

Abstract Submitted
for the GEC15 Meeting of
The American Physical Society

Effect of energetic electrons for dust charging in a large rectangular RF helium plasma SOONGOOK CHO, Hanyang University, TAEHYEOP LHO, Plasma Technology Research Center, National Fusion Research Institute, KYU-SUN CHUNG, Hanyang University, HANYANG UNIVERSITY COLLABORATION, PLASMA TECHNOLOGY RESEARCH CENTER COLLABORATION — A large rectangular RF plasma device (44 x 50 x 120 cm³) has been developed for the study of transport and removal of dusts. Effects of dust grains and properties of background plasma are investigated by a planar electric probe in dusty plasma, which is consisted of helium plasma and tungsten dust. To check effect of the energetic electrons on the charging process, low density energetic electrons are produced by applying negative bias to a meshed tungsten grid installed between the upper power electrodes of RF antenna and the bottom ground electrodes. Density and charge of dusts are deduced by comparing pure helium plasma to that of dusty helium plasma.

SoonGook Cho
Hanyang University

Date submitted: 18 Jun 2015

Electronic form version 1.4