



Height profiles of the ionospheric electron density derived from remote sensing of UV and X-ray emissions, and measured by EISCAT radar data: A comparison

A. Aksnes (1), **J. Stadsnes** (1), A. Brekke (2), N. Ostgaard (1), G. A. Germany (3), R. R. Vondrak (4), K. Oksavik (5), U. P. Lovhaug (2)

(1) Department of Physics and Technology, University of Bergen, Bergen, Norway (Arve.Aksnes@ift.uib.no / Fax: +47-5558-9440) (2) Department of Physics, University of Tromsø, Tromsø, Norway (3) University of Alabama, Center for Space Plasma and Aeronomy Research, Huntsville, AL 35899, USA (4) NASA/Goddard Space Flight Center, Code 690, Greenbelt, MD 20771, USA (5) JHU/APL, 11100 Johns Hopkins Road, Laurel, MD 20723, USA

Using remote sensing of UV- and X-ray emissions by the UVI and PIXIE cameras on-board the Polar satellite, we derive precipitating electron energy spectra valid within an electron energy range of ~ 0.1 -100 keV. From the electron spectra, we then infer the height profiles of the ionospheric electron density N_e between 80 and 160 km. In this study, we perform a ground-truth experiment and compare the derived N_e values from Polar satellite data with simultaneously measured N_e using EISCAT radar measurements.