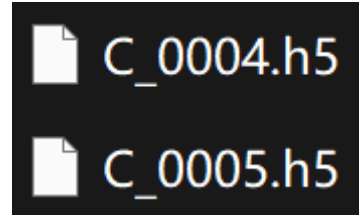


General Workflow for SSRL data

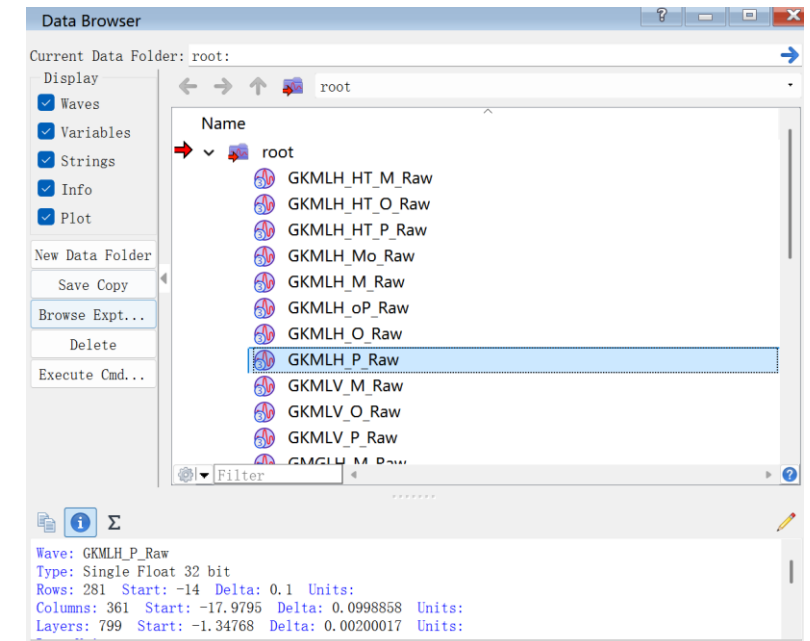
- 1. Load the .h5 raw data file from the experiment
A $+x$ field data and a $-x$ field data simultaneously
- 2. **Preprocess** in **Igor**, including
fermi-surface correction ...



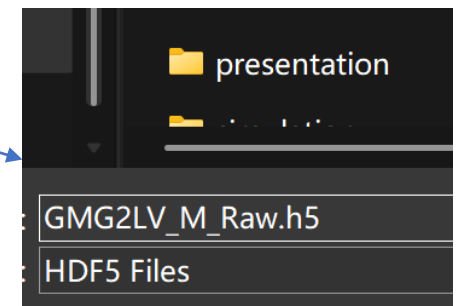
General Workflow for SSRL data

- 3. Put the preprocessed data as waves
- 4. **Export** from Igor the +field and – field waves as **.h5** files
(with the command below. Choose a comfortable folder to hold the data)

- **Variable** fileID_M
- **HDF5CreateFile** fileID_M as "GKMLV_M_Raw.h5"
- **HDF5SaveData** root:GKMLV_M_Raw, fileID_M
- **Close** fileID_M

