

# 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/Inls/beamlines/ipe/proposals/<proposal number>/proc/XAS/

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

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

The data file will be:  
XAS\_<sample>\_<element>\_<edges>\_<file\_number>\_<date>\_<time>.dat

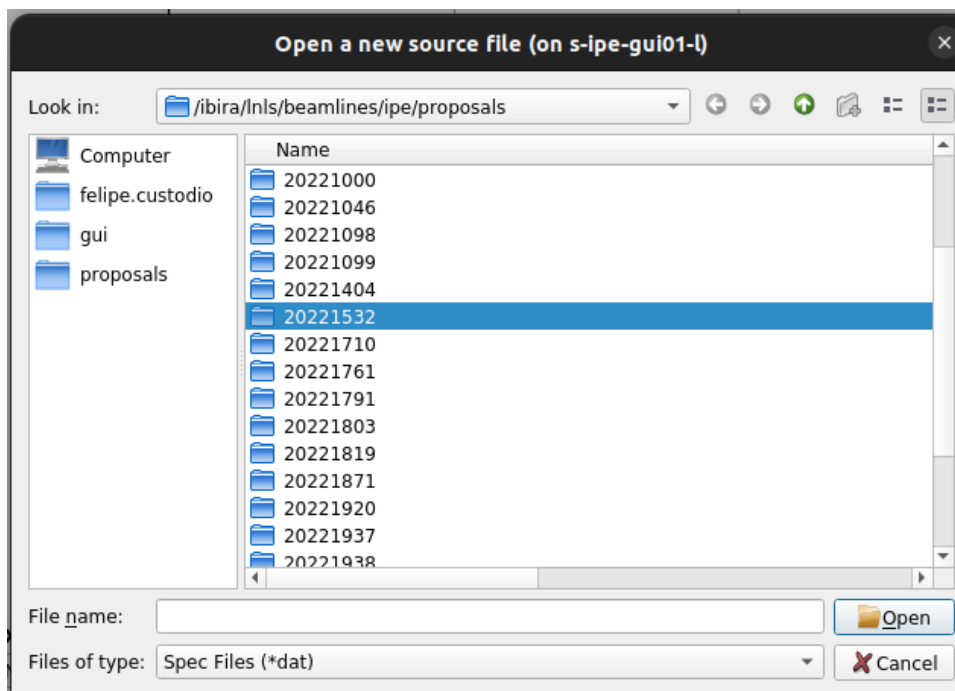
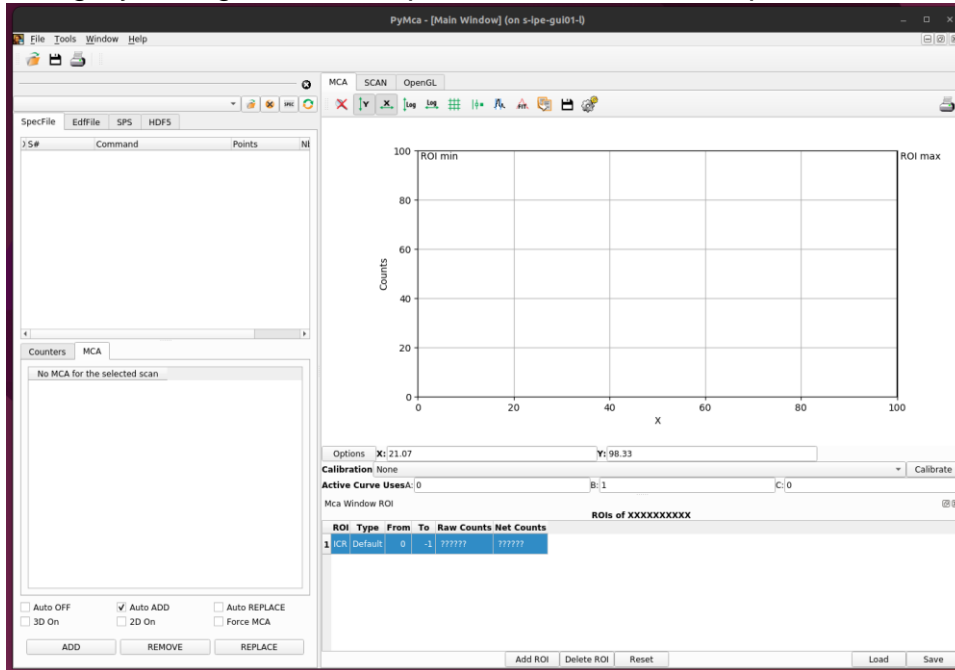
You can open the files using the PyMCA Software (<https://www.silx.org/doc/PyMca/latest/install.html>) or other software like Origin and Excel.

