

Abstract Submitted
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Experimental demonstration of plasma detachment from a magnetic nozzle¹ ROGER D. BENGTSON, B.N. BREIZMAN, JACKIE L. MEYER, University of Texas at Austin, D. GREGORY CHAVERS, CHRIS C. DOBSON, JONATHAN E. JONES, NASA/Maarshall Space Flight Center, Huntsville, AL, ADAM K. MARTIN, NASA/Maarshall Space Flight Center, Huntsville, AL, JASON CASSIBRY, ZHONGMIN LI, BRANWEN SCHEUTTPELZ, University of Alabama, Huntsville AL, CHRISTOPHER A. DELINE, University of Michigan — We have demonstrated the detachment of a magnetized plasma from a magnetic nozzle, that is, the plasma has expanded from a region of high magnetic field to a location where the plasma kinetic energy is higher than the local magnetic field pressure. Interferometers, Mach probes, Langmuir probes, flux probes and magnetic field probes follow the flow of the plasma as it expands in the magnetic nozzle. Experimental results will be compared with theoretical models.

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