Seasonal Variations of the Activity of Sq-Field of Terrestrial Magnetism

This short note deals with the electric current-system equivalent to the Sq-field of terrestrial magnetism. Electric current-density of this system may be say a measure of the activity of the Sq-field, and is given by the difference of magnetic potentials. This potential-differences are computed by graphycal integration using $\Delta X$ or $\Delta Y$ (deviations from the mean state of magnetic north component or east component respectively).

If we discuss the activity at the region near the centre of this current-vortex which is situated on the local 11°-meridian, it is convenient to use $\Delta X$-curve along 11°-meridian. This curve crosses zero-line at the centre of the current-vortex, therefore we may adopt the latitudinal gradients of magnetic north-component ($dX/dx$) for the present purpose.

Figure shows monthly means of $dX/dx$ at American Region during Aug. 1932-Dec. 1933. From this Figure it can be seen that the activity of Sq-field has maximum in Equinox and is predominant in Spring than in Autumn. As far as these results concern, about the latter fact we can not determine whether it is regular or temporal.

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The 5th General Meeting. Held at the Nagoya University on May 9–11, 1949. 50 Reports were read; 70 Members assembled.

The 6th General Meeting. Held at the Tokyo University on Oct. 25–28, 1949. 70 Reports were read, 150 Members assembled.

The Tanakadate-prize were awarded for the following excellent works.

The 3rd. The Laboratory of Cosmic Ray, Nagoya University; The Geoelectrical and Geomagnetical Studies for Cosmic Ray.

The 4th. Mr. I. Tsubokawa: The G. S. B. Type Magnetometer.

The 5th. Mr. T. Kuboki: On the Temperature-compensation of a Magnetic Variometer using a Magnetic Shunt Alloy.