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POLAR PATCHES AND THE "TONGUE OF IONIZATION"

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Optical images of [OI] 630.0 nm emission from drifting *F* region polar patches, acquired with a sensitive all-sky imager, have been analyzed to infer the ionospheric convection velocity over a period of nine hours on December 8, 1993. The drift vectors agree well in both direction and magnitude with simultaneous measurements from a nearby digital ionosonde. The delay between interplanetary magnetic field (IMF) B_y changes measured at IMP 8 and changes in the convection direction at the pole is estimated. A montage of the optical emission from the patches observed over the period is presented to illustrate the range of optical patch shapes, sizes, and spacings observed. (Airglow, plasma convection, polar ionosphere, ionospheric irregularities)

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