

MAGNETIC STORM GRIPS THE EARTH

Electric Currents, Said to Be Due to Sun Spots, Cripple Telegraph Service.

WIRES ARE "STAGNANT."

Similar Disturbances Every 11 Years, Accompanied by Aurora Borealis.

An electrical disturbance of the earth and air, tinged with mystery and manifested in a wave of magnetic currents, put telegraph wires all over the world out of business yesterday. The trouble, which Chicago scientists could account for only partly, is generally thought to have been caused by storms on the surface of the sun.

The phenomena first were felt in Chicago about 5 o'clock in the morning and continued with varying intensity until 5 o'clock in the afternoon. By that time the currents ceased and telegraph service assumed its normal condition.

The disturbance was similar to the occurrences of 1803 and 1832, except that it was much more violent. It was accompanied by the appearance of the aurora borealis, or northern lights. This was not visible in Chicago yesterday, due to the presence of the sun. It could have been seen about 9 o'clock in the morning had there been darkness.

The aurora appears with emphasized brilliancy at regular intervals of eleven years, and usually follows such disturbances as the one yesterday.

The magnetic storm took the form of earth and air currents, which seemed to drift over the country in an easterly direction. It appeared with varying degrees of violence in different parts of the country and had the effect of producing what telegraph operators termed a "stagnancy" in the wires and instruments.

Prof. Fox, in charge of the observatory at Northwestern university, and Prof. E. B. Frost, director of the Yerkes observatory at Williams Bay, Wis., said last night a direct relation exists between the disturbances on the sun and the magnetic storms on the earth. The aurora, they said, is the visible demonstration of these storms.

Ship Compasses Go Crazy.

The currents reached their heaviest wave about 7 o'clock in the morning. At that time all telegraph companies were at a standstill. The disturbing force was so great that fuses were blown out and resistance lamps burned brilliantly.

Compasses on lake ships were crippled and vessels drifted for hours in helpless condition. The needles whirled about in a bewildering manner, and many pilots are thought to have gone far astray of their courses.

The United States weather bureau was unable to give a definite explanation of the disturbance further than to say that a similar phenomenon occurred in 1832. At that time an aurora lighted up the northern skies brilliantly. A report made by the local weather forecaster on April 10, 1832, said telegraph wires running east and west were more powerfully affected than those running north and south, although the latter felt the currents. The trouble at that time lasted about twenty-four hours.

Yesterday's disturbance is thought to have had its center in the neighborhood of Manitoba, although the condition of the telegraph wires made it impossible to get reports from that part of the country.

Prof. David Cuthbertson, in charge of the weather bureau in the federal building, said the trouble without doubt was accompanied by an aurora borealis.

"Such electrical disturbances are frequent," said he, "although they seldom are as violent as this one. They always are accompanied by the aurora borealis, which is particularly pronounced in high pressure air areas. The column of air is highest in the northern district over Manitoba, and it is there that the most serious effects of the earth currents are noticeable. The northern lights, as the aurora borealis usually is called, are, of course, not visible through the day. They continue usually from twenty-four to thirty-six hours."

Managers of the Western Union and Postal telegraph companies made different reports as to the effects of the currents. At 4 o'clock the Western Union wires were reported stagnant, and the company managers said only an intermittent message could be sent. At the same hour the Postal superintendent reported that the wires of his company practically had regained their efficiency and that he did not expect more trouble. At that hour the Postal had got a message through from San Francisco to New York without delay.

Telegraph Wires Melted.

In some localities the disturbance raised the voltage in the telegraph wires and batteries to such a high state that flashes of fire leaped across the gaps when the instruments were opened. From the cities of the west came reports that the current had been so violently increased that the wires in some instances melted. These cases were rare, however, as the wire operators opened the circuits so that the surplus currents could escape into the ground.

Prof. E. B. Frost of Yerkes observatory at Williams Bay, Wis., corroborated the statements of local scientists to the effect that the exact cause of the trouble is not thoroughly understood.

"The cause of such disturbances never has been determined," said he. "About all we know is that the earth currents and an aurora borealis are simultaneous with the appearance of large spots on the surface of the sun. Such spots are visible at the present time."

That the disturbance was world wide was shown by European dispatches, which told of similar trouble of lines on the continent as well as on the submarine cables.

ENGLISH WIRE SERVICE HURT.

LONDON, Sept. 25.—The whole telegraphic system of the united kingdom and all cable services were seriously affected by the magnetic storm experienced here soon after noon today. The underground wires suffered more than the overhead wires, the telephone system being little affected. The last occasion on which the wires were similarly put out of working order here was six years ago. The trouble is attributed by cable experts to the aurora borealis.

France's Wires Also Suffer.

[BY CABLE TO THE CHICAGO TRIBUNE.]

PARIS, Sept. 25.—Telegraphic communication in France has been interrupted, owing to seismic disturbances in the Midi.

SEES WHITE SPOT ON SATURN.

Observer in Arizona Also Finds Medial Dark Streak, Along Planet's Equator, and Lacing Wisps.

Cambridge, Mass., Sept. 25.—Dr. Percival Lowell of the Harvard observatory announced tonight that an observation had been made by Prof. Slither of the Flagstaff, Ariz., observatory, of a white spot on Saturn 50 degrees south, on Sept. 23 at 5 o'clock, Washington time. The message containing this announcement also said that there was a medial dark streak along Saturn's equator and lacing wisps counterparting those of Jupiter.

CRASH IN FOG KILLS TWO.

Conductor and Motorman Dead and a Score Injured in Des Moines Car Collision.

Des Moines, Ia., Sept. 25.—Conductor William L. Keiser of Des Moines was instantly killed, Motorman Peter McCourty's legs were cut off—he died later at a hospital—and a score of passengers were injured when a Perry interurban car collided with a Highland Park car in the fog early today. The injured all live in Highland Park. It is believed none is fatally hurt.