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## **Observations of a phase transition in the plasma characteristics across the open-closed magnetic field line boundary**

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The TIGER HF radar is the most equatorward SuperDARN radar, enabling it to routinely observe a sharp transition from large spectral widths located on open field lines to low spectral widths on closed field lines. The large spectral width regions are dominated by Lorentzian Doppler spectra and the low spectral width region by Gaussian spectra. This implies a phase transition from fast flowing, turbulent plasma with a correlation length of velocity fluctuations less than the scattering wavelength to a slow moving plasma with a correlation length greater than the scattering wavelength. The large conductivity of nightside auroral oval probably plays a role in forming this phase transition.