



Contribution ID: 38

Type: Poster

Development of an analysis algorithm for electrostatic probe characteristics in Scilab

Electrostatic probes are widely used in various ion sources to measure the plasma parameters. Such probes are cost effective, easy to construct in laboratory and one can easily analyse the current-voltage (I-V) characteristics of the probe to find out the local plasma conditions in an ion source. However, due to unfavourable alterations in plasma conditions, a random fluctuation is often observed to be integrated with the probe data. Therefore, to analyse such probe data, an algorithm has been developed in Scilab environment which can calculate plasma parameters for a given experimental condition. The experimental data are fitted with an empirical tangent hyperbolic function that contains four constants that controls the various plasma parameters.

Author: DAS, Bidyut Kumar (Department of Physics, Dakshin Kamrup College,)

Presenter: DAS, Bidyut Kumar (Department of Physics, Dakshin Kamrup College,)

Track Classification: Track 02: Electronics & Photonics, Computational Physics, Applied & Engineering Physics