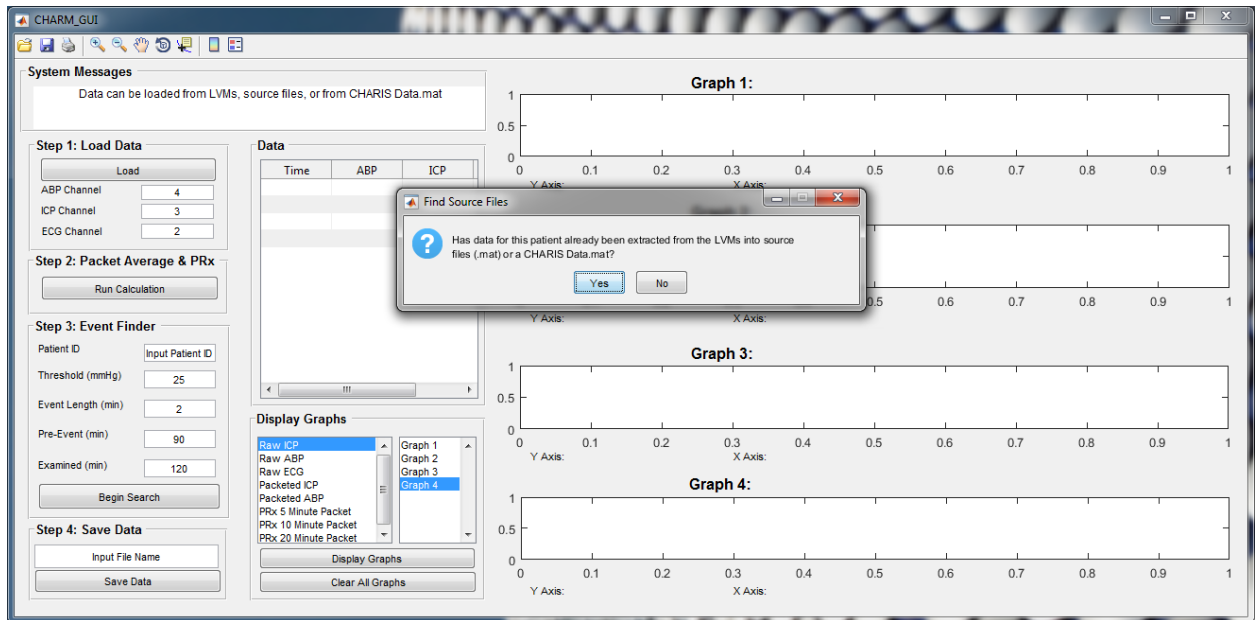


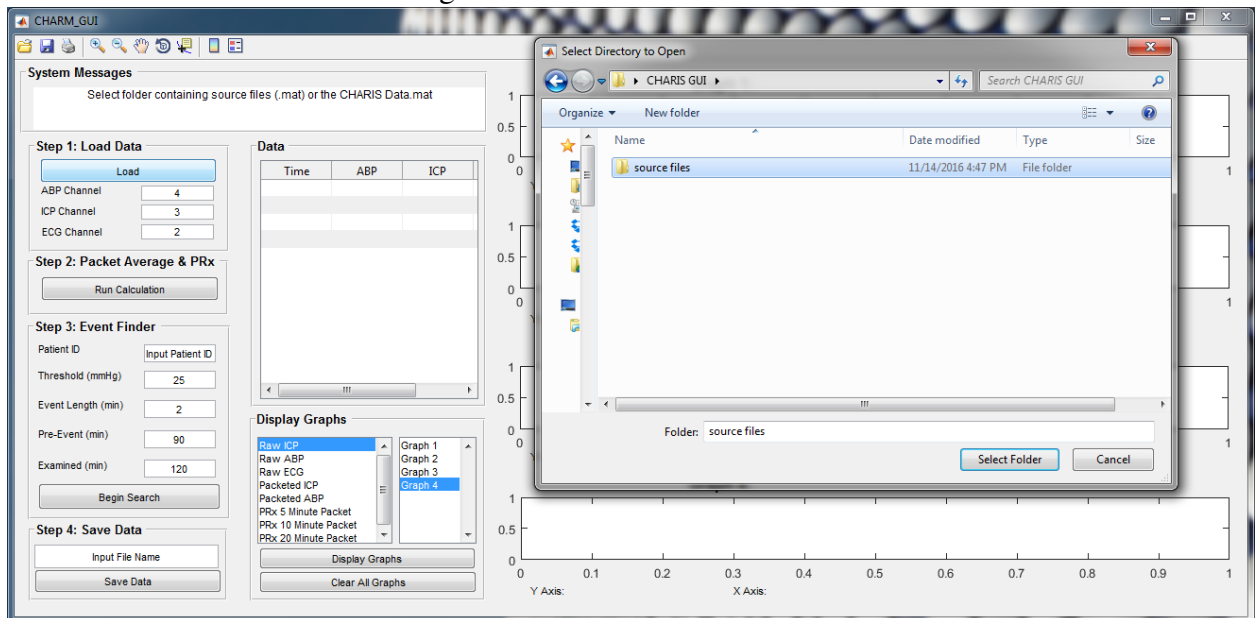
CHARIS GUI Instructions

Note: System messages will be displayed at the top of the window.

