

FEATURE DESCRIPTION: DIRECT GRAPHING

OVERVIEW

The Direct Graphing feature allows the user to graph any two of seven columns to the right of the “TIME” column (as displayed in the Log Read Out Window) directly from the User Interface (UI) software running on their PC or MAC:

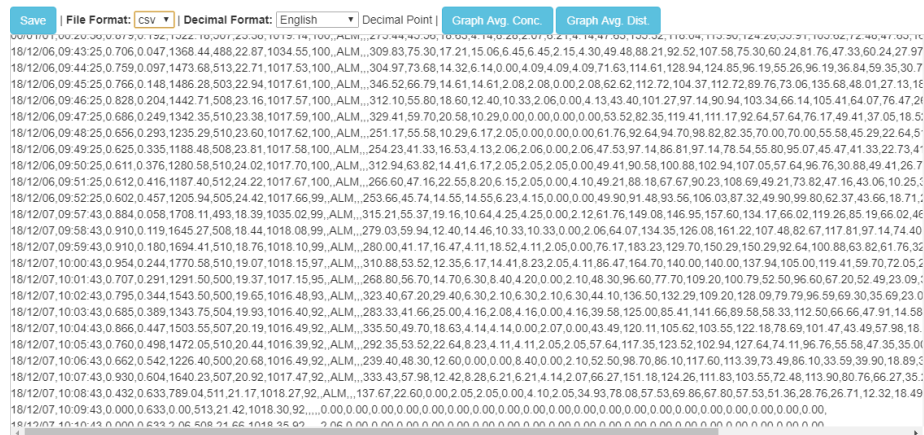
1. mass-concentration "AVG MASS CONC",
2. moving-window average mass-concentration “WIN AVG MASS CONC”,
3. count-concentration “COUNT CONC”,
4. pump flow rate “FLOW RATE”,
5. internal temperature “TEMP”,
6. ambient pressure “PRS”,
7. battery state of charge “BATTERY”.

This creates line graphs for the 2 columns chosen that can be scaled, zoomed, and adjusted to focus on any part of the data available in the Log Read Out window. The graph can be saved as a .png file.

USING THE DIRECT GRAPHING FEATURE

Before generating graphs, there must be log data in the “Log Read Out” window of the User Interface.

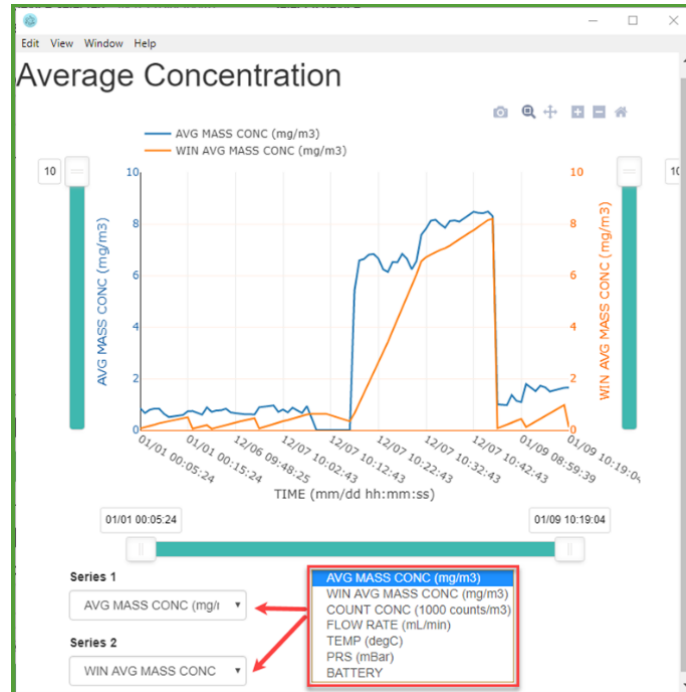
Log Read Out



User Interface Log Read Window with particle size distribution

To generate graphs there are two blue action buttons at the top of the “Log Read Out” window in the User Interface application.

Clicking on the “Graph Avg. Conc” button will pop-up a 2-line graph of average mass concentration and moving window average of the mass concentration with respect to time are initially displayed.

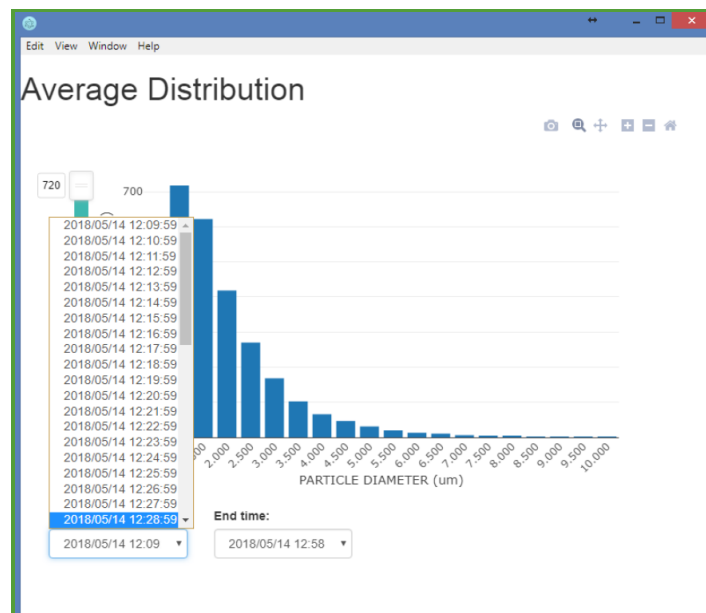


Average Concentration graph window when Graph Avg. Conc. is clicked

The series 1 and series 2 drop-down menus at the end of graph window can be changed to plot different data as shown. Each series will have separate vertical axes with titles and units (or format) in parenthesis. The sliders along each of these axes allow user to zoom in or out by modifying range on the axes.

Legend for the graph i.e. series' color and title, is on the top right corner of the graph window

Clicking on the "Graph Avg. Dist" button will pop-up a new window with a bar graph displaying the mass-concentration by particle size, averaged over all data in the Log Read Out Window.



Average Distribution histogram when Graph Avg. Dist. is clicked

The y-axis of the bar graph can be scaled to focus on any part of the data available in the Log Read Out window. Instead of averaging all data to generate the bar graph, the user can select a sub-set of the most recent data to be averaged. This is done through a drop-down window at the bottom-left of the bar graph.

Saving the graph to a .png file can be done at any time. The .png file will be a snap-shot of the bar graph as seen on the screen at the time it was saved. The graph-saving function allows the user to select where the .png file is to be saved.