

THE AURORA BOREALIS.

A BRILLIANT DISPLAY LAST NIGHT.

THE HEAVENS ABLAZE FOR MORE THAN TWO HOURS—EFFECT ON THE TELEGRAPH WIRES—MESSAGES SENT BY THE AURORAL CURRENT TO PHILADELPHIA, ALBANY, MONTREAL, BOSTON, AND OTHER POINTS.

Such a brilliant display of northern lights as was seen in this City last night has not been witnessed for several years. There was no aurora at all last year, and not since the wonderful exhibition of the Spring of 1869 has anything so sublime been observed as the play last night of the fire that glowed vividly from horizon to zenith for more than two hours, and lingered until nearly midnight in flickering flames. The light began to be visible soon after sunset, when it appeared as a low arch which scarcely showed itself above the tops of buildings. This arch rose steadily until about 8 o'clock, when it had advanced about one-half of the distance to the zenith. The arch was a well-defined one, of a uniform pale blue tint; and beneath it was a clear dark space, out of which the stars shone brightly. Toward 7 o'clock the color of the arch became brighter near the western horizon, and increased in intensity until it seemed to change gradually to a vivid green, and white rays shot down from the centre of the arch to the horizon. This play of the light continued for several minutes, when, suddenly, a number of thin, lance-like flames shot up from the western end of the arch, and in a moment the whole length of the arch was broken into similar forks of light that reached quite up to the zenith. The changes from that time forward until 10 o'clock were too rapid and various to be described. The grand arch that had spanned the northern sky was broken into huge masses of green and blue light, which varied constantly in intensity, and which were ever in motion. The forked appearances continued for a time, when there was another instantaneous change, and the light seemed spread out in filmy sheets that overspread the entire heavens to the zenith. With this change began a flickering and waving motion that was bewildering to the eye that watched it, yet possessed a fascination for the beholder which would not permit him to withdraw from its contemplation. The waves of light were incessant in their movements, and played far up overhead like the flashes of Summer lightning, so thin and gauzy that the faintest stars were seen through the glowing mass. Soon after 10 o'clock the display faded, although the waving lights still appeared. Then, as if the heavenly forces had gathered themselves up for a last effort, there was a renewal of the shooting and waving sheets of fire, and streams of flame poured forth with intense radiance toward a lofty central point overhead. At no time during the prevalence of the aurora were any of the red tints seen which commonly accompany such phenomena, but the extent and brilliance of the exhibition were wonderfully grand. Crowds of persons gathered in the streets to observe the play of the lights and to admire the streams of flame which were poured forth from the horizon and expanded themselves in the zenith.

The effect on the telegraph wires over a large area of country was to disturb them notably. At the Western Union Telegraph Office in this City all the quadruplex instruments were paralyzed, and it was necessary in the case of a number of circuits to make new adjustments to overcome the disturbing influence. Experiments were made from the moment the current began to affect the wires, and the galvanometer was employed to note the movement of the current from north to south, and from south back again to north. The delicate needle of the galvanometer obeyed every "shaking of the banners" as Mr. Dolan, the electrician in charge, termed the movement of the electric lights—and it would vibrate slowly back and forward from positive to negative poles, or dance wildly if the feathery lines in the sky were very active. The current last night was not so powerful at any time as it was for moments on the 17th of October, 1872. On that date there were no lights visible, but for an hour messages were sent in the midst of a pouring rain storm. From 9 o'clock until midnight the wires were last night so thoroughly charged that with the batteries disconnected it was possible to communicate with any distant points. It was found that the current prevailed much more powerfully on the west bank of the North River than on the east. Montreal was in uninterrupted communication with the New-York office without the use of the battery. Boston, Philadelphia, Baltimore, and Washington were also spoken with. Business was exchanged with Albany for a long time by means of the current, it being stronger between this City and Albany than in any other direction. The chief of the Albany office was called upon to describe the effect produced upon the office at his end of the line, and he sent a dispatch of 100 words without interruption. At 10:55 the current left the wires altogether, but at 11:05 it charged them again as powerfully as ever, although there were then only a few faint feather lines of the brilliant display visible in the skies. The galvanometer indicated that the storm was going back from south to north. Mr. Dolan took a reporter of THE TIMES out upon the balcony and showed him a low line of what at first appeared to be fleecy clouds hanging over the Brooklyn shore. They were not clouds, however, he explained, but aurora, for they moved rapidly along, and the bright lights behind shone through just as the stars shone through similar clouds which had appeared an hour before overhead. Mr. Dolan believed that the auroral exhibition would be followed by warmer weather, and that it was undoubtedly the result of an effort to restore an equilibrium of electricity between the earth and the atmosphere.