Abstract Submitted
for the GEC19 Meeting of
The American Physical Society

Study the excitation of high frequency waves and its effect on plasma properties in weakly magnetized capacitive discharge SARVESH SHARMA, Institute for Plasma Research, Bhat, Gandhinagar 382 428, India, SHALI YANG, School of Physics, Huazhong University of Science and Technology, Wuhan 430074, China, ALEXANDER V. KHRABROV, IGOR KAGANOVICH, Princeton Plasma Physics Laboratory, Princeton University, Princeton, New Jersy 08543, USA, WEI JIANG, School of Physics, Huazhong University of Science and Technology, Wuhan 430074, China — In recent publication [Phys. Plasmas 25, 080704 (2018)] it is reported that the spatial symmetry in low pressure single frequency capacitively coupled plasmas (SF-CCP) can be break by using transverse magnetic field. It is also shown that the flux and energy of ions can be controlled simultaneously by changing the sheath width with help of transverse magnetic field. In present work, we report the numerical evidence of the excitation of the high frequency waves and its effect on electron heating in low-pressure CCP. The detailed study of the effect of these waves on the bulk plasma properties and heating mechanism of electrons and ions are studied here using direct implicit particle in cell (PIC) simulation.

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Date submitted: 31 May 2019 Electronic form version 1.4