

EISCAT VELOCITY PATTERNS
FOR THEORETICAL PLASMA CONVECTION MODELS

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Theoretical line-of-sight velocities, as would be observed by the EISCAT radar, are computed for idealized models of plasma convection in the polar ionosphere. The calculations give the velocity as a function of range and Universal Time. For several variants of the Volland and Heelis convection models (Fig. 1, Fig. 2), the paper examines how the maxima, minima and reversals of velocity depend on beam azimuth. The analysis is designed to be applied to data from the UK-POLAR experiment, an example of which is shown in Fig. 3.

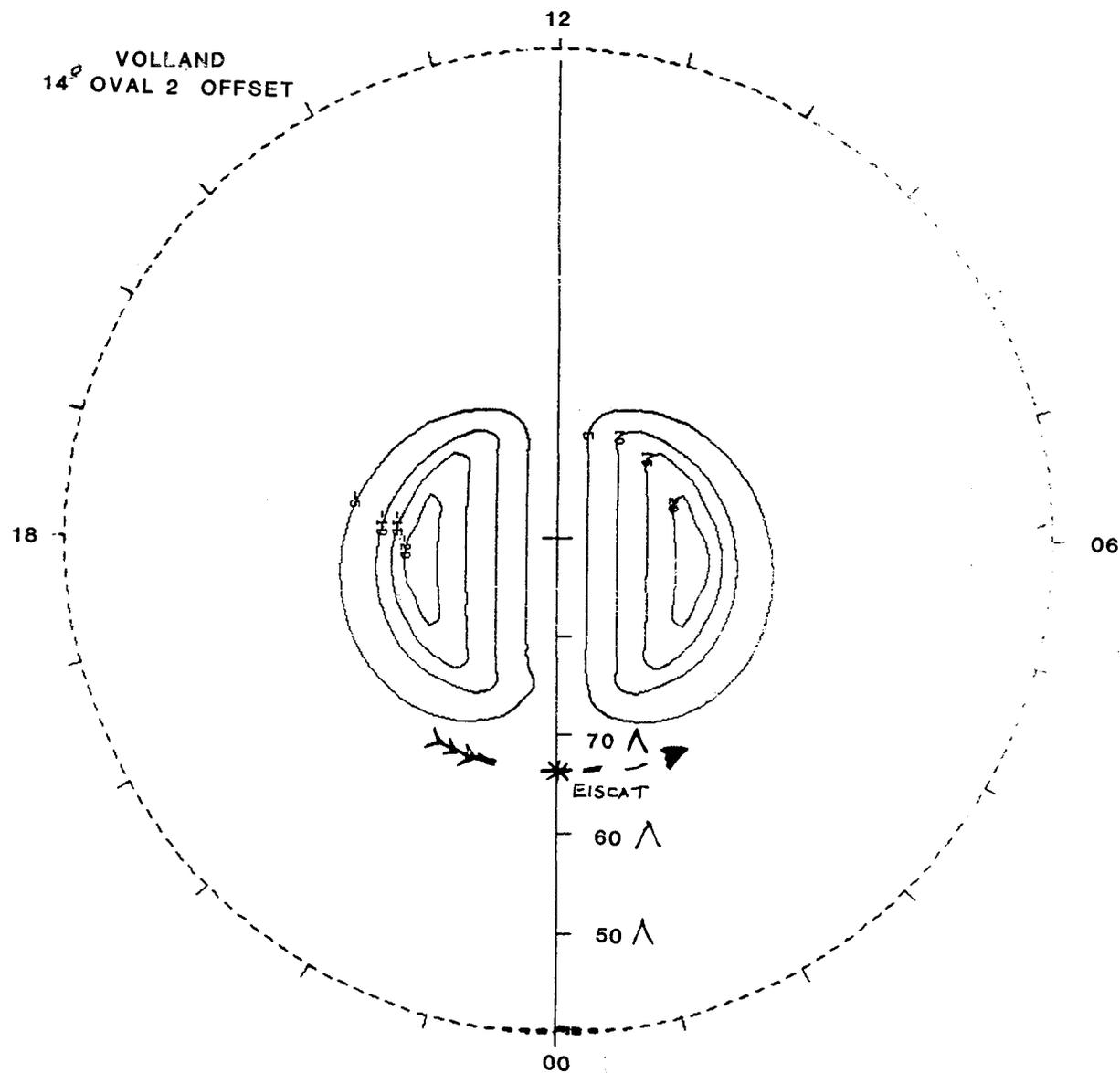


Figure 1.