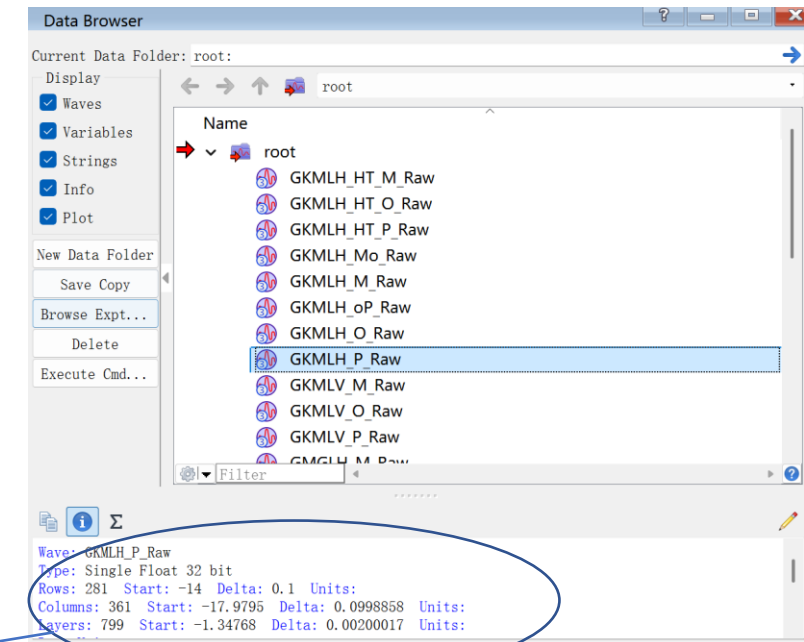
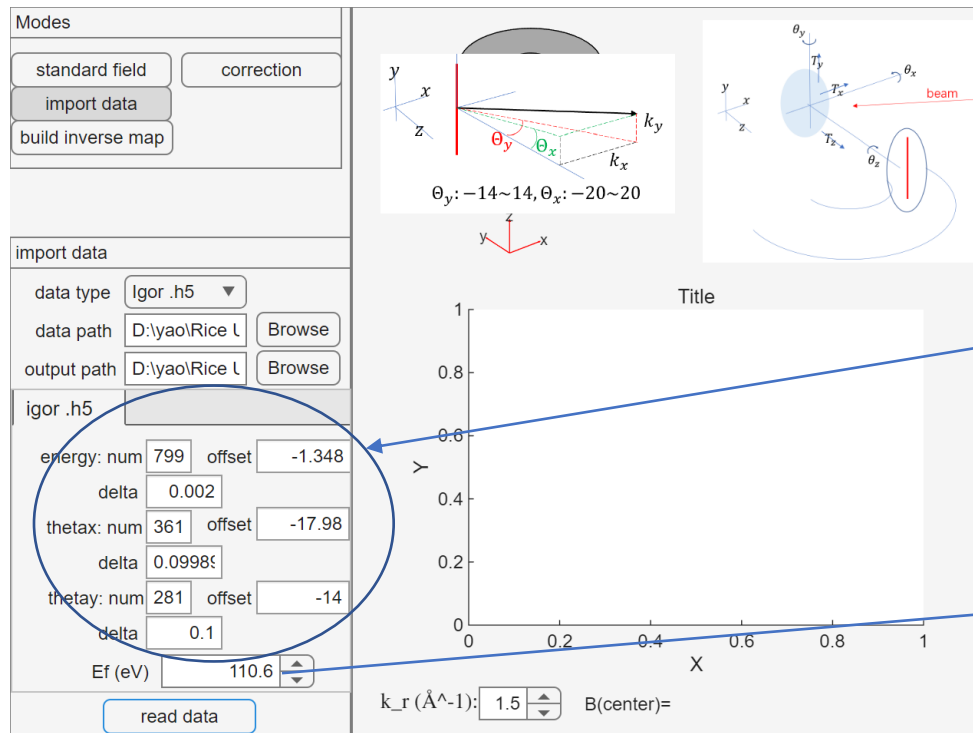


This line returns GUI browser
Include .h5 in the filename
after running this line



