

**[P-10]**

## **Ambipolar EXB drift in Transversely Magnetized Capacitive Coupled Plasma**

유신재, 조용석, 장홍영, 장충석, 정진욱\*

Department of Physics, Korea Advanced Institute of Science and Technology

\*Division of Electrical and Computer Engineering, Hanyang Univ.

We investigated an ambipolar EXB drift in transversely magnetized Capacitively Coupled Plasma by measuring the plasma density shift with various magnetic fields at low pressure (10 mTorr). From the experimental results, we found that the EXB drift in our experiment is different from a conventional one. While a EXB drift is proportional to  $1/B$ , the drift(plasma shift) in our experiment increases against the magnetic field. This unusual EXB drift could be understood as an ambipolar EXB drift which could appear in weakly magnetized plasma, where only electrons could be magnetized. Both theoretical results calculated from a model of ambipolar EXB drift and a fluid simulation agree well with the experimental result.