

**Abstract (paper not available)**

**Spacecraft Charging at Mars**

*Laila Andersson<sup>1</sup>, R. E. Ergun<sup>1</sup>, G. T. Delory<sup>2</sup>, A. Eriksson<sup>3</sup>, R. E. Howard<sup>4</sup>*

*<sup>1</sup>LASP University of Colorado (United States of America); <sup>2</sup>SSL, University of California (United States of America); <sup>3</sup>IRF (Sweden); <sup>4</sup>Orbital Sciences Corp (United States of America)*

One of the newest spacecraft's at Mars, the MAVEN spacecraft has a complete plasma packet and a EUV detector. It is a 3-axial stabilized spacecraft that was during the design phased selected to not carry conductive solar panels. The MAVEN spacecraft is exposed to highly variable plasma environments from densities above 105 cc at temperatures below 500 K to very low density 1-10 cc warm plasma >3000 K. During normal operation only moderated charging occurs. But for some attitudes at high density the spacecraft charges negative ~20 V. In this presentation we present how the spacecraft potential changes as the ram velocity and the sun direction changes with respect to the spacecraft surface.

---

\*\*\*\*\*