

# **Numerical modelling of the Blackstone radar antenna array**

**M J Parsons, E C Thomas & M Lester**

**Radio and Space Plasma Physics Group, Leicester University, University Road,  
Leicester LE1 7RH, UK**

## **Abstract**

This poster presents the results of numerical modelling of the Blackstone SuperDARN radar antenna array. EZNEC software based on Nec2 has been employed to model the entire antenna array and results are presented which indicate the predicted performance of the antenna system.

The model realisation developed for this study incorporates improvements compared to earlier models of the new APL antenna design and has application to antenna arrays with antenna separations less than the 15.24m used previously. Comparisons to the conventional log periodic antenna design are included as an aid to both understanding potential differences between SuperDARN radars and as an aid to those planning new SuperDARN installations.