

## A statistical survey of ELF/VLF wave activity observed by Akebono

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Using the long period observation datasets obtained by Akebono, the spatial distributions of electric and magnetic intensities of ELF/VLF waves in the magnetosphere and their dependences on the solar activity, geomagnetic activity, local time etc. are studied. In the present paper the parameter dependences of the waves, especially the characteristics of the chorus emission observed in the vicinity of the plasmopause, are reported.

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In the auroral region, wave activity has a positive correlation with Kp index but a negative correlation with the solar activity. As for the seasonal variation, the winter hemisphere is most active. Chorus emissions in the frequency range above 1kHz are observed in the vicinity of the plasmopause. The strongest chorus is observed in the dawn to noon sector, but the distribution region has a frequency dependence, that is, the region shifts to the smaller L-value and earlier local time as the frequency of the chorus becomes higher. This type of chorus emissions are thought to be generated in the equatorial region by the wave-particle interaction with the electrons injected from the tail region during the substorm. The projected map to the equatorial plane of the active region of the chorus is possibly correspond with the injected region of energetic electrons. It is remarkable that our analysis is useful to study the global energy distribution of waves and particles in the magnetosphere.