Argonne NATIONAL LABORATORY

Introduction to GIXSGUI

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GIXSGUI by Zhang Jiang

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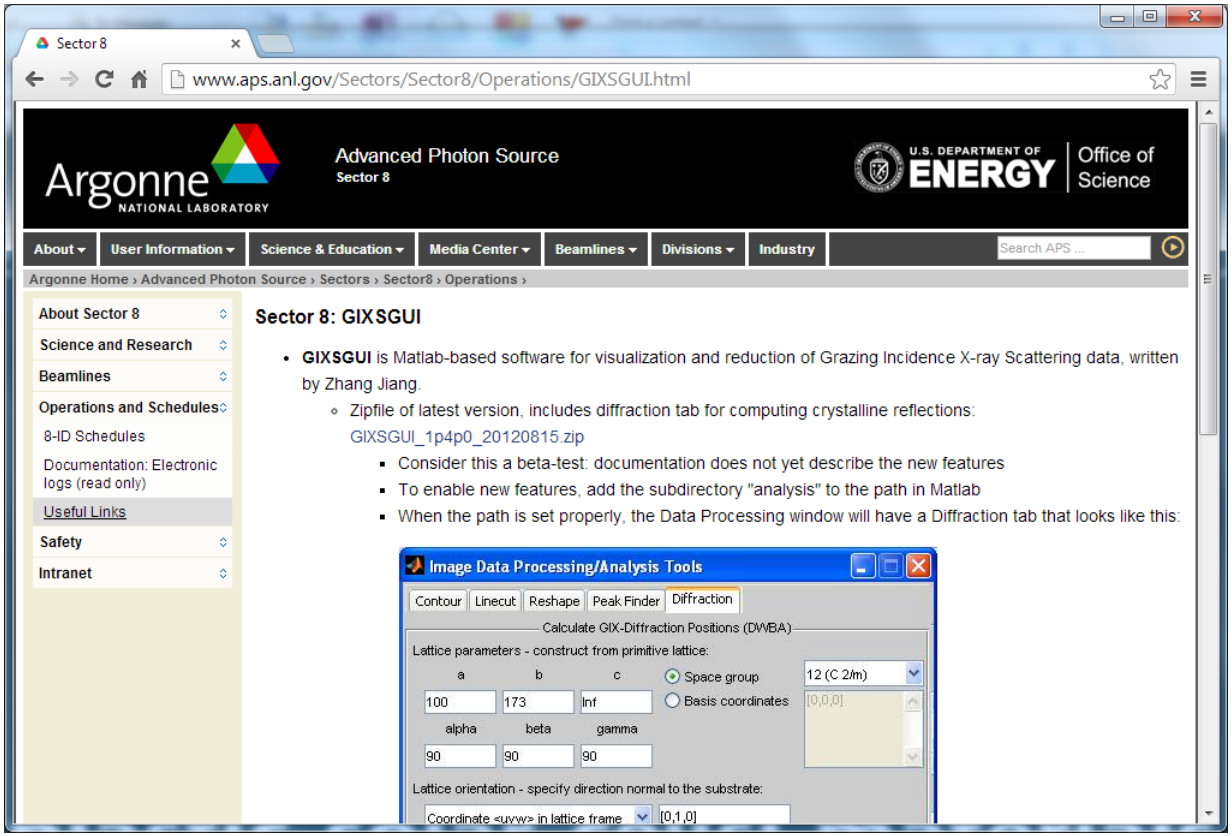
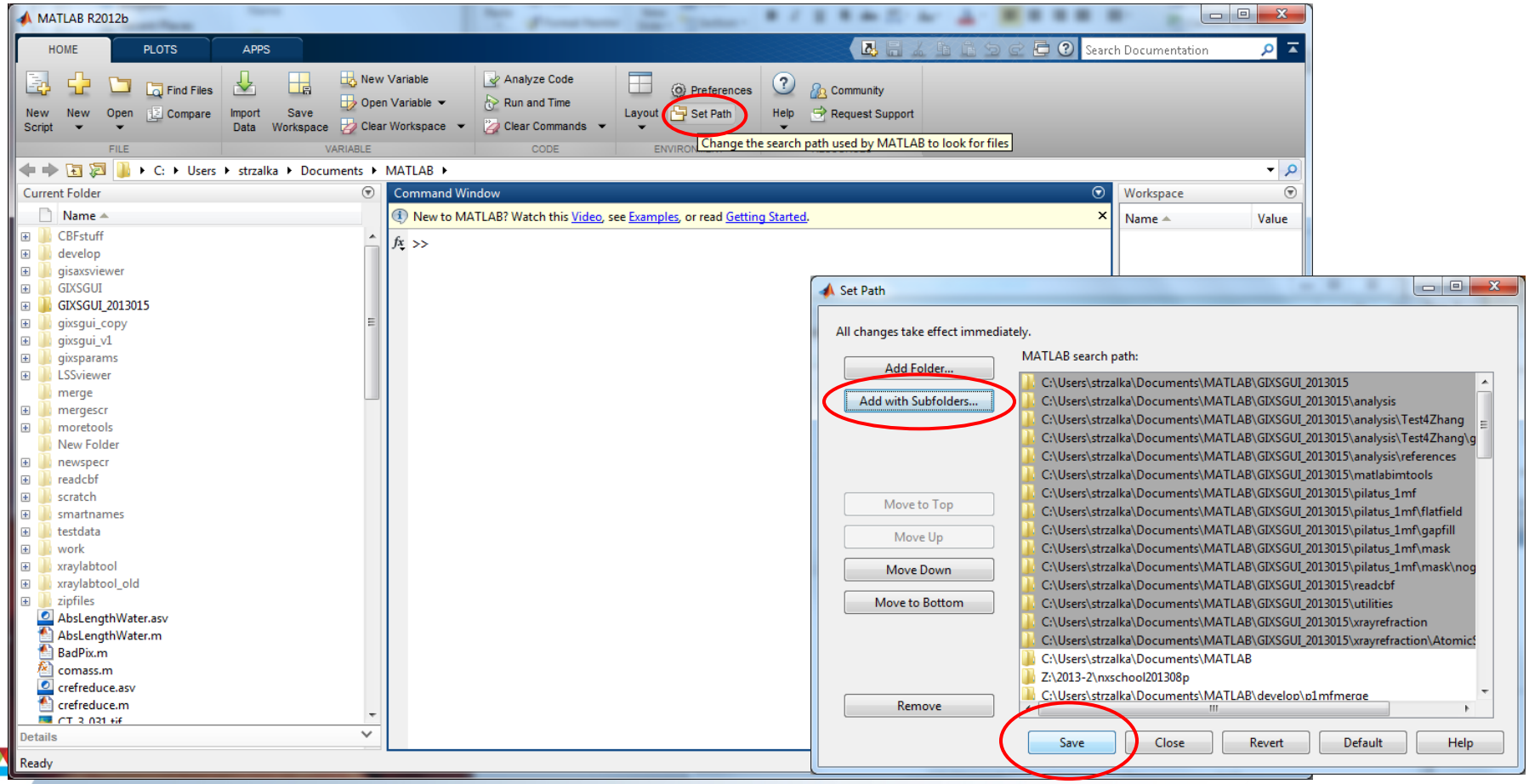
Downloading GIXSGUI

- GIXSGUI is a Matlab package available for download: www.aps.anl.gov/Sectors/Sector8/Operations/GIXSGUI.html
- Use requires license for Matlab (Distribution 2010a or newer).



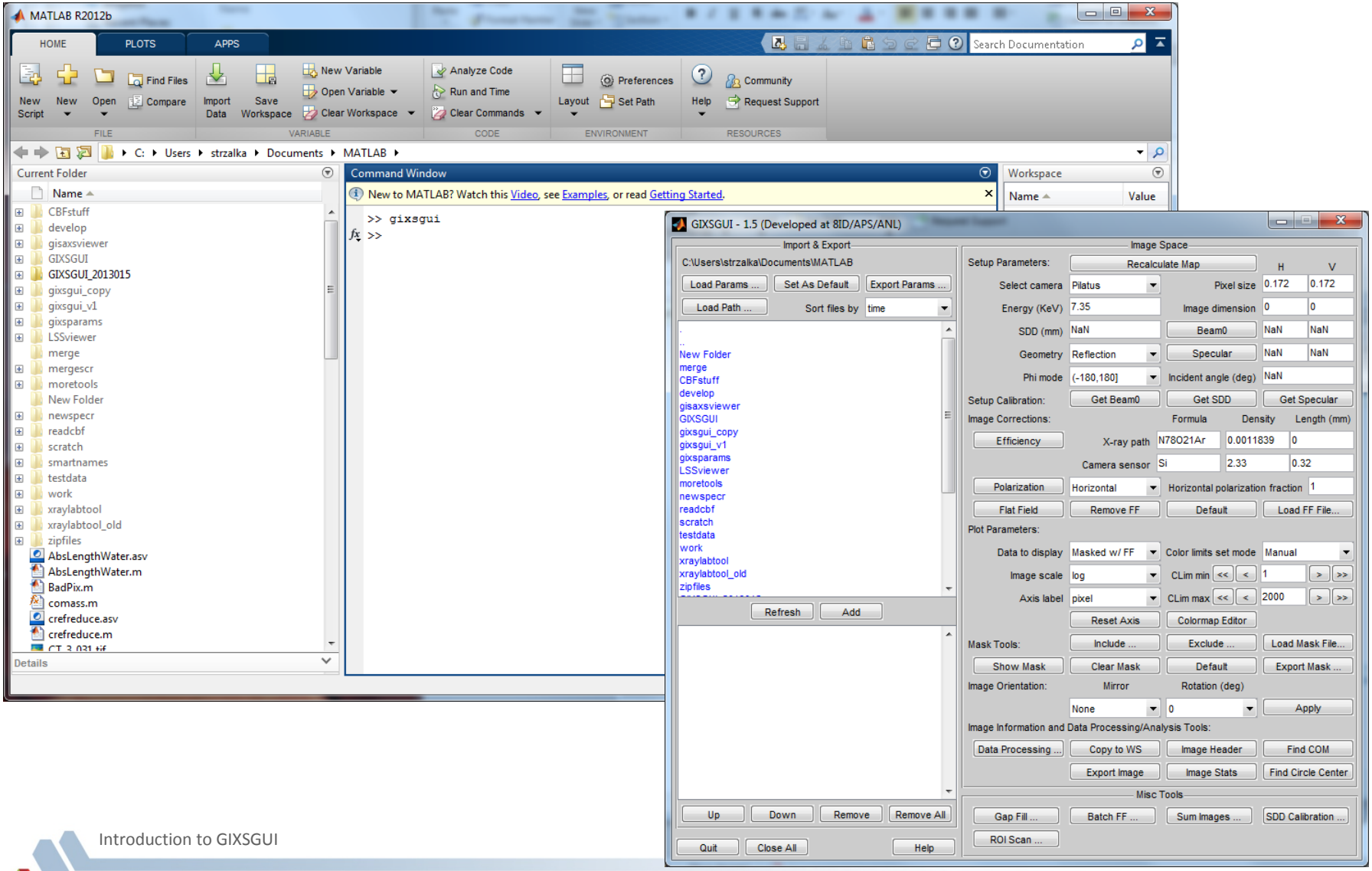
Setting up GIXSGUI

- Unzip the .zip file. The doc subfolder contains doc.pdf, documentation for GIXSGUI.
- Start Matlab.
- Modify your path: Set Path →Add with Subfolders → <Select the path for GIXSGUI> → Save



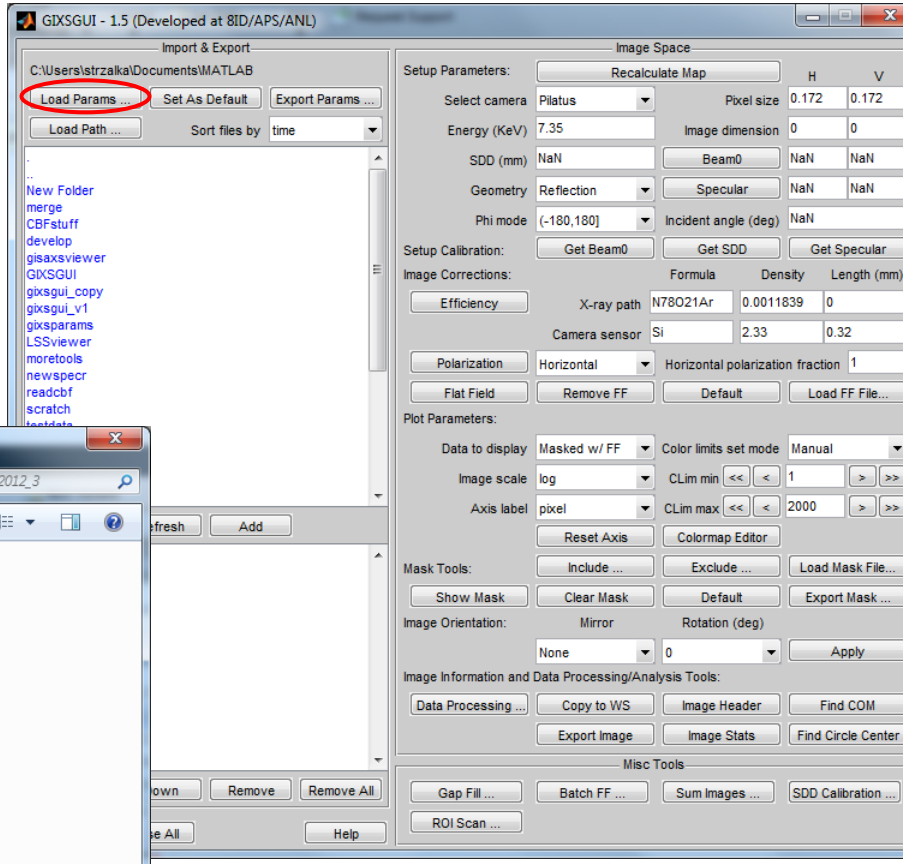
Starting GIXSGUI

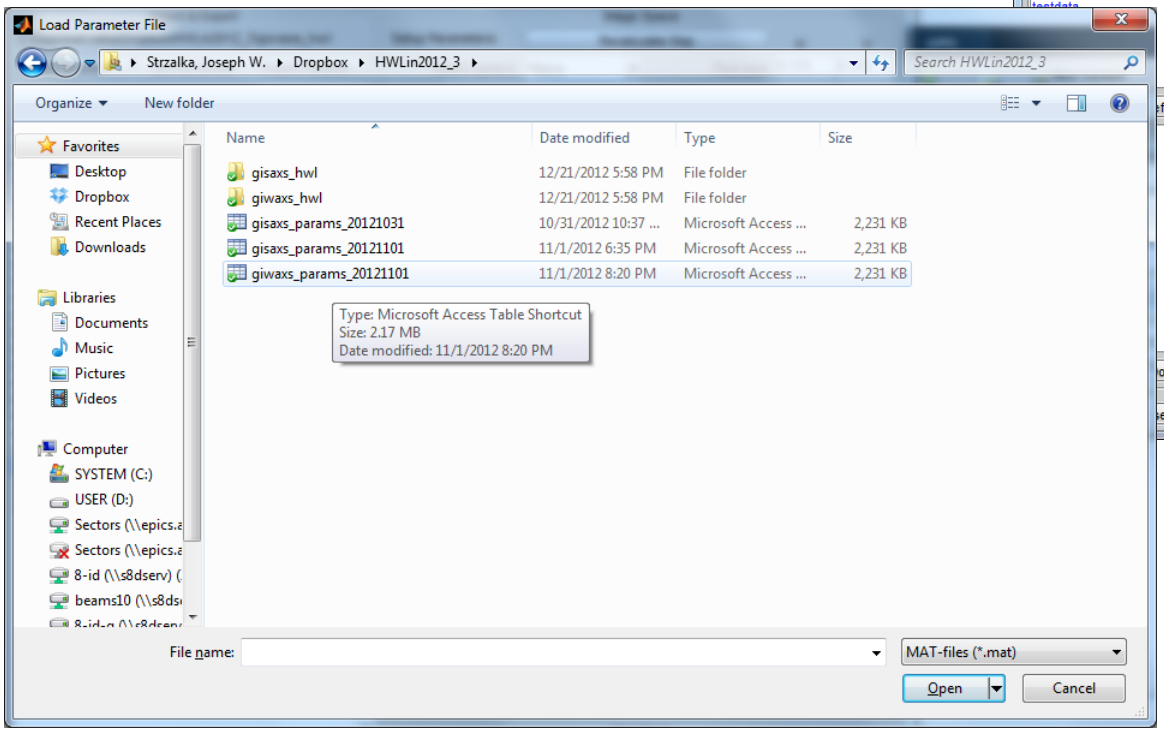
- Enter `gixsgui` into the command window.



Loading GIXSGUI parameters from a file

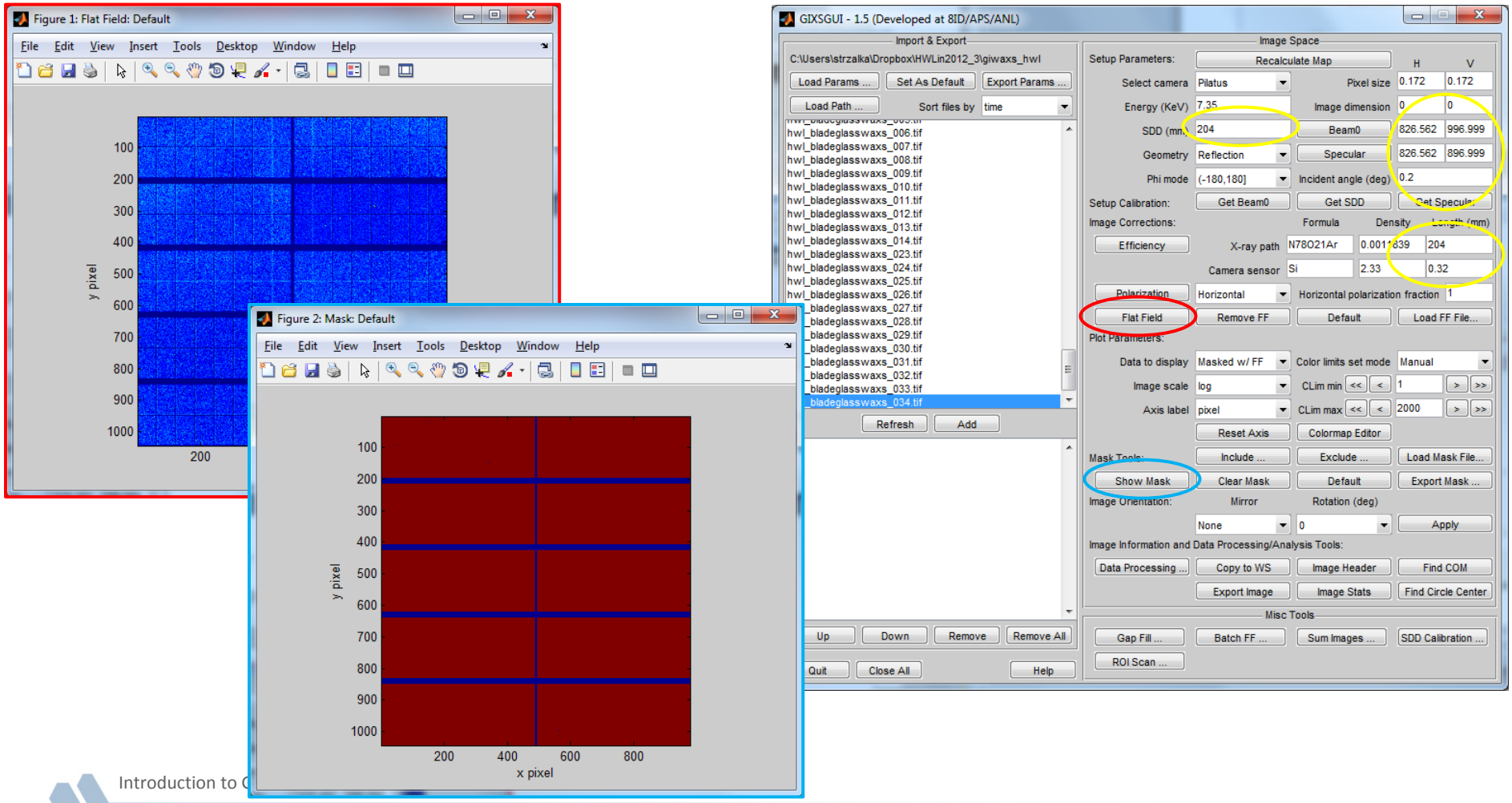
- For an existing parameter file:
  - Load the path for your 2-D data files.
  - Load the parameter file.





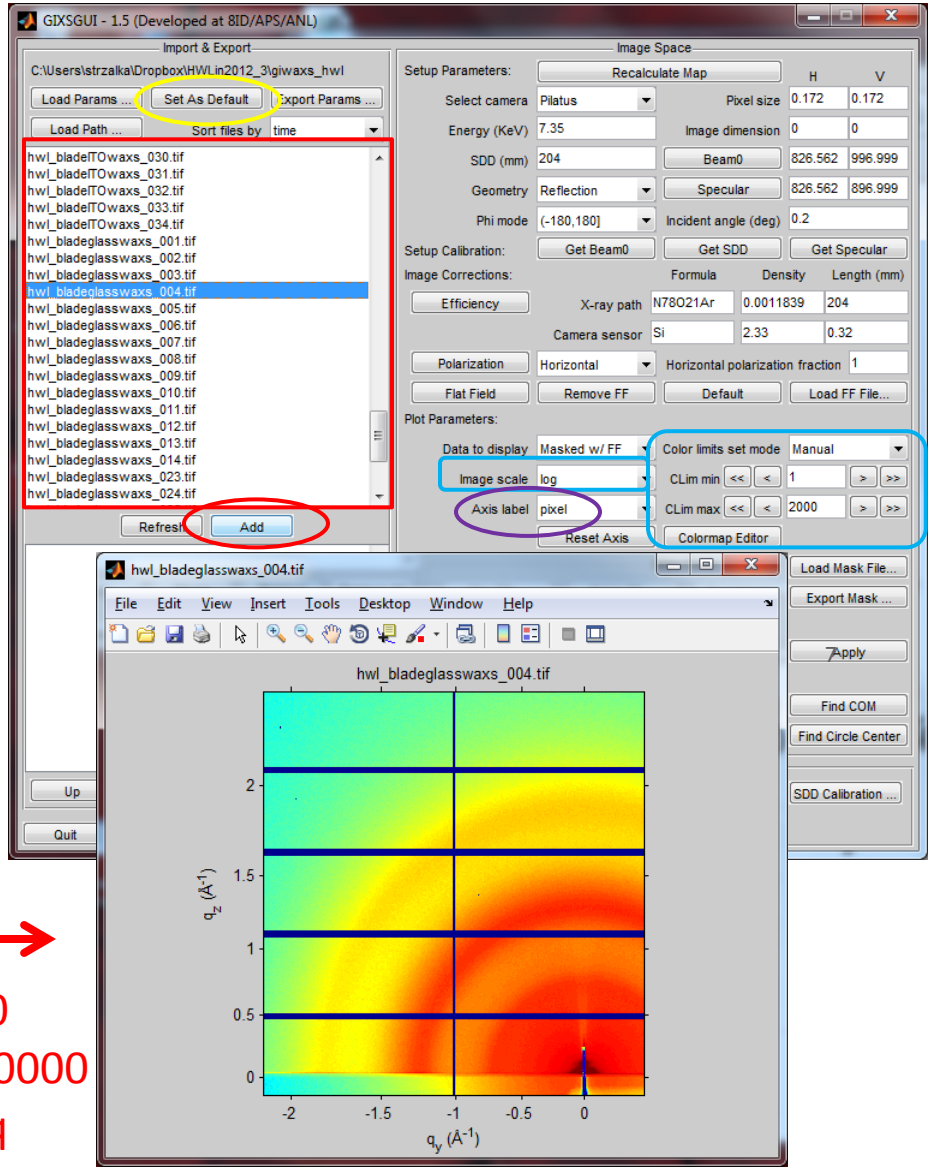
Loading GIXSGUI parameters from a file

- After loading,
  - Parameters appear
  - Flat field data and mask data are read in



Displaying 2-D data in GIXSGUI

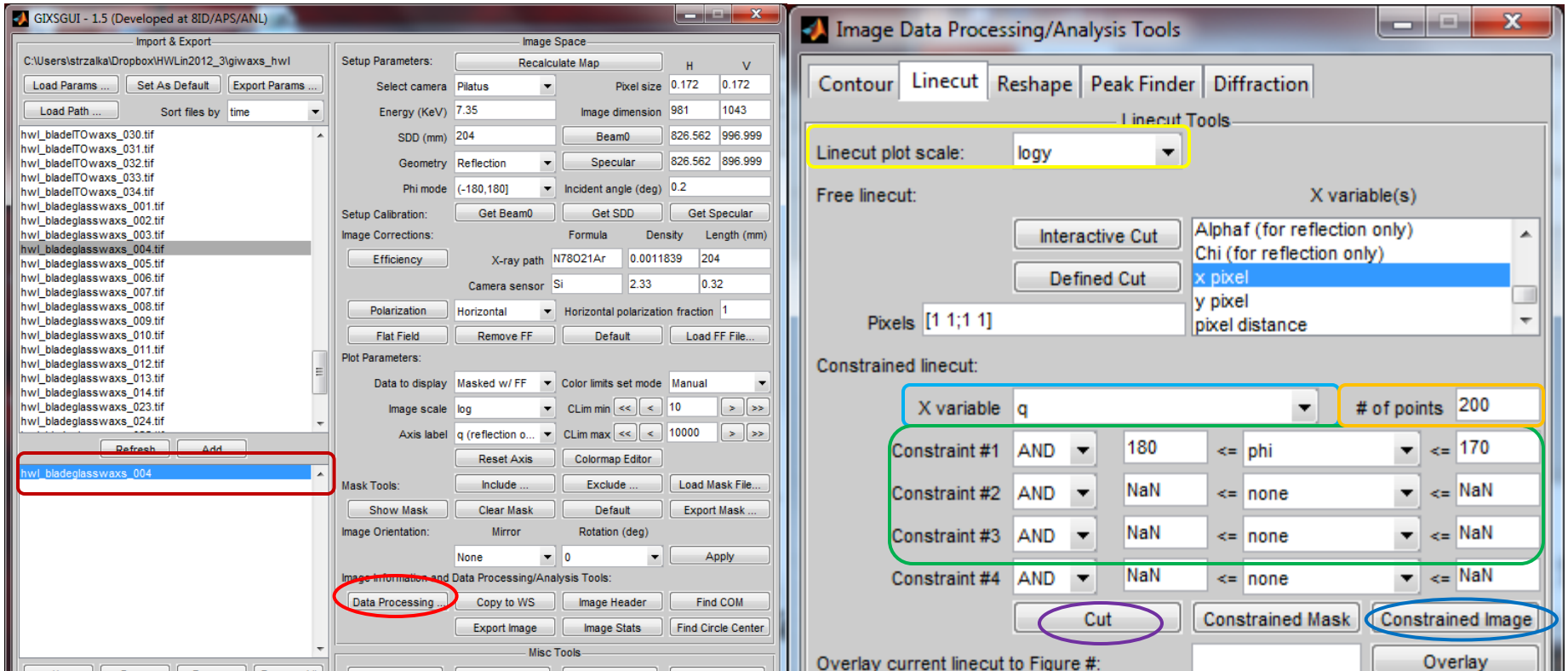
- Select a file in the path list box
  - Double click on the filename OR
  - Click the Add button
  - Image appears
  - Adjust color scale with controls
  - Control axes with Axis label menu
  - Make new settings default with Set as Default button



Clim min = 10
Clim max = 10000
Axis label = q

Applying simple linecuts

- Data processing button calls up new window
- For Constrained linecut, set X variable, Constraints, enter # of points in the result and set the Linecut plot scale
- Click Constrained Image to see the region included in the integration
- Click Cut to produce the linecut
- Note: linecut is performed on whichever image is selected in the list box.



Example Linecut

- Settings on previous slide produce the Constrained Image (left) and the linecut (right) below.