

## **First Results from the Blackstone Radar**

**J. M. Ruohoniemi<sup>1</sup>, R. A. Greenwald<sup>1</sup>, J. B. H. Baker<sup>1</sup>, C. R. Clauer<sup>1</sup>, R. J. Barnes<sup>2</sup>,  
M. Lester<sup>3</sup>, E. C. Thomas<sup>3</sup>, J. D. Thornhill<sup>3</sup>, S. Milan<sup>3</sup>, and T. K. Yeoman<sup>3</sup>**

**<sup>1</sup>Bradley Department of Electrical and Computer Engineering  
302 Whittemore Hall  
The Virginia Polytechnic and State University  
Blacksburg VA  
USA**

**<sup>2</sup>The Johns Hopkins University Applied Physics Laboratory  
Laurel, MD  
USA**

**<sup>3</sup>Leicester University  
Leicester  
UK**

The newest SuperDARN mid-latitude radar began operation on February 2, 2008 at a site near Blackstone, Virginia. The build of the radar was managed out of JHU/APL and supported by Virginia Tech while Leicester University provided the transmitters and control electronics. All three institutions contributed personnel. The design of the radar is patterned on that of the Wallops HF radar with some enhancements. Its field of view is directed over the central part of the North American continent and includes large portions of ground-based instrument networks that utilize imagers, magnetometers, and riometers. The combination of Wallops and Blackstone radars effectively anchors a latitudinal chain of SuperDARN radars that extends from mid-latitudes through the auroral zone to the polar cap. In this talk we review the development of the Blackstone radar, discuss its capabilities, and consider some early observations.