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

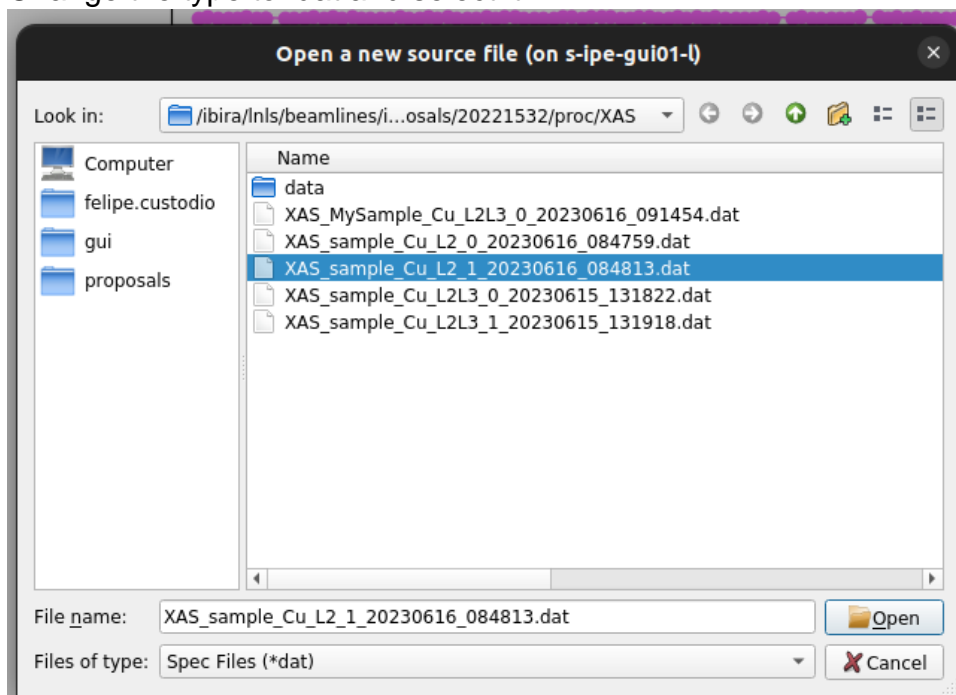
```
192 #C #
193 #C ##### XPS_pos (mm, deg) #####
194 #
195 #C # XPS_X = 0.0
196 #C # XPS_Y = 14.0
197 #C # XPS_Z = 1.5
198 #C # XPS_Ry = 0.0
199 #C #
200 #L ENERGY PHASE TEY FY I0 SP ENERGY SP PHASE TIMESTAMP
201 249.999456 16.992199246454238 0.13651831448078156 0.0012972626136615872 0.03199908882379532 250.0 16.992 1687729819.6982589
202 260.000750 17.29872588213547 0.157303586062211 0.0013578796060753849 0.031605188352926254 260.0 17.3 1687729823.2123094
203 270.001198 17.595034852361678 0.17116035521036426 0.0014564025914296508 0.03074418884515762 270.0 17.593 1687729826.5959442
204 280.001663 17.8966809333134 0.01620223047310412 0.001315161120146513 0.030801158023566416 280.0 17.861 1687729829.8847205
```

ENERGY PHASE TEY FY I0 SP ENERGY SP PHASE TIMESTAMP

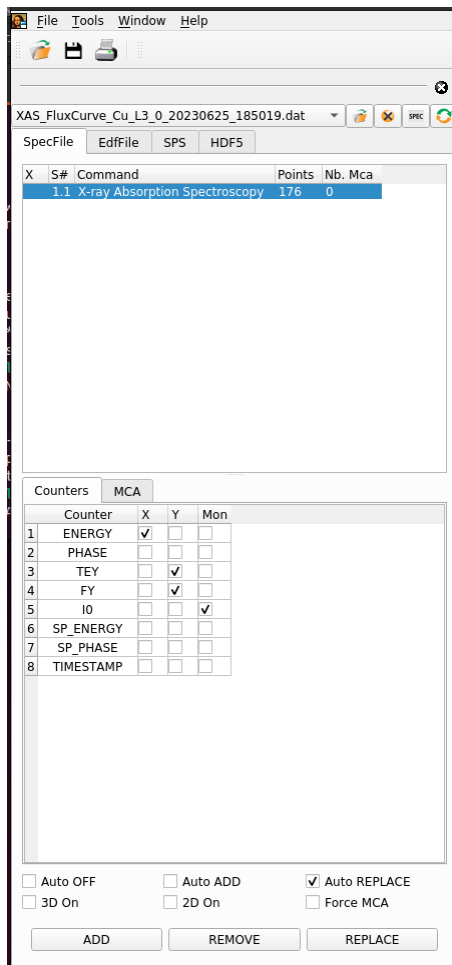
Using PyMCA go to file -> Open -> Data Source to open the scan file



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:

