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## **MHD Simulation of Laboratory Jets**

Abstract:

We performed a numerical MHD simulation of a laboratory experiment using powerful lasers to study the formation and evolution of jets.

The laboratory experiment is as follows. A powerful laser instantly heats the target in a vacuum chamber from which charged particles begin to run. On the opposite side of the camera a detector is installed, which fixes the flow of particles.

To describe these processes and simulate plasma flow, we chose a numerical method, boundary and initial conditions. We investigated the picture of the flow and compared it with experiment. We found the distribution of the density of matter at various distances from the target and at different time, and investigated the possible structures of matter on the surface of the detector