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Geomagnetic Variation in 1994, at King Sejong Station

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As one observatory with INTERMAGNET (international real-time global geomagnetic observatory network), geomagnetometer system was installed at King Sejong Station. This system is composed of 3-components Ring Core Fluxgate, Proton magnetometer, real-time recorder, and data aquisition systems. At the first time, the annual data of 1994 were stored in succession, by normal operation at King Sejong Station.

By those data, the diurnal variation at King Sejong Station in austral winter season is much larger than in austral summer. The difference of horizontal hourly means is amount to more than 50 nT in Jan., Feb., Oct., Nov., Dec., but to less than 20 nT in May, Jun., Jul., Aug. The trend of diurnal variation of total component is similar to that of the horizontal, but the value of vertical intensities in mid-night is more or less small in compared with the total and the horizontal.

The weekly deviation of geomagnetic variations is amount to 40 nT in winter but 25 nT in summer.

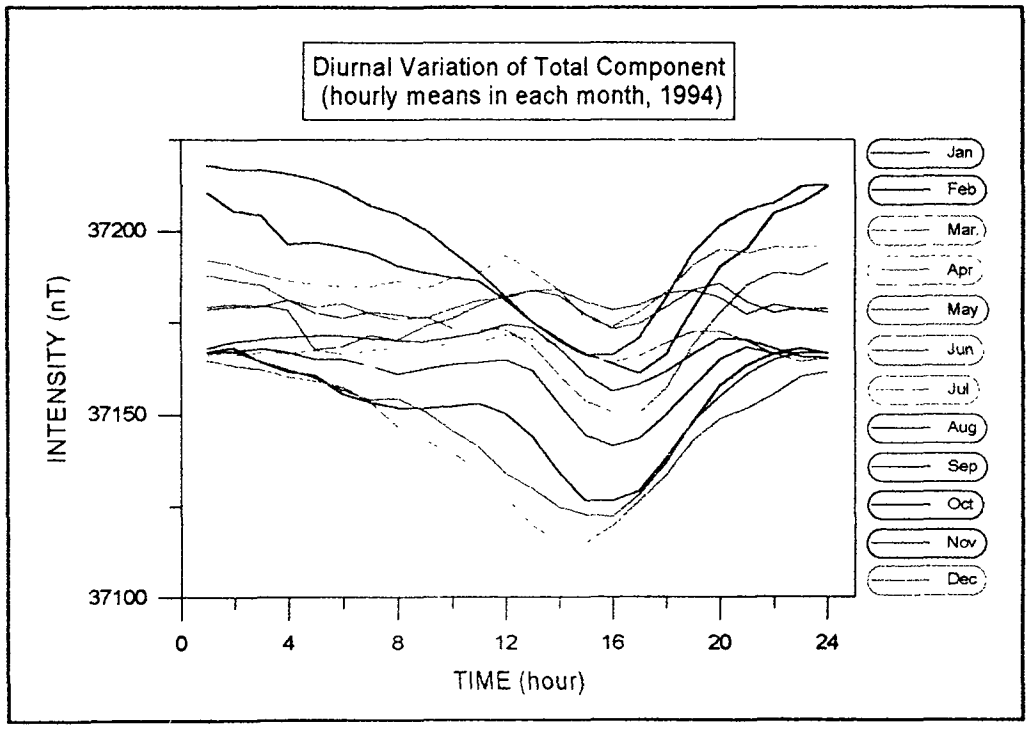

Fig. 1. Geomagnetic diurnal variation of total field in each month, 1994. Hourly mean data show that the intensity and the variation of it in winter are relatively large but both small in summer season.

Especially, the deviation in Aug. has the minimum value, less than 15 nT. The weekly means of vertical intensities during summer season are relatively high after the correction of annual decreasing variation in the station. On the other hand, most geomagnetic fields typically decrease as the annual variation. This annual decreasing rate of total component is amount to 52 nT from the fluxgate magnetometer, but to 82 nT by proton meter. In addition, the horizontal intensity in Dec. shows relatively high and it reduces the decreasing rate of annual variation.