

Abstract Submitted
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Transition of Plasma Electrons from Anisotropy to Isotropy at Beginning of the Pulsed Discharges HYO-CHANG LEE, CHIN-WOOK CHUNG, Hanyang University — We present experimental studies on the transition of plasma electrons from anisotropy to isotropy at beginning of the pulsed discharges. The electron energy probability functions (EETFs) are obtained from the first derivative of the measured I-V curve at planar type Langmuir probes. Strong anisotropy is found depending on the probe direction at the first stage of the low pressure pulsed plasma. The anisotropy of the electrons is transitioned into isotropy on the EETF. This study may provide fundamental understanding of both the electron acceleration via wave-electron interaction and the electron thermal transport in plasma discharges.

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