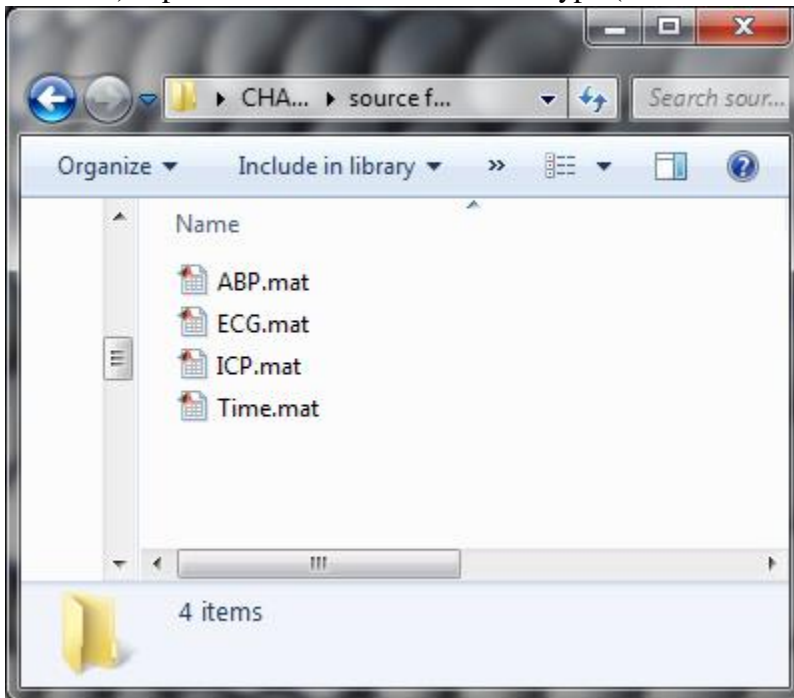
- **Step 1: Load Data**
 - Click “Load” button
 - The following prompt will appear: “Has data for this patient already been extracted from the LVMS into source files (.mat) or a CHARIS Data.mat?”
 - In order to analyze .mat files, select “Yes” (if using LVM data, see [pg. 11](#))



