

THE HISTORY AND THE PRESENT SHAPE OF THE TOKYO/KAKIOKA MAGNETIC OBSERVATORY

YASUHIRO MINAMOTO, Yuzo ISHIKAWA, Tetsuya YAMAMOTO,

Kakioka Magnetic Observatory, Japan Meteorological Agency, Japan

e-mail : minamoto@kakioka-jma.go.jp

The Kakioka Magnetic Observatory, Japan Meteorological Agency, is in charge of geomagnetic and geoelectric observations and the relevant research. The Headquarters is in Kakioka in the central part of Japan, and two branches are located at Memambetsu, North Japan and Kanoya, Southeast Japan.

Routine geomagnetic observations in Japan began in 1883 during the 1st International Polar Year (1882-1883) near the emperor's Palace in Tokyo. And later, continuous observation of the geomagnetic field had been carried out from 1897 to 1912 in Tokyo. All magnetograms and observation notes of Tokyo Observatory kept in the Central Meteorological Observatory were burned up at the 1923 Great Kanto Earthquake by which the city was severely damaged. Fortunately, the hourly values of Tokyo were left in printed annual reports kept in the libraries of the Kakioka. They are available via our web pages.

Because of increasing artificial geomagnetic disturbances, the observatory moved to Kakioka about 75km northeast from Tokyo and started geomagnetic observations in January 1913. Geomagnetic observations in Memambetsu and Kanoya were started in 1952 and 1958, respectively.

Our standard magnetometer KASMMER (Kakioka Automatic Standard Magnetometer) was completed in 1972. It has produced one-minutes value of geomagnetism since 1976 and one-second measurements started in 1984. A high-sensitivity fluxgate-magnetometer has been operated since 1990. The magnetometer produces 0.1-second value of geomagnetic field as well as one-second value, which is obtained through a data collection unit attached for high-pass filtering. One-second value measurements started at the two branch observatories, Kanoya in 1996 and Memambetsu and 1997, respectively.

Now we are carrying out some researches on quantitative evaluations of errors in geomagnetic absolute measurements and managements of artificial geomagnetic disturbances in order to discuss frequencies of the absolute measurements.

historical data, one-second value measurement, fluxgate-magnetometer

Yasuhiro MINAMOTO, Kakioka Magnetic Observatory, Japan Meteorological Agency, 595 Kakioka, Ibaraki-ken Ishioka-shi 315-0116 JAPAN, Tel: +81-299-43-1151, Fax: +81-299-43-1193, e-mail : minamoto@kakioka-jma.go.jp