

pon the hill which limits our view eastward. I remember well the position of the Great Bear, halfway to the zenith; but I dare not undertake to say *exactly* the inclination of the arch relative to the position of the Bear. It was certainly S. of the Great Bear, and in no way interfered with it. I dare say nothing about the position of the arch in relation to Orion or the Pleiades. There was no appearance of "crumpling up" before it disappeared. This arch was so beautifully and *equally* continuous from horizon to horizon for so long a time as to excite our greater curiosity, being so different from the usual aurora to our unpractised eyes. The time that the arch was entire, to our eyes, was certainly from 8.35 to 8.45. It may have been so longer; but this is *within* the limit, we feel *sure*.

On Friday evening last, February 21st, about 8.45, my attention was called to a peculiar appearance in the sky, and on