

Relations between the auroral plasma cavity and the impulsive electrostatic broadband noise

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Akebono satellite observations of VLF(low frequency plasma wave) and LEP (low energy particles) revealed that in the auroral plasma cavities,

- (1) electron density is very low (below 1/cc) and highly fluctuate, depending upon the magnitude of the flux of the accelerated electron from the plasmasheet region.
- (2) upflowing ion beam and inverted V electron precipitation are always observed.
- (3) electrostatic ion cyclotron wave(EIC) is highly associated with the upflowing ion beams.
- (4) impulsive electrostatic noise strength corresponds to the increment and decrement of the fluxes of the upflowing ion beams and precipitated electrons.