General Workflow for SSRL data

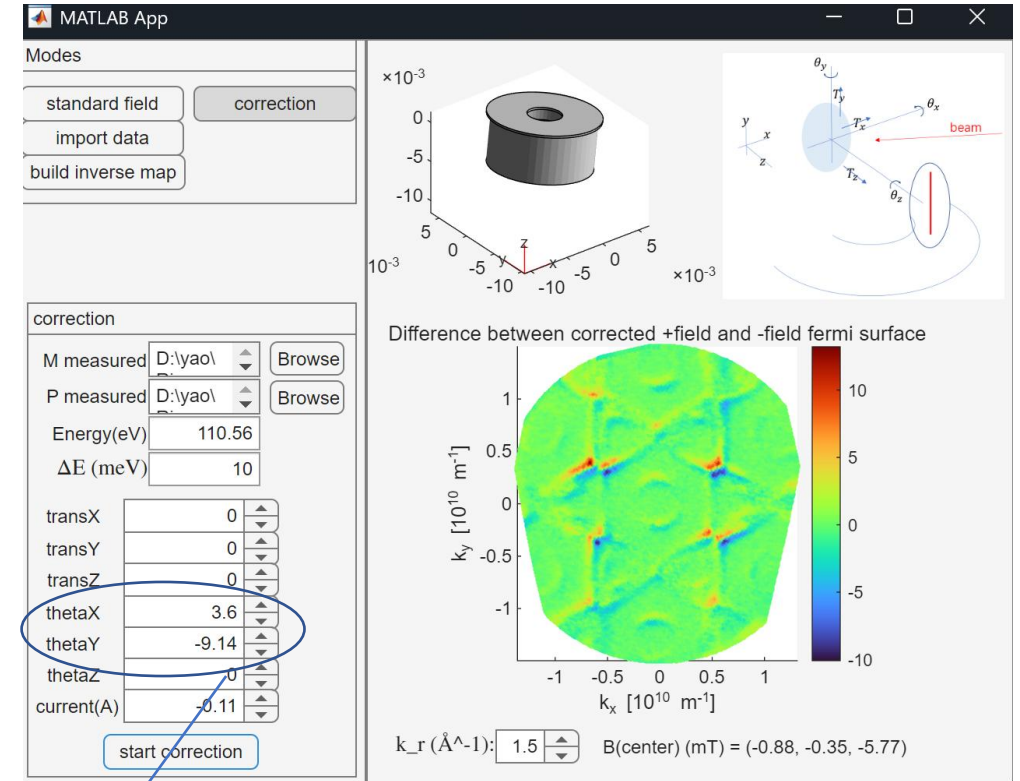
- 5. Using the matlab app, read the preprocessed igor .h5 file and store .mat data file



If the preprocessed data translate the fermi energy to 0, you should set a non-zero E_f as this translation in Energy

General Workflow for SSRL data

- 6. Open “Correction” panel in matlab app.
Choose an energy slice that contains pronouncing patterns.
Try to find the parameters that make corrected+ field band & corrected – field band match the best.
- (+ field and – field bands are corrected with the same set of the parameters with opposite current. Due to the symmetry, an ideal parameters should make them match the best)

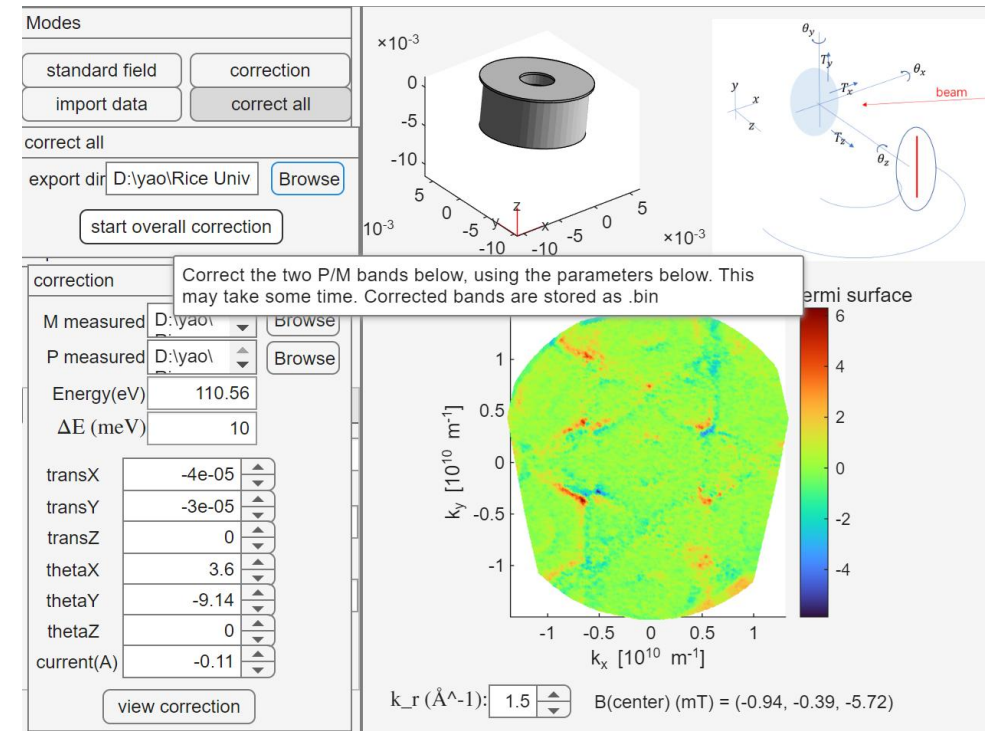


T polar	F tilt
-9.14	3.6
-9.14	3.6
-9.14	3.6

If calibrated, the manipulator position during experiment could be put in thetaX, thetaY
Try \pm values because the def may differ

