Abstract Submitted
for the GEC14 Meeting of
The American Physical Society

2D streamer simulations using the high order fluid model ARAM MARKOSYAN, University of Michigan, SASHA DUJKO, University of Belgrade, UTE EBERT, CWI — In 1D, the recently derived high order fluid model [Dujko et al, J. Phys. D, 46:5202, 2013] shows promising performance and accuracy compared to the classical first order model using the local field approximation [Markosyan et al, J. Phys. D, 46:5203, 2013]. Here we simulate cylindrically symmetric streamers between two planar electrodes with the high order fluid model. The system is discretized using finite volume spatial discretization (high-resolution scheme) and explicit time stepping. We discuss the results and compare with previous work.

Aram Markosyan
University of Michigan

Date submitted: 13 Jun 2014 Electronic form version 1.4