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A Stabilization of LIBMESH Based Finite Element Method in Two-Dimensional Fluid Simulation of Capacitively Coupled Plasma HY-ONU CHANG, Plasma Technology Research Center, National Fusion Research Institute — LIBMESH is a library for providing a framework for the numerical simulation of partial difference equations using arbitrary unstructured discretizations on serial and parallel platforms. A two-dimensional axisymmetric fluid simulation based on the finite element method which is supported by LIBMESH is introduced. Stabilization of this simulation is accomplished by using the test functions of Petrov-Galerkin scheme. An example of capacitively coupled plasma is modelled by the simulation and the results are compared with of other literatures.

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