

**TWO-DIMENSIONAL SIMULATION OF
INDUCTIVELY COUPLED PLASMA BASED ON
COMSOL AND COMPARISON WITH
EXPERIMENTAL DATA**

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There are many fluid dynamic models for argon inductively coupled plasma (ICP) by various means. In this paper, a two dimensional axisymmetric ICP model and its implement detail in a multiphysical software, COMSOL, are described. And then the simulations are compared with argon discharge experimental results of Gaseous Electronics Conference RF Reference Cell (GECRC) in ICP mode. The general trends of electron number density and electron temperature along radial scanning are approximately correct. In final, the reasons that make the comparison disagreed is discussed, and then we propose the improvement of assumptions on Maxwellian eedf and reaction rate.