General Workflow for SSRL data

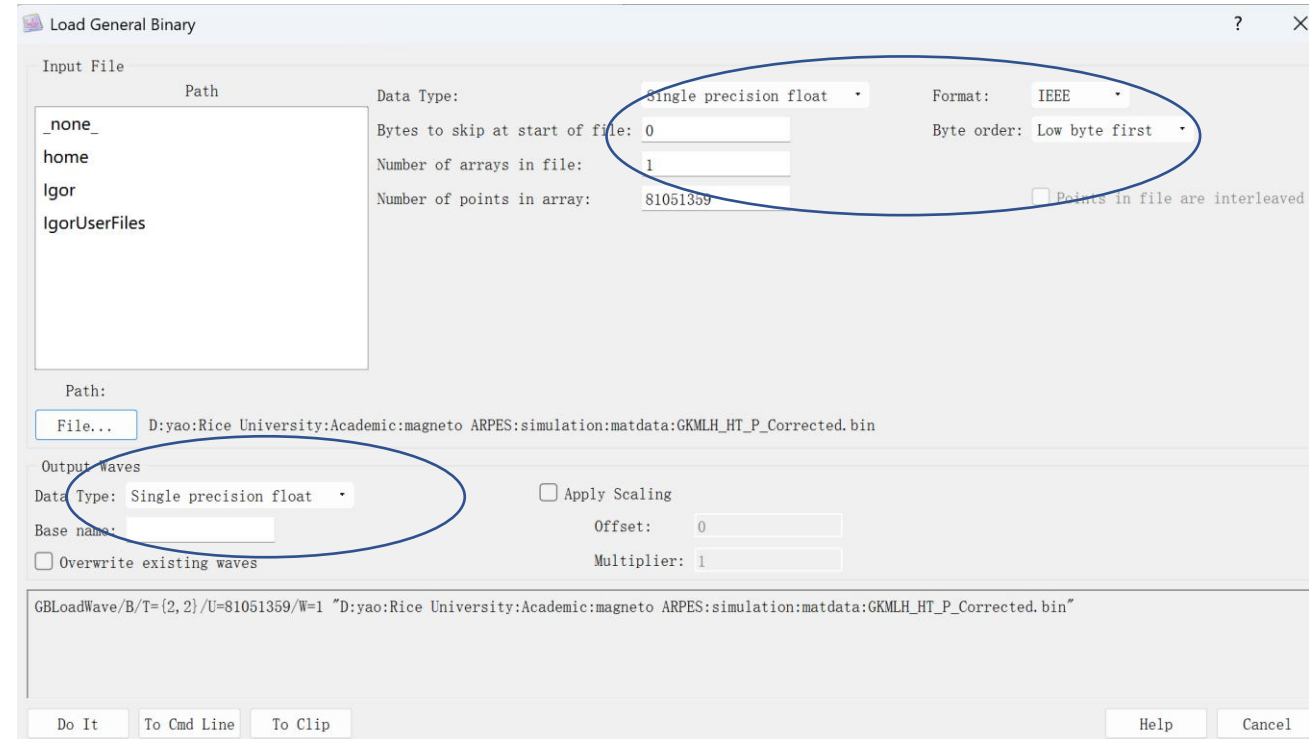
- 7. Switch to “correct all” in matlab app
Assign the output directory
Correct the \pm field bands and export
as **.bin**



General Workflow for SSRL data

8. Use Igor to load general binary waves. Fix the axes information.
Finish!

(Thanks to Jounghoon's function, we can autoload the matlab generated .bin into Igor now)



- GBLoadWave/B/T={2,2}/U=81051359/W=1 "D:\yao\Rice University\Academic\magneto ARPES
General binary file load from "GKMLH_HT_P_Corrected.bin" (324205436 total bytes)
Data length: 81051359, waves: wave0
- Redimension/N=(281,361,799) wave0
- SetScale/P x, -14, 0.1, "ThetaY (deg)", wave0
- SetScale/P y, -17.9795, 0.0998858, "ThetaX (deg)", wave0
- SetScale/P z, -1.34768, 0.00200017, "Energy (eV)", wave0