



Echo occurrence in the southern polar ionosphere as measured by the Dome C East radar.

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Back-scatter echoes from irregularities in the polar ionosphere are detected by HF radars only when propagation conditions along the entire propagation path are favorable. Therefore, occurrence of HF echoes depends on several factors as the radar location, season and time of the day. Solar cycle and interplanetary conditions plays an important role, as well. The Dome C East radar, part of the Super Dual Auroral Radar Network (SuperDARN) is located at the Concordia station in Antarctica, nearby the geomagnetic pole. Its 16 beams fan out from the geomagnetic pole towards the southern auroral latitudes along the geomagnetic meridians. Here, we present a statistical study of the ionospheric scatter echoes detected by Dome C East for the period 2013 - 2017, where echoes occurrence is investigated as a function of geomagnetic latitude and MLT location, season and interplanetary conditions.