Python Files

**P15\_FrameFluxbyTraverseLoc.py**

Uses raw particle data files (\*.vsp) from spray sheet discrete position data sets and returns dataframe of “flux” as determined from P15 particle count and measurement volume.

**P15Data\_VelVolWtDist\_ByTravLoc.py**

Code is written to filter text files and only look at those measured at discrete location within the spray sheet. This is done by passing over data files that indicate a “Full” traverse was done. Iterates through remaining .txt files containing VisiSize data and uses VisiSize determined cumulative distribution data to calculate and return volume and volume\*velocity weighted DV10, DV50 and DV90 values.

The code from lines 225 and forward is where the main loop occurs, calling to the previously defined functions. Upon initial pass of all data, the resulting DataFrame is saved to a pickle file. If DataPickle file exists, set DataPickle = True and program will just read existing file. Otherwise, DataPickle should equal False.

If Plot = True, a plot of all data by position will be returned.

**P15Data\_VelVolWtDist\_FullTraverse.py**

Same as P15Data\_VelVolWtDist\_ByTravLoc.py but for Full traverse data. No plot.

**PlotFrameFlux\_Patternator\_PlotsByFunction.py**

Takes in existing pickle dataframe files for P15 and Sympatec data and plots droplet size and “flux” by position in spray sheet.

**P15\_FullTraverse\_DistData\_FromRaw.py**

Calculates volume and volume\*velocity weighted distribution data from raw (\*.vsp) files. Only Full traverse data sets are used.