

Abstract Submitted  
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**Plasma and Thruster Characteristics of a Ferroelectric Plasma Thruster**<sup>1</sup> MARK KEMP, SCOTT KOVALESKI, University of Missouri-Columbia

— The ferroelectric plasma thruster (FEPT) is a new micropropulsion concept. The FEPT is a ferroelectric plasma source driven by oscillating high voltage at RF frequencies. The ferroelectric plasma source produces plasma at a surface partially covered by an electrode when the spontaneous polarization vector is reversed by application of an oscillating electric field. Thrust is generated by the FEPT by acceleration of ions from the surface plasma via the ponderomotive force. At the University of Missouri-Columbia, experiments are being conducted on optimizing a FEPT for microspacecraft propulsion. This includes measurements of total emitted electron and ion current, energy distribution of the emitted ions, and spectra of plasma light emission.

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