

Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Exhaust Plume Measurements of the VASIMR VX-200 BENJAMIN LONGMIER, EDGAR BERING III, University of Houston, JARED SQUIRE, TIM GLOVER, FRANKLIN CHANG-DIAZ, Ad Astra Rocket Company, MICHAEL BRUKARDT, University of Houston — Recent progress is discussed in the development of an advanced RF electric propulsion concept: the Variable Specific Impulse Magnetoplasma Rocket (VASIMR) VX-200 engine, a 200 kW flight-technology prototype. Results from high power Helicon only and Helicon with ICRH experiments are performed on the VX-200 using argon plasma. Recent measurements of axial plasma density and potential profiles, magnetic field-line shaping, charge exchange, and force measurements taken in the plume of the VX-200 exhaust are made within a new 125 cubic meter cryo-pumped vacuum chamber and are presented in the context of RF plasma thruster physics.

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Date submitted: 18 Jul 2008

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