

OCEANOGRAPHIC RESEARCH: A NEW APPLICATION FOR SUPERDARN RADARS

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ABSTRACT

Large military HF over-the-horizon radars (OTHRs) can measure ocean wave heights, surface currents, and surface wind directions over vast, remote regions. This paper will demonstrate the potential for relatively compact Super Dual Auroral Radar Network (SuperDARN) radars to acquire valuable sea state information. Detection of Bragg backscatter from the Southern Ocean was made possible by a new radar operating system permitting the acquisition of coherent, long time series data at great ranges without range aliasing. The detection of large, illegal fishing vessels in the remote Southern Ocean may become possible with planned advances in radar hardware, operation, and data analysis.