Waveform of low frequency noise in the auroral region observed by Akebono (2)

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Using analog wide band receiver onboard Akebono satellite, waveform of low frequency noise observed in the auroral region was analyzed. In the altitude range around several thousand kilometers, random noise with upper cutoff around 1kHz is dominant and impulsive waveform is observed simultaneously. The impulsive wave is usually observed with an amplitude of a few mV/m and a pulse width of less than 1msec at intervals of several msec or more.
The occurrence rate of impulsive wave changes in the very short time scale (less than a few hundreds msec), which suggests there is a micro-scale variation of plasma environment in the region. Possible wave-particle mechanisms will be also discussed.

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