Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Excitation of VUV Atomic Sulphur Emissions following Electron-Sulphur Interactions[1] STEPHEN BROTTON, WILLIAM MCCONKEY, University of Windsor — A beam of sulphur, obtained by evaporation of solid sulphur, was crossed by an electron beam of carefully controlled energy and the resulting VUV radiation was detected, in a direction perpendicular to both beams, by a $1/2$ meter Seya-Namioka monochromator with a CsI-coated channel electron multiplier detector. In an associated experiment a microwave discharge was used to dissociate the sulphur molecules released during evaporation. Relative calibration of the detection sensitivity over the wavelength range 90-170 nm was achieved using the well known spectrum of H_2 in this spectral region. Data, covering the electron-impact energy range from threshold to 350 eV, on the planetary-important multiplets at 142.5, 147.4 and 167.7 nm will be presented together with a full description of the experimental techniques, possible fragmentation channels etc.

[1]The authors thank NSERC (Canada) for financial support.

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Date submitted: 15 Jan 2010 Electronic form version 1.4