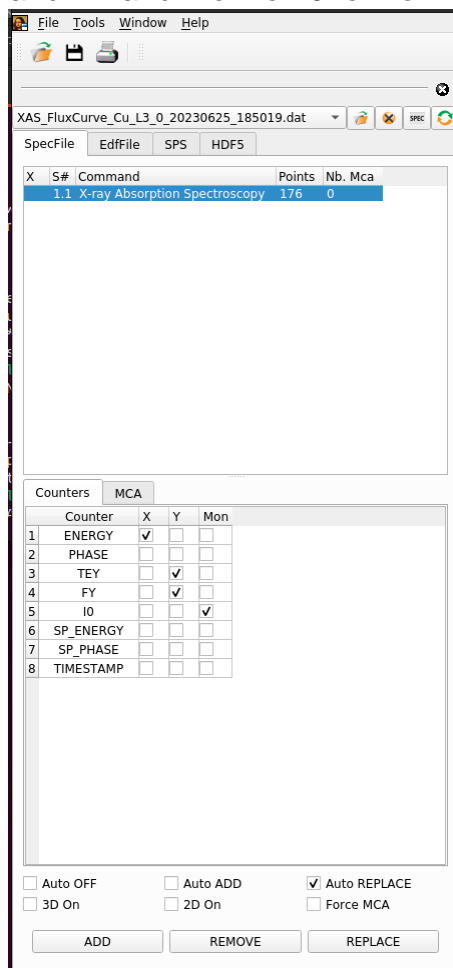This is PyMCA. In file -> Open -> Data Source you can open the scan

It will open /ibira/lnls/beamlines/ipe/proposals/ folder. Go to: <proposal number>/proc/XAS/ folder.

The full fila path:
/ibira/lnls/beamlines/ipe/proposals/<proposal>/proc/XAS/

Change the type to .dat and select it

A general configuration to see the spectrum is X for ENERGY, Y for TEY
and FY and Mon for i0 for normalization

The Spectrum: