**clipdata\_WR.mlapp**

***Latest update: May 13, 2022 – Kristin Dickerson***

This GUI is used for clipping whole round (WR) and half round sections of hard rock core. This includes measured GRA bulk density and bulk magnetic susceptibility on the WRMSL, NGR on the NGRL, and point magnetic susceptibility on the SHMSL. Data is clipped using images of the split cores from the SHIL as well as laser profile data from the SHMSL. Any data can be clipped by the user, but this GUI is primarily used for clipping data recorded for gaps between rock pieces as well as accounting for edge effects. Data can be clipped for the four data types together in batch or individually by removing data points from each plot. Steps for using the GUI are as follows:

1. Organize your folders and subfolders with raw data
   1. Create a folder with the name of the hole for which you would like to clip your data. Example: /U1309D/
   2. Create four subfolders:
      1. /data\_raw/
      2. /images/
      3. /outputs/
      4. /profiles/raw/
      5. /profiles/formatted/
   3. Gather raw data and profiles. These can be downloaded directly from LIMS. Change the names of each csv file to match the following formats:
      1. Raw data to be placed in /data\_raw/ should contain all data from each hole. Examples:
         1. 399-U1309D\_GRA.csv
         2. 399-U1309D\_MAD.csv
         3. 399-U1309D\_MS-SHMSL.csv
         4. 399-U1309D\_MS-WRMSL.csv
         5. 399-U1309D\_NGR.csv
         6. 399-U1309D\_PWAVE.csv
      2. Laser profiles from the SHMSL to be placed in /profiles/raw/ should contain all data from individual sections *(Note: these files do not need a name change from direct download from LIMS).* Examples*:*
         1. 399-u1601c-2r-1-a\_2305041641403\_profile
         2. 399-u1601c-2r-2-a\_2305041649553\_profile
         3. 399-u1601c-3r-1-a\_2305042042343\_profile
      3. Run ‘getprof.m’ function. This will automatically format your raw laser profile data to work with the GUI. Formatted profiles will be placed directly in /profiles/formatted/
2. Launch GUI
   1. Run ‘clipdata\_WR.mlapp’ to launch the application
3. Select section to clip
   1. Fill in text edit fields for:
      1. expedition
      2. site
         1. *Note: do NOT include the ‘U’. For example, site should be ‘1601’ instead of ‘U1601’*
      3. hole
         1. *Note: do NOT capitalize your hole number. For example, hole should be ‘c’ instead of ‘C’*
      4. core
      5. section
4. Plot laser profile
   1. Press the **Plot laser profile** button
   2. This will find your formatted profile data in /profiles/formatted/ and plot versus offset of section (cm)
   3. This will also add a file name in the text edit field for file name. Ensure this is correct, as all subsequent outputs will be saved with this name.
5. Plot data
   1. Press **Plot data** button
   2. This will find your raw data in /data\_raw/ for NGR, GRA density, bulk magnetic susceptibility (WRMSL), and point magnetic susceptibility (SHMSL)
6. Optional: Pull up the SHIL images of each section
   1. This is very beneficial for visualizing where gaps and edges of pieces are in your section.
   2. Images can be saved in /images/ subfolder and pulled up quickly when clipping data from each section separately.
7. Clip data
   1. Select the ‘Brush’ button on the top right corner of any of the four plots
   2. Drag mouse (while holding down left click) to highlight all data points you wish to remove.
   3. Once unwanted data is selected (the points should be highlighted red), right click and select ‘Replace with’ and select ‘NaNs’
   4. *Removing all data in batch:*
      1. Removing points from the ***laser profile*** will remove points at that offset from all datasets
   5. *Removing data from individual datasets separately:*
      1. Removing points from an individual data plot (i.e., either NGR, density, magnetic susceptibility recorded on the WRMSL, or magnetic susceptibility recorded on the SHMSL) will remove data from ***only that dataset***. Measurements at that offset from other datasets will remain the in their respective dataset
8. Update plots
   1. Press **Update plots** button
   2. This will update all plots with removed data
9. Save filtered data as a new .xlsx file
   1. Press **Save filtered data to spreadsheet** button
   2. This will save your data, with clipped data removed, for that section, using the file name defined on the GUI edit field.