

# **Dynamic Spectra Analysis on Geomagnetic ULF Waves during Magnetic Storms**

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The spectrum of the variations of the geomagnetic field is very wide. To investigate the continuous frequency variations of the geomagnetic disturbances, we have developed a software package for dynamic spectrum analyzing the geomagnetic data. With this software package, the frequency variations of geomagnetic disturbance in ULF band during geomagnetic storm in middle and high latitude region have been studied, using of ground-based observations by geomagnetometer at stations of the 120°E meridian chain and the station in polar areas. The wholly figure of frequency variations from 1 to 16 mHz band during the geomagnetic storm is given. It seems support the suggestion that during the initial phase and the main phase the frequency of geomagnetic Pc5 declines gradually, and increases in the recovery phase. Combining the analysis to Dst and other geomagnetic index, it will be helpful to distinguish the different types of origin and variation mechanism of geomagnetic ULF disturbance.