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 Visualization

After remote access the ibira (storage where the files are saved) the XAS files will be at:

/ibira/lnls/beamlines/ipe/proposals/<proposal number>/proc/XAS/

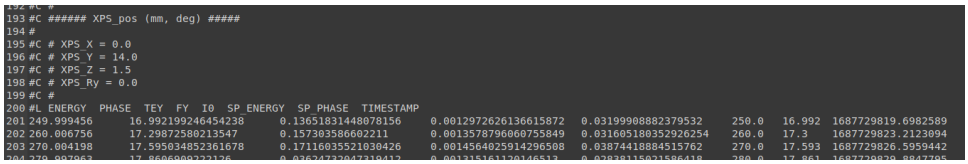
Your proposal folder will be /ibira/lnls/beamlines/ipe/proposals/ <proposal number>

XAS folder folder where the data is saved: /proc/XAS/

The data file wil be: XAS_<sample>_<element>_<edges>_<file_number>_<date>_<time>.dat

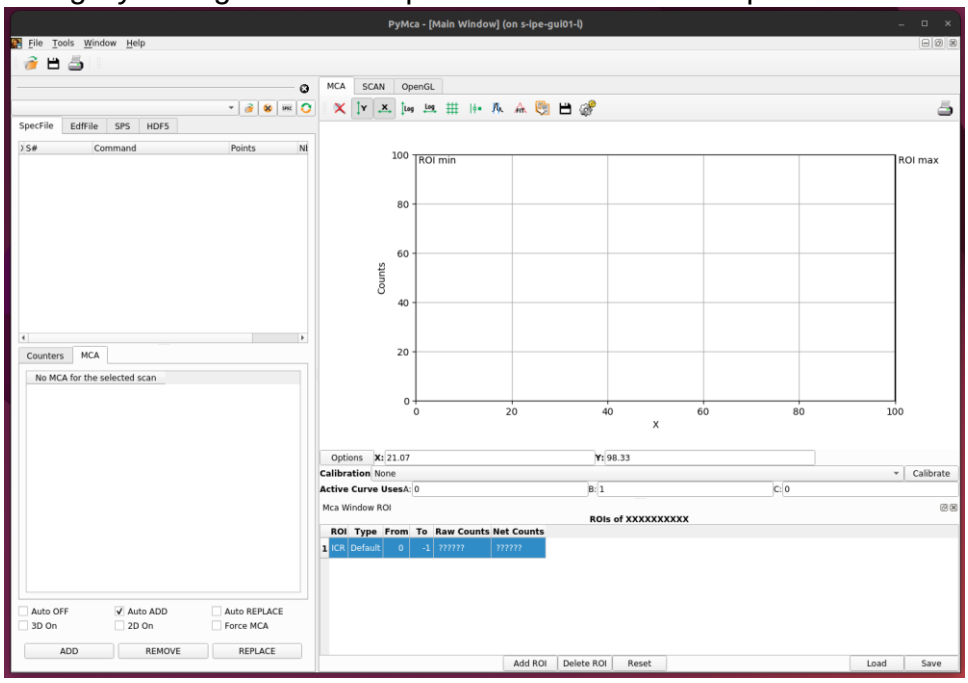
You can open the files using the PyMCA Software (https://www.silx.org/doc/PyMca/latest/install.html) or other software like Origin and Excel.

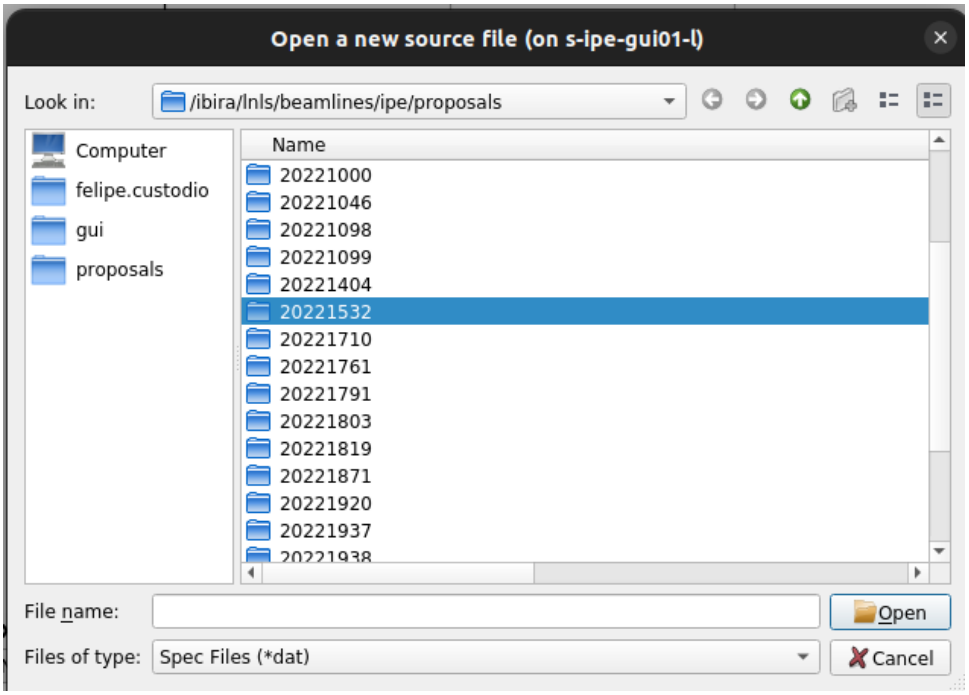
It will have 200 lines of Metadata and 8 columns of data



