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# JOURNAL CLUB

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## SuperDARN Observations of Meteors

by

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### ABSTRACT

The Geophysical Institute operates an HF radar on Kodiak Island that is part of the Super Dual Auroral Radar Network (SuperDARN). SuperDARN is an international network of radars that work together to map ionospheric convection over the earth's polar regions. Since these radars started operation, echoes from meteor plasma trails have been observed in the near ranges. Much work has been done within the SuperDARN community to extract valuable information about meteor region atmospheric dynamics from the typical SuperDARN observations. However, the design of SuperDARN radars limits their ability to make measurements with spatial resolutions comparable to other dedicated meteor radars. As part of my graduate work, I developed a hardware and software system that improved the capabilities of the radar at Kodiak Island. The radar can now make higher resolution observations of meteors, and meteor region dynamics can be better observed. In this talk I will discuss radar basics, and give a description of the capabilities of the Kodiak HF radar. I will also discuss the recent changes made to Kodiak radar, and I will present an overview of the signal processing method used to derive meteor region atmospheric dynamics.

Friday, Oct. 1, 2004  
Globe Room, Elvey Bldg  
3:45 pm