

Abstract Submitted
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A New Inductively Driven Plasma Generator (IPG) Source TRU-ELL HYDE, RENE LAUFER, CASPER - Baylor University, GEORG HERDRICH, CASPER - Baylor University / IRS University of Stuttgart, MICHAEL DROP-MANN, SUSANNE PETERS, IRS, University of Stuttgart, LORIN MATTHEWS, MICHAEL COOK, JIMMY SCHMOKE, CASPER - Baylor University — As part of the partnership between the Center for Astrophysics, Space Physics and Engineering Research (CASPER) at Baylor University and the Institut für Raumfahrtssysteme (IRS) at the University of Stuttgart, a new design for a modular, inductively driven plasma generator (IPG) source is being developed and tested within CASPER and the IRS. The current IPG design is built on a well-established heritage of modular inductively driven plasma generators designed and operated at IRS. This latest IPG source enables the electrodeless generation of high-enthalpy plasmas and will provide CASPER researchers the ability to operate with various gases at plasma powers of approximately 20 KW. It will also provide minimized field losses and operation over a wide scope of parameters not possible using existing designs requiring flow-controlled stabilization. Both research and technical applications will be discussed.

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