

Abstract Submitted
for the GEC10 Meeting of
The American Physical Society

PIC simulations of low pressure plasmas using graphics processing units PHILIPP MERTMANN, Ruhr-University Bochum, AEPT, DENIS EREMIN, THOMAS MUSSENBROCK, Ruhr-University Bochum, TET, PETER AWAKOWICZ, Ruhr-University Bochum, AEPT — GPU-computing (graphics processing units) is a new and fast technology to solve mathematical problems highly parallel. Particle in cell (PIC) simulations can be parallelized for the most part, but still have some modules that can lead to problems when running on a GPU. Programming the code straight forward can actually decrease the speed in comparison with a normal CPU. In this contribution we present different implementations and an outlook on how a two-dimensional code can be approached.

Philipp Mertmann
Ruhr-University Bochum, AEPT

Date submitted: 28 May 2010

Electronic form version 1.4