

Abstract Submitted
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The effect of inhomogeneous ohmic heating on the electron energy probability functions in an oxygen capacitively coupled plasma. HOWON LEE, CHIN-WOOK CHUNG, Hanyang University — Electron energy probability functions (EEPFs) are measured in an oxygen capacitively coupled plasma (CCP) using a Langmuir probe depending on the distance from the power electrode to the ground electrode in the CCP. Plasma densities and electron temperatures are obtained from the EEPFs. A choke filter is used to minimize a RF perturbation. The EEPF is changed from a Maxwellian distribution to a bi-Maxwellian distribution from the powered electrode. This seems to occur because the electric fields generated by the powered electrode does not penetrate through the center. The collisional heating is efficient by the strong electric fields near the powered electrode, while the collisional heating is inefficient far from the powered electrode. This shows the effect of inhomogeneous ohmic heating on the EEPFs in CCPs.

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