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Enhanced operation of SuperDARN radars with the Borealis radar system

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The Borealis radar system developed by SuperDARN Canada at the University of Saskatchewan has enabled new operating modes for SuperDARN radars. Two new operating regimes have been used by SuperDARN Canada: simultaneous sensing of the full field-of-view (FOV), and multistatic sensing. Full FOV illumination increases the temporal resolution sixteen-fold, while multistatic sensing probes novel plasma velocity vectors. Initial observations using a wide transmission beam exhibited some artifacts detrimental to geolocation. In this talk, besides the details of new operation regimes, enhancements to the full FOV mode that mitigate said artifacts will be discussed.

Keyword-1

Radar

Keyword-2

SuperDARN

Keyword-3

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