Abstract Submitted
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Low-Impurity, Electrode-less Pre-ionizer Plasma Gun for Innovative Confinement Concepts[1] JAMES PRAGER, University of Washington, TIMOTHY ZIEMBA, Eagle Harbor Technologies, Inc., ROBERT WINGLEE, JONATHAN WROBEL, University of Washington — There is a need within the fusion community for a pre-ionizer plasma source that does not produce impurities; act as a plasma limiter, either through direct contact with the plasma or open magnetic field lines; or produce significant electromagnetic interference on control and diagnostic systems. The University of Washington, in collaboration with Eagle Harbor Technologies, Inc., has developed a Low-Impurity, Pre-Ionizer Plasma Gun for Innovative Confinement Concepts. The plasma gun has been constructed and integrated with the vacuum chamber. The experimental setup includes a flux conserver so that plasma injection through a flux conserver can be demonstrated, which is important for many applications. Here we present preliminary density, temperature, and velocity data to characterize the plasma gun.

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