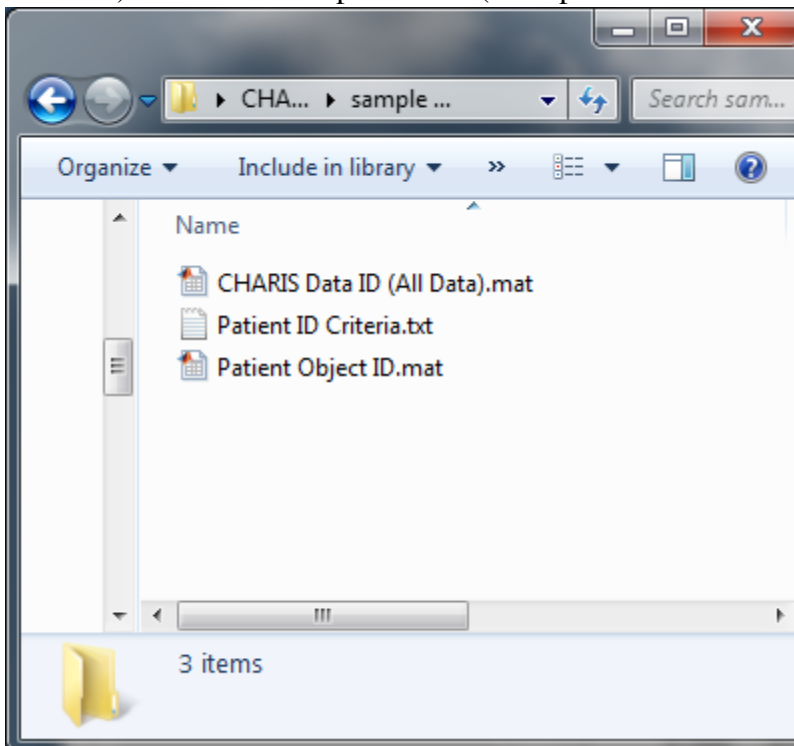
- Select the folder containing files



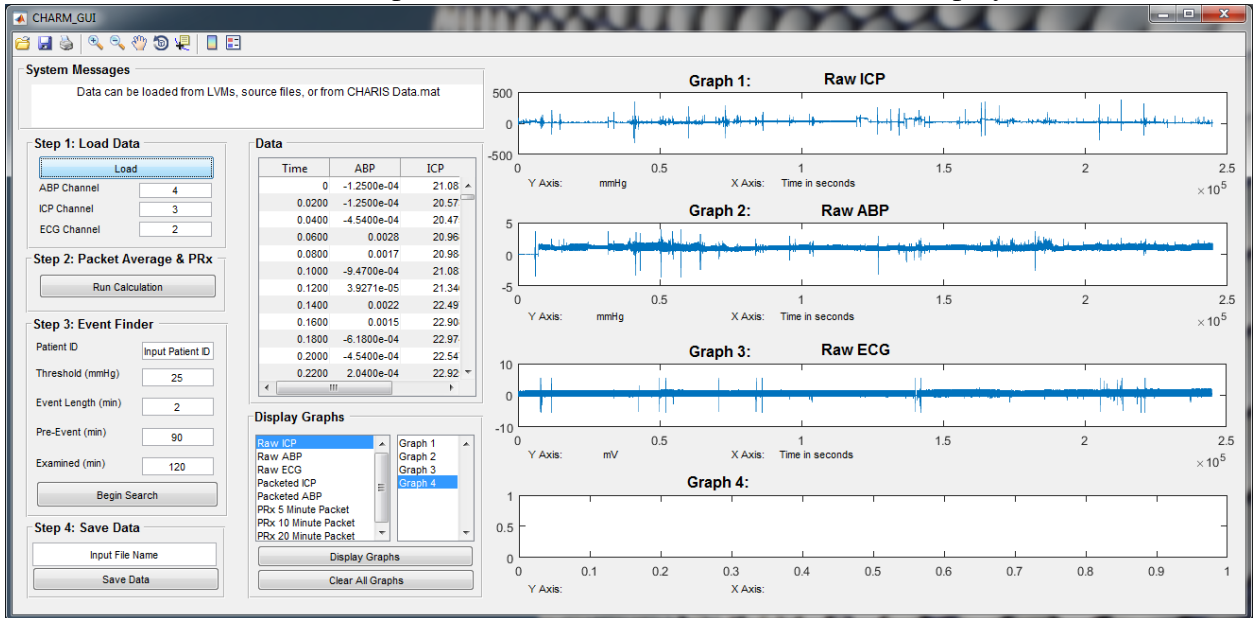
- .mat files should be in the following formats:
 - 1) separate .mat files for each data type (where Time.mat is in seconds)



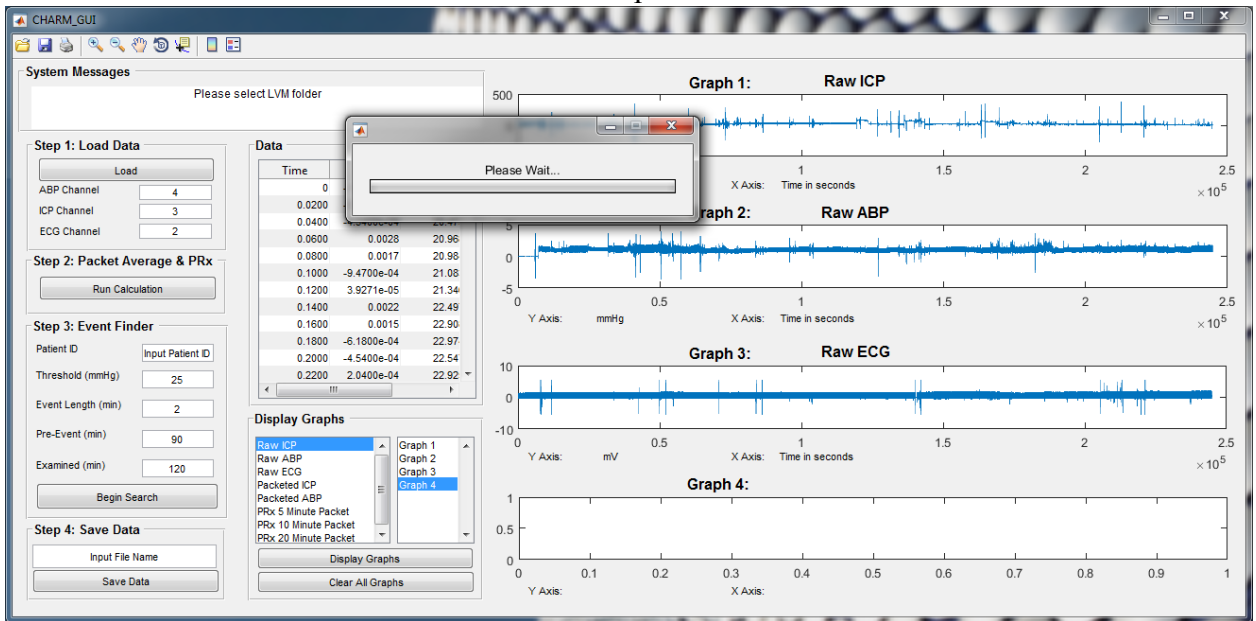
- 2) .mat files in output format (from previous use of the GUI)