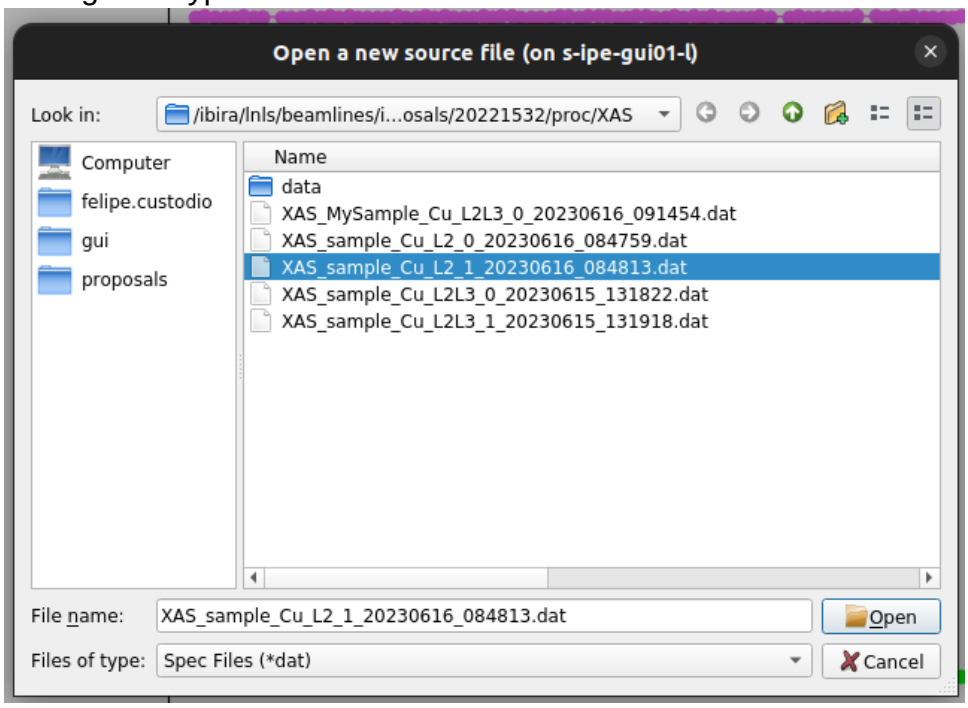
ENERGY PHASE TEY FY I0 SP_ENERGY SP_PHASE TIMESTAMP

Using PyMCA go to file -> Open -> Data Source to open the scan file

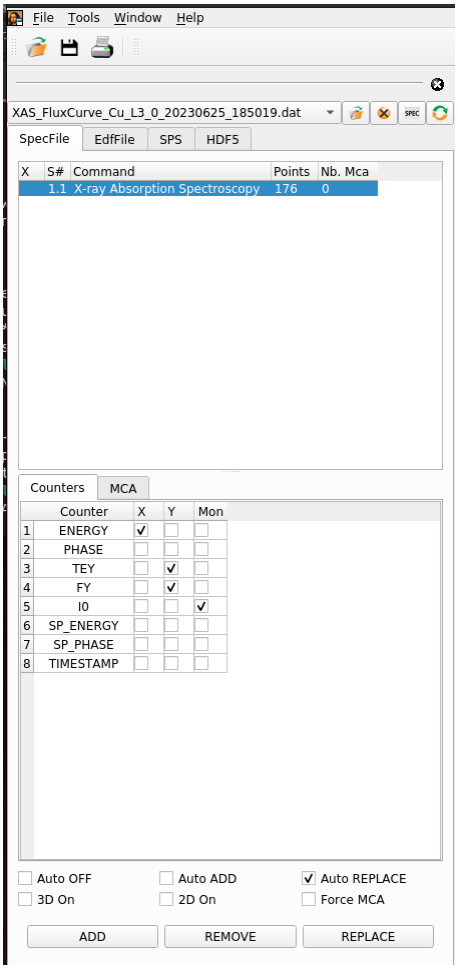




Change the type to .dat and select it



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



The Spectrum: