

Abstract Submitted
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A Frequency-Varied, Inductively-Coupled Plasma Source for Laboratory Use¹ ANTHONY ROGERS, F. SKIFF, Department of Physics and Astronomy, University of Iowa — Presented here is a description of an inductively-coupled plasma source with a folded geometry driven by a capacitive matching network. The inclusion of a matching network allows use of the source over a range of frequencies ($\sim 10\text{-}20\text{MHz}$). The goal is to develop a source with independent control of plasma density and electron temperature by varying the neutral density, source frequency, and source power. The source described is currently in use in a 3-meter long, cylindrical, magnetically-confined Ar II plasma experiment. A survey of plasma electron temperature and density over varied frequencies, neutral densities, and source power will also be presented.

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