

Abstract Submitted
for the GEC16 Meeting of
The American Physical Society

Charging of particles on a surface LUCAS HEIJMANS, SANDER NIJDAM, Eindhoven University of Technology — This contribution focusses on the seemingly easy problem of the charging of micrometer sized particles on a substrate in a plasma. This seems trivial, because much is known about both the charging of surfaces near a plasma and of particles in the plasma bulk. The problem, however, becomes much more complicated when the particle is on the substrate surface. The charging currents to the particle are then highly altered by the substrate plasma sheath. Currently there is no consensus in literature about the resulting particle charge. We shall present both experimental measurements and numerical simulations of the charge on these particles. The experimental results are acquired by measuring the particle acceleration in an external electric field. For the simulations we have used our specially developed model. We shall compare these results to other estimates found in literature.

Lucas Heijmans
Eindhoven University of Technology

Date submitted: 09 Jun 2016

Electronic form version 1.4