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**E-H heating mode transition in high-pressure helium inductively coupled plasma** HYO-CHANG LEE, JUNG-KYU LEE, CHIN-WOOK CHUNG, Hanyang University — Inductively coupled plasma (ICP) are known to have two distinct modes, capacitive mode (E mode) at a low plasma density and inductive mode (H mode) at a high plasma density, and the heating mode transition from E mode to H mode occurs with abrupt increase in the plasma density at a high gas pressure. However, a smooth transition of the plasma density on the E H heating mode transition was observed in high-pressure helium discharge from the measurement of the electron energy distribution function (EEDF). This result was compared and analyzed with the measured plasma parameters and EEDF in high-pressure argon discharge.

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