



COLLEGE OF ENGINEERING
AEROSPACE ENGINEERING
UNIVERSITY OF MICHIGAN

The Plasmadynamics and Electric Propulsion Laboratory (PEPL) at the University of Michigan is seeking a highly qualified postdoctoral research fellow in the area of low temperature plasma physics. PEPL is one of the world's leading electric propulsion research centers, developing and testing the next generation of electric propulsion devices from powers of 10 W to 200 kW. For a comprehensive understanding of these devices PEPL develops advanced diagnostics including time-resolved laser induced fluorescence and high-speed Langmuir probes. More information on the group can be found at <http://pepl.engin.umich.edu/>.

The successful candidate will conduct research on the CubeSat Ambipolar Thruster, a miniature helicon thruster, investigating its ion acceleration mechanism and ion acceleration mechanisms of magnetic nozzle thrusters in general. The details of ion acceleration in an expanding magnetic field is not yet well understood and greatly affects the design and operation of magnetic nozzle thrusters. Electrostatic probe data from the plasma plume will be compared to particle-in-cell simulation results and experimental measurements from other thrusters.

Review of applications will begin in July 2015 with a start date of September 2015. The appointment will last for one year.

A candidate with the following traits is sought:

- Recent PhD in plasma physics or closely related field
- Experimental experience: electrostatic probes (Langmuir probes, double probes, emissive probes, etc.), vacuum systems, retarding potential analyzers, radio frequency discharges
- Basic knowledge of magnetohydrodynamics and kinetic theory
- Excellent oral and written communication skills
- US citizen or permanent resident

Applicants should submit the following in a single pdf document to Dr. J. P. Sheehan <sheehanj@umich.edu>:

- Cover letter explaining interest and suitability for the position
- CV
- Names and contact information of three references