



D- and E-region effects in the auroral zone during a moderately active 24-hour period in July 2005.

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The effects of energetic electron precipitation into the auroral region at a time of enhanced solar wind have been investigated during a continuous period of 24 hours, using the EISCAT incoherent-scatter radar, an imaging riometer, and particle measurements on an orbiting satellite. The relative effects in the E region and the D region are found to vary during the day, consistent with a gradual hardening of the incoming electron spectrum from pre-midnight to morning. The radio absorption observed with the riometer and estimated from the radar data are compared. A sharp reduction of electron flux recorded on a POES satellite is related to the edge of an absorption patch delineated by the imaging riometer.