

MLM-IV-ANALYSIS

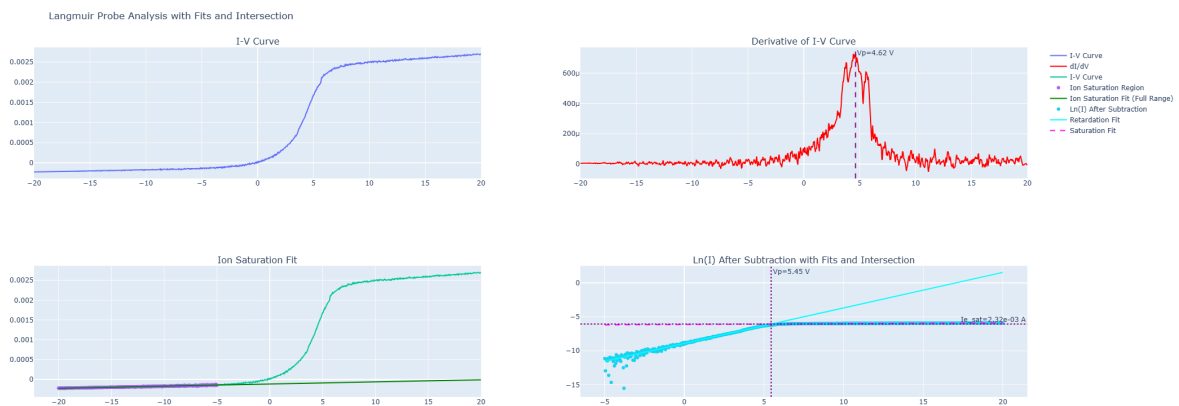
INDEX

MLM-IV-Analysis, loads a NPY data file from MLM-IV-SimPlot and performs following plots, fits, and analysis:

The analysis provides four sub-plots:

1. IV Curve
2. Derivative of IV Curve, and peak finding for estimation of the plasma potential V_p
3. Ion Saturation Fit, where we fit a linear curve to the ion saturation current
4. Subtraction of the Ion Saturation Current from the IV curve, and plotting the resulting data transformed by $\ln(y)$, and fit the electron retardation zone and the electron saturation zone. The slope of the electron retardation zone gives the electron temperature T_e in eV, the crossing point between the two fits is the plasma potential V_p which in most cases is a better estimated value compared to the value achieved by the peak of the derivative of the IV curve.

Output plot by [MLM-IV-ANALYSIS](#) : Langmuir Probe Analysis with Fits and Intersections



The programs outputs four plots using Plotly (for [CODESPACE](#) use for pair programming [Plotly](#) does not work that well and we therefore also provide a version using [Dash by Plotly](#) which is confirmed working with [LiveShare using VSCODE and GITHUB CODESPACE](#))

4.