

## Ionospheric phenomena near the cusp on February 1, 1998 observed with the SuperDARN and EISCAT ESR radars

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On February 1, 1998, the EISCAT Svalbard radar (ESR) observed a series of electron density variation, ion outflow occurrence, ion and electron temperature enhancements in the cusp-latitude F region ionosphere. Simultaneous F region plasma drifts (electric fields) were obtained with the SuperDARN HF radars at Finland and Iceland. We present some observational results from these radars and discuss the physical processes to explain them. Strong electric fields are very important for creating the ion outflow, electron density depression, ion temperature increase and patch formation.