

Abstract Submitted
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Supersonic ExB Rotation in the Highly Ionized, Low Temperature Plasma of a Hall Thruster¹ MARTIN GRISWOLD, YEVGENY RAITSES, NATHANIEL FISCH, PPPL — We study how pressure gradients and centrifugal forces from electron rotation affect the potential distribution near the thruster channel exit of a cylindrical Hall thruster. The region of interest is a low temperature plasma with magnetized electrons and flowing, unmagnetized ions. We use langmuir probe measurements to quantify the importance of pressure forces and centrifugal forces on determining the equilibrium potential distribution.

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