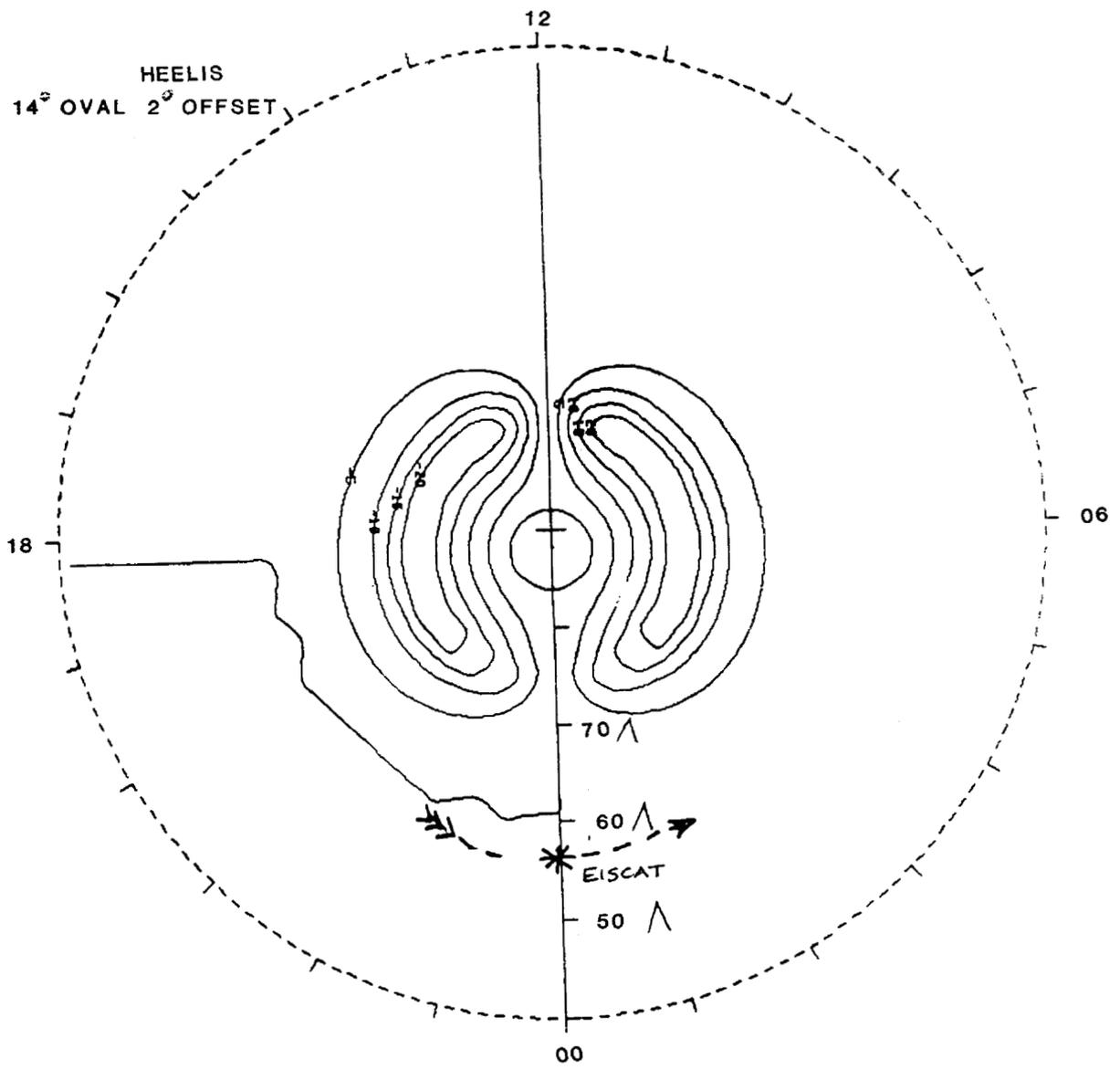


Figure 2.

