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**Numerical distortion removal method of Langmuir probe I-V curve in RF plasma** KYUNGHWAN YOU, KYUNG-HYUN KIM, CHIN-WOOK CHUNG, Hanyang university — In the Langmuir probe method, RF plasma potential oscillation can cause distortion of the I-V curve, so the RF voltage applied to the probe sheath must be minimized for accurate measurement. In a dual or triple RF plasma, RF choke filter must compensate not only harmonic components but also intermodulation components. However, it is difficult to design an RF choke filter to compensate for such frequency components. In this study, we suggest a method for numerically removing the distortion. The distorted I-V curve was obtained from the probe without the RF choke filter and the RF perturbation was measured by the auxiliary probe. At this time, a normal I-V curve can be obtained by the numerical method using the measured RF perturbation and the distorted I-V curve. The I-V curve through this method and the I-V curve from RF compensated Langmuir probe were compared. It was confirmed that the I-V curve and electron temperature obtained by the above method are in good agreement with that of Langmuir probe with RF choke filter.

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