

Space Studies of the Upper Atmospheres of the Earth and Planets including Reference Atmospheres (C)

Ionosphere -Thermosphere Coupling to Magnetosphere and Solar Wind (C13)

**BEHAVIOUR OF THE 5577Å, 6300Å EMISSIONS AND THE 38.2 MHZ ABSORPTION DURING SUBSTORMS ASSOCIATED WITH RECURRENT SOLAR WIND STREAMS**

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The behaviour of the auroral emissions 5577Å and 6300Å, the ratio I6300/I5577 and the absorption at 38.2 MHz during substorms occurred at the time of recurrent streams (RS) has been examined. The development of the substorm bulge is followed up. The variations of the emissions and the absorption at 38.2 MHz depending on the different locations of the substorm bulge with respect to the point of observation have been studied. Estimations of the particle precipitation spectra at the polar edge of the auroral bulge and inside it have been obtained. For the study, data from the All-Sky Imagers at Andøya Rocket Range (ARR), Andenes, Norway (69.3N, 16.03E) and at the Auroral Observatory, Longyearbyen, Svalbard (78.20N, 15.83E) from the observational season 2005-2006 have been used, and simultaneous measurements from the ALOMAR Imaging Riometer for Ionospheric Studies (AIRIS), 64-beam Imaging Riometer at the Auroral Observatory, Longyearbyen, Svalbard (78.20N, 15.83E); IRIS at Kilpisjärvi, Finland (69.05N, 20.79E).. Additional data concerning the solar wind parameters, IMF, the precipitating particles and the magnetic field are used from the WIND and DMSP satellites and the IMAGE magnetometer network to determine the recurrent streams, the substorms during

RS and the boundaries of the precipitating electrons. Data access has been provided under the Project "ALOMAR eARI" (RITA-CT-2003-506208), Andenes, Norway. This Project received research funding from the European Community's 6th Framework Program.