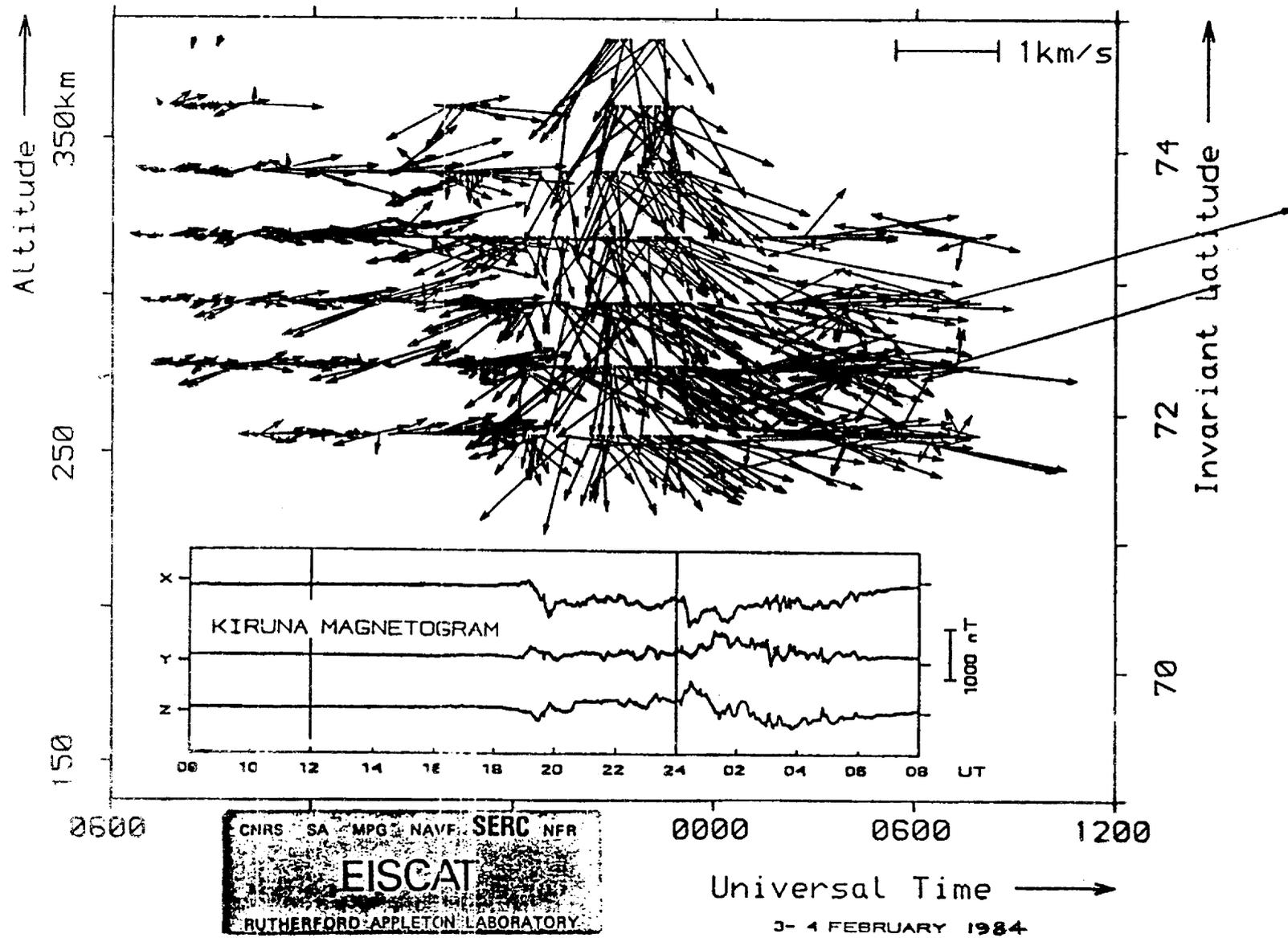


Figure 3.