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Interhemispheric Study of SuperDARN HF Radar Echoes: Occurrence, Line of Sight Velocity and Spectral Width of Near Range Echoes Observed With the Hankasalmi and Kerguelen Radars.

J.-P. Villain (1), E. Amata (2), J.-C. Cerisier (3) and M.L. Lester (4)
(1) LPCE/CNRS, Orléans, France(2) IFSI/CNR, Roma, Italy
(3) CETP/CNRS, St-Maur des Fossés, France

(4) University of Leicester, Leicester, UK

SuperDARN radars are well suited to study interhemispheric features related to ionosphere-magnetosphere coupling. The behavior and limits of magnetic conjugacy of auroral zones is not yet fully understood. In this study, we have analyzed the occurrence, line of sight velocities and spectral width of near range echoes (60° to 65° of magnetic latitude) for meridional beams of the Hankasalmi and Kerguelen radars, respectively in the northern and southern hemispherefor the whole year 2001. Several events exhibiting a high level of conjugacy for all radar parameters are presented as well as the general features.