



Contribution ID: 17

Type: **Invited Speaker / Conférencier invité**

Science Objectives and Results from the ePOP Suprathermal Electron Imager

Monday 16 June 2014 14:45 (30 minutes)

The ePOP Suprathermal Electron/Thermal Ion Imager (SEI/SII) uses a microchannel-plate-intensified CCD-based detector to record 2-D (energy/angle) electron distribution functions having a nominal energy range of 2-200 eV, and ion distributions at energies that include the ambient ionospheric population (< 1 eV) and extending up to 100 eV. At the highest measurement resolution, distribution images are 64 pixels in diameter, read out at a rate of 100 per second. The SEI is designed to address one of the principal scientific objectives of ePOP, namely to characterize polar ion outflow and its drivers including ambipolar electric fields generated by suprathermal electron populations, and direct heating of ions by plasma waves or collisions with neutral particles. In SII mode the instrument can track ion velocity in two dimensions, and can characterize ion temperature and higher-order properties of the distribution. This talk presents highlights of the first half year of ePOP SEI operations.

Author: Prof. KNUDSEN, David (University of Calgary)

Co-author: Dr BURCHILL, Johnathan (University of Calgary)

Presenter: Prof. KNUDSEN, David (University of Calgary)

Session Classification: (M1-2) ePOP satellite mission I - DASP / Mission satellitaire ePOP I - DPAAE

Track Classification: Atmospheric and Space Physics / Physique atmosphérique et de l'espace (DASP-DPAAE)