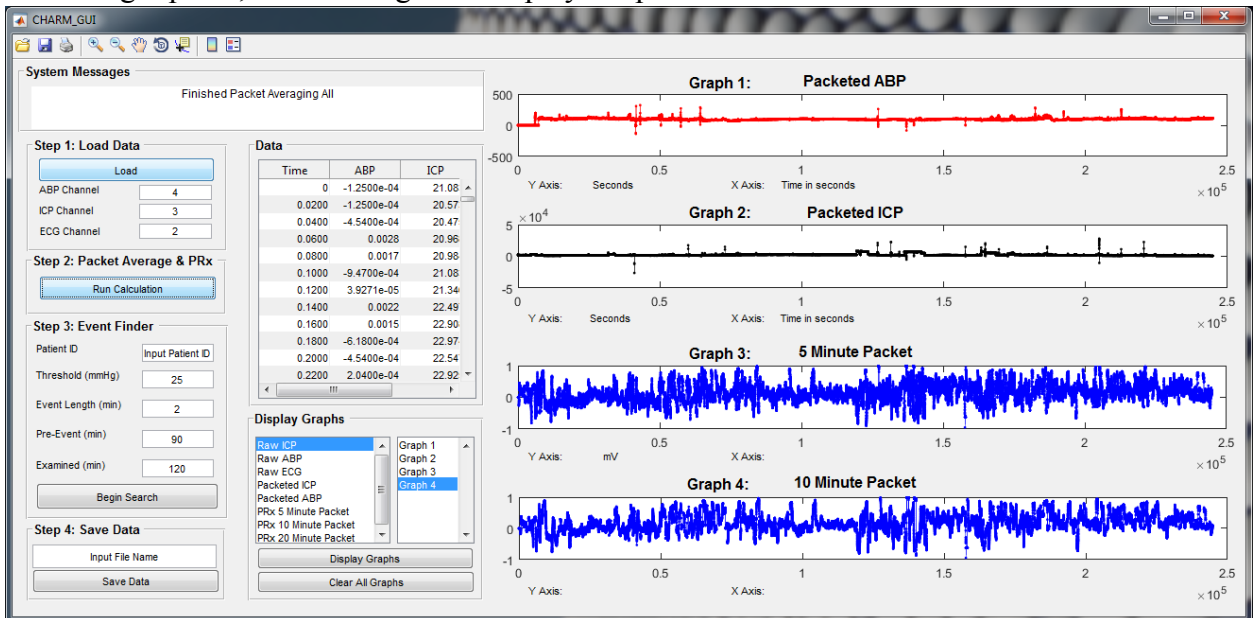
- Once files have been uploaded the ICP, ABP, and ECG will be displayed.



- **Step 2: Packet Average and Calculate PRx**
 - Click “Run Calculation” button under Step 2

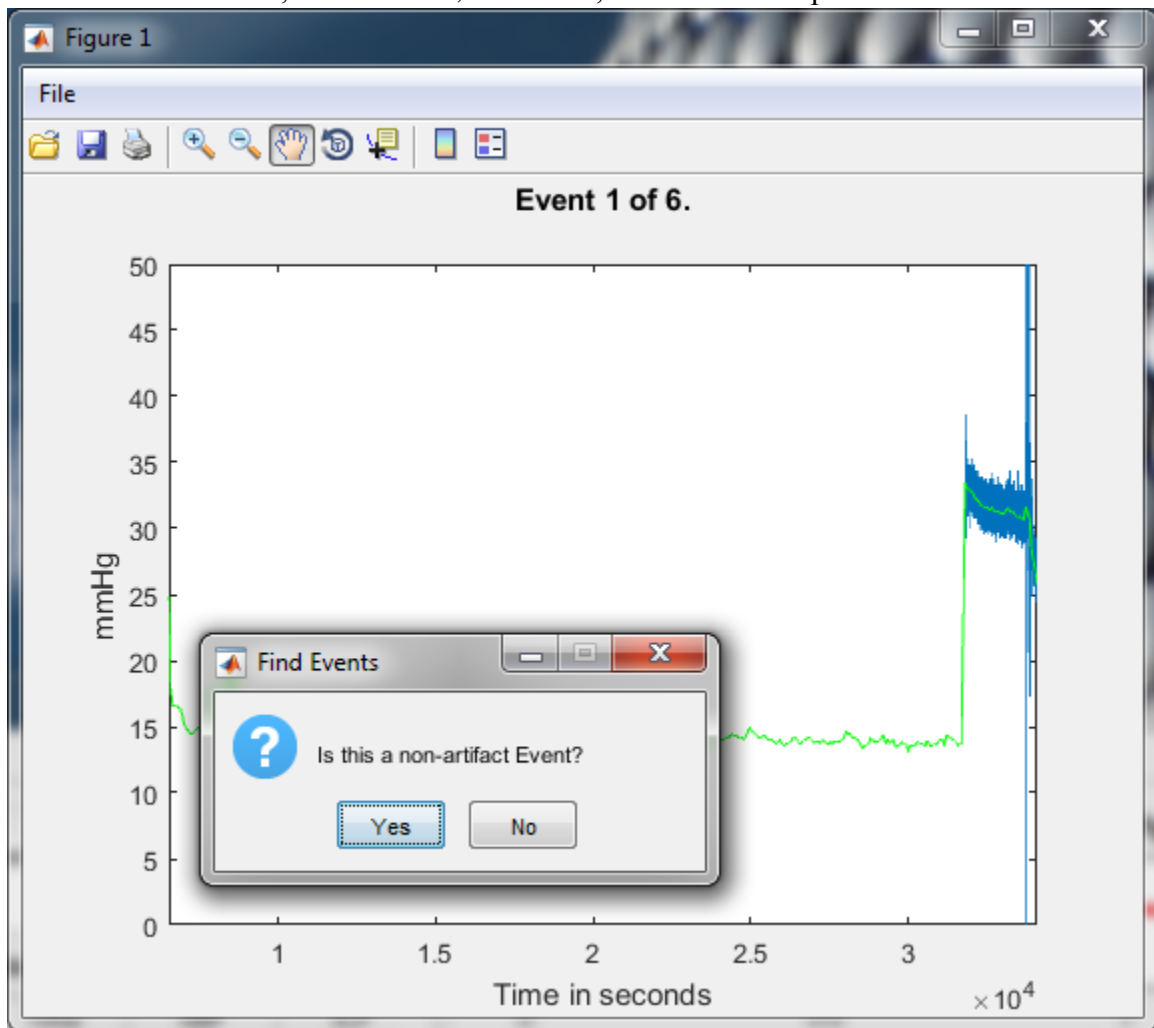


- Packeted data and PRx calculation should appear. Displayed graphs can be changed by selecting the desired graph on the left panel, where to display on the right panel, and clicking the “Display Graphs” button.

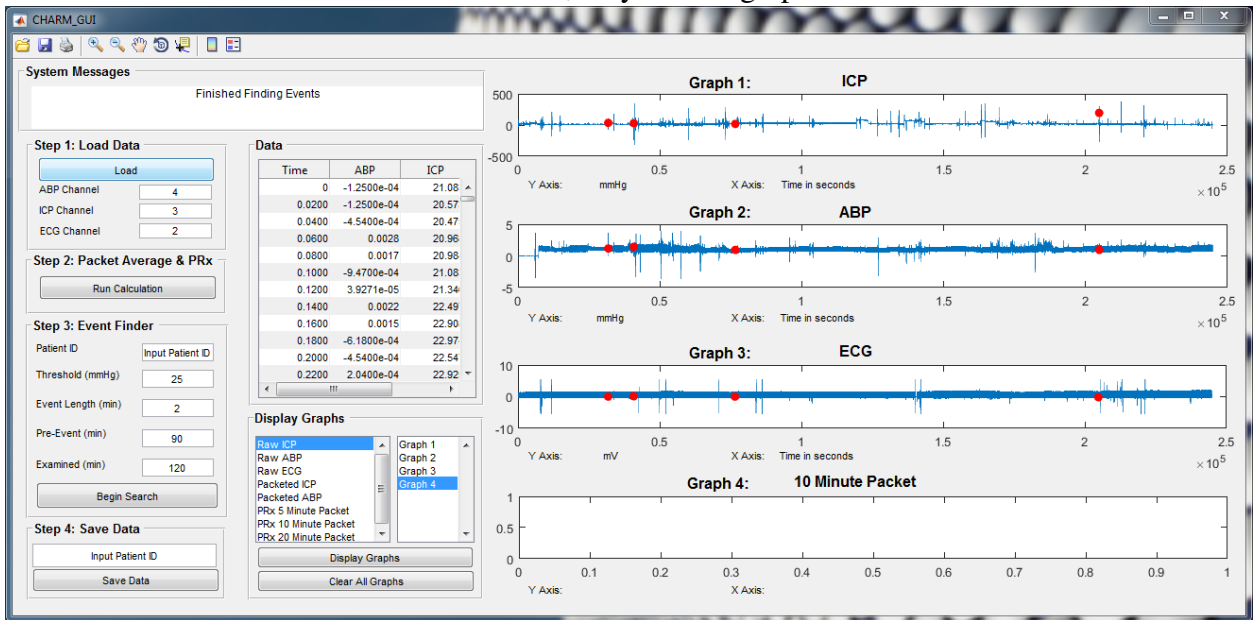


- **Step 3: Event Finder**

- Enter the desired parameters and criteria for ICP events in Step 3 and click “Begin Search”
- A window will pop up with the pre-event average (green) and the raw ICP event data (blue). A prompt will ask “Is this a non-artifact Event?”, if the ICP shown is not an artifact, select “Yes”, otherwise, select “No”. Repeat for all events.

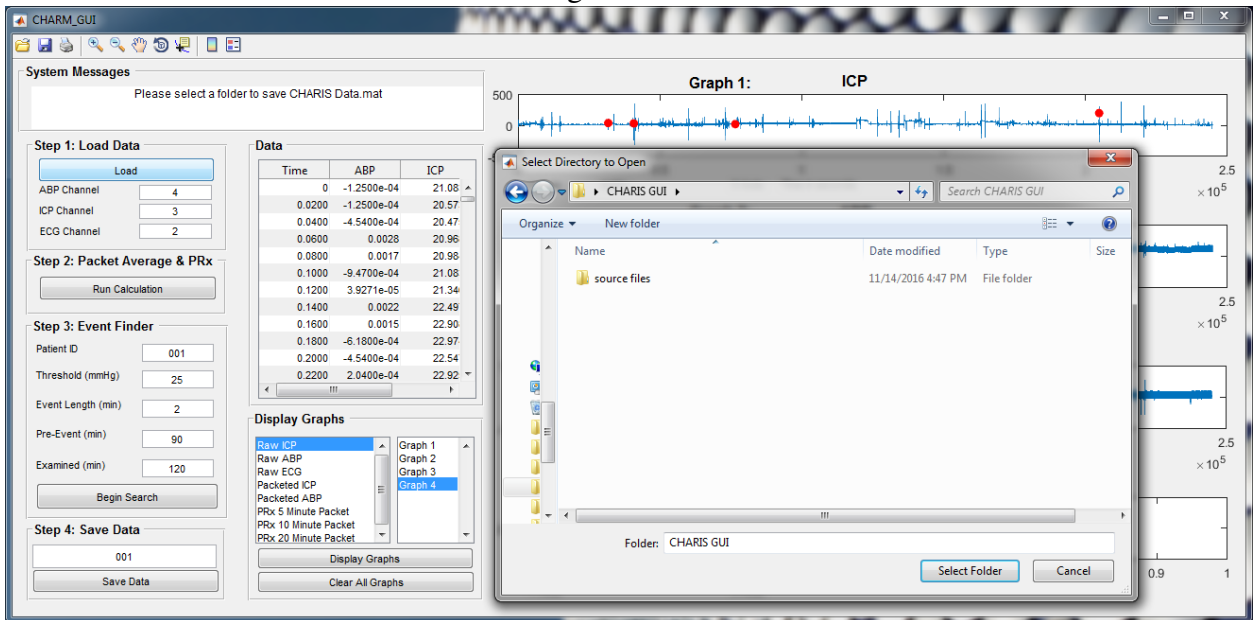


- Once all events have been identified, they will be graphed in the GUI.

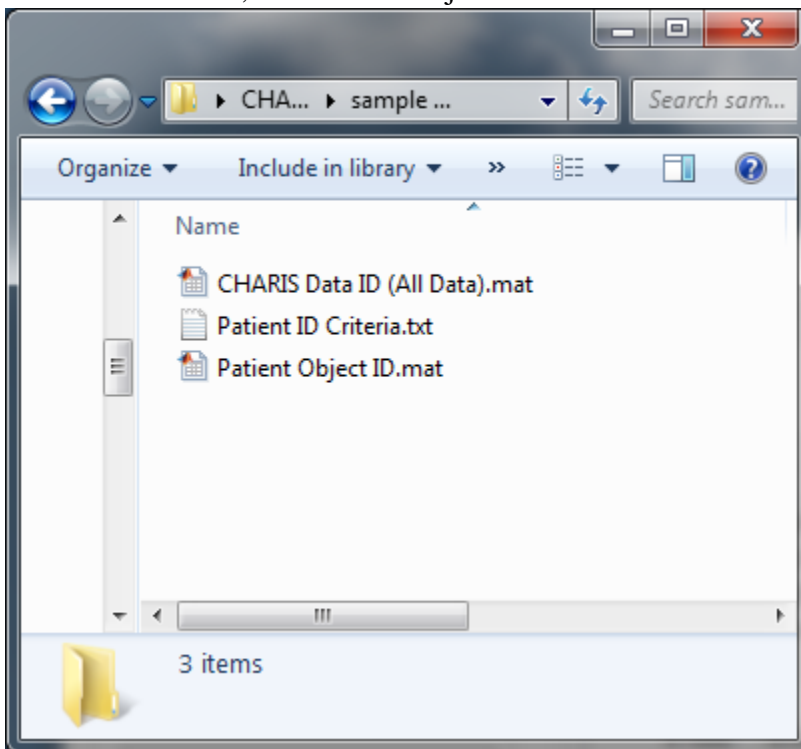


- **Step 4: Save Data**

- Type patient ID and click “Save Data” to save the file. A prompt will ask the user to select a folder to store the resulting .mat files.

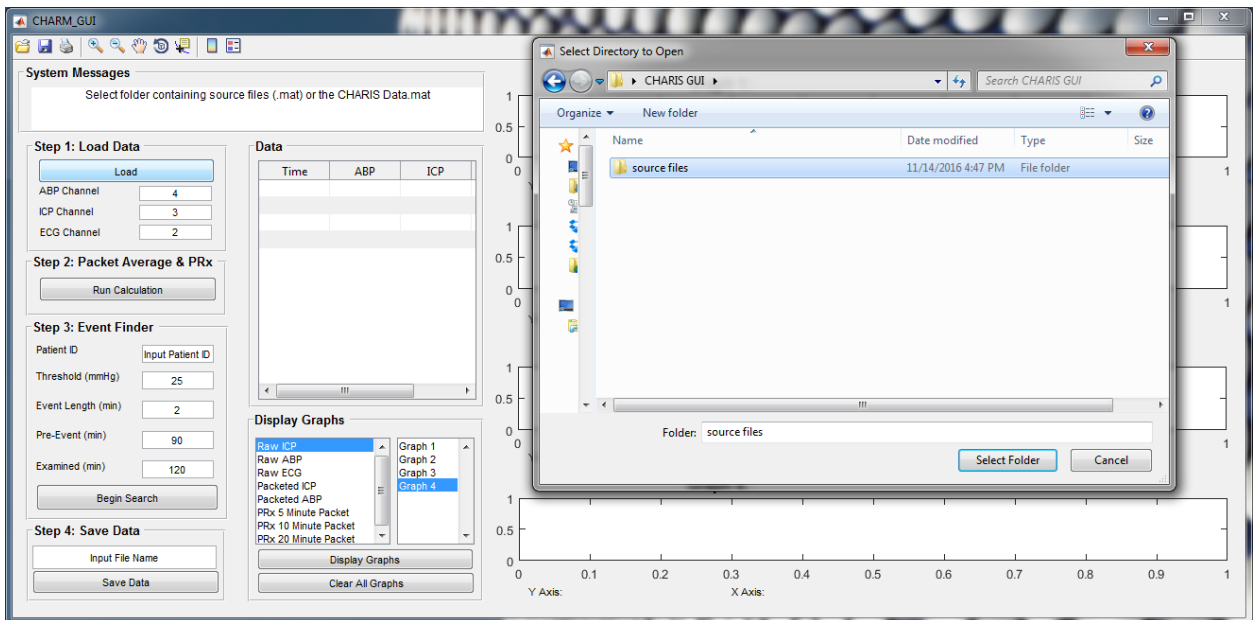


- The output will consist of: CHARIS Data ID (All Data).mat, Patient ID Criteria.txt, and Patient Object ID.mat

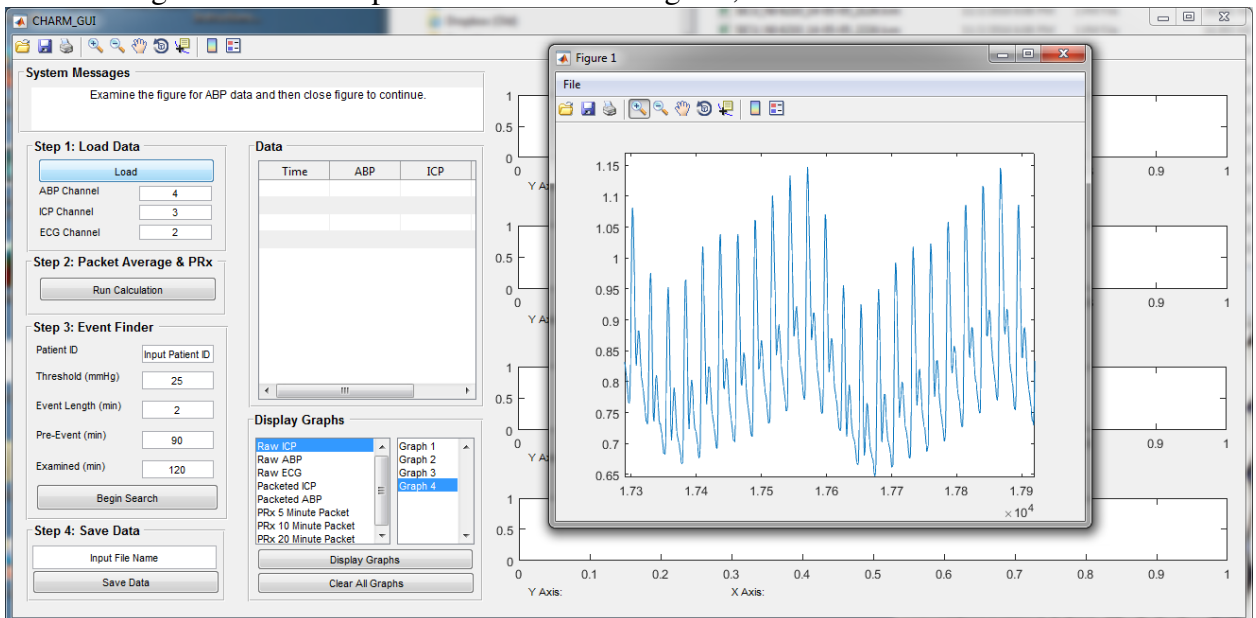


- **Using LVM Data**

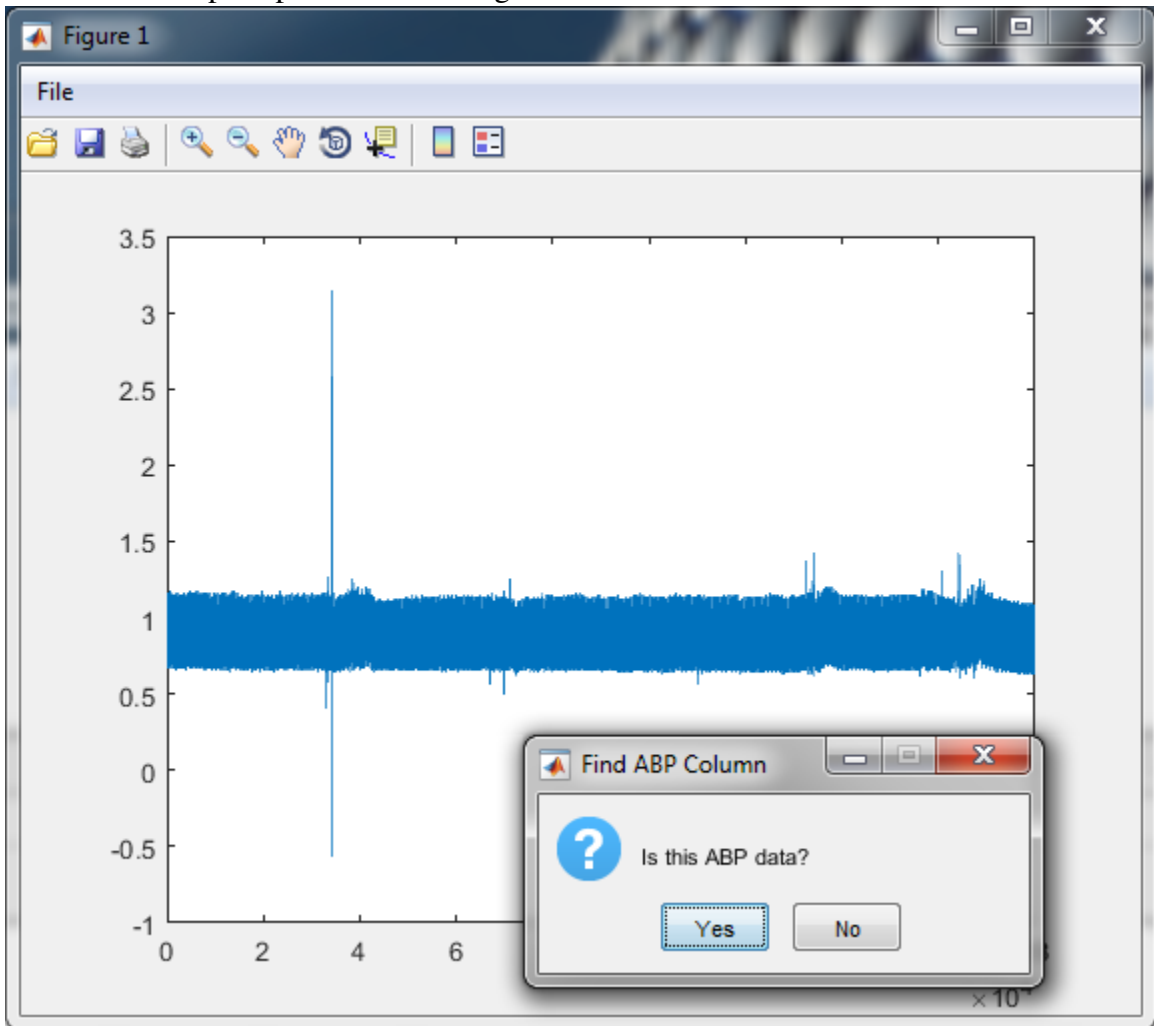
- If the user already knows which channels (columns) the ICP, ABP, and ECG are in, the user may input the channel numbers in the corresponding text boxes. If not, click “Load”
- The following prompt will appear: “Has data for this patient already been extracted from the LVMs into source files (.mat) or a CHARIS Data.mat?”, select “No”
- Select a folder containing LVM files to be analyzed



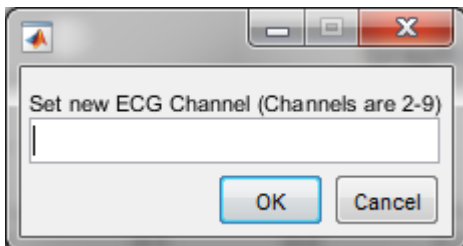
- A figure will show a portion of one of the signals, zoom in to examine



- Answer prompt after examining data



- If not the type of data specified in prompt, examine another channel. Repeat until the correct channel is selected. The procedure is the same to find ABP, ICP, and ECG channels.



- Once channels have been selected, LVM files will be concatenated and displayed (see [pg. 6](#)).

