# PRELIMINARY EXPERIMENTAL RESULTS FROM A NEW MEGAMP DENSE PLASMA FOCUS

Eric J. Lerner, S. Krupakar Murali, and A. Haboub
*Lawrenceville Plasma Physics, Inc, Berkeley Heights, NJ 07922 USA*

Lawrenceville Plasma Physics Inc. has initiated a two-year-long experimental project to test the scientific feasibility of Focus Fusion, controlled nuclear fusion using the dense plasma focus (DPF) device and pB11 fuel. The experiment is being conducted with a newly-constructed dense plasma focus, Focus-Fusion-1, which is expected to generate peak currents in excess of 2 MA. The goals of the experiment are first, to confirm the achievement the high ion and electron energies first observed in previous experiments in 2001 at Texas A&M University; second, to greatly increase the efficiency of energy transfer into the plasmoid where the fusion reactions take place; third, to achieve the high magnetic fields (>1 GG) needed for the quantum magnetic field effect, which will reduce cooling of the plasma by x-ray emission; and finally, to use pB11 fuel to demonstrate greater fusion energy production than energy fed into the plasma (positive net energy production). Preliminary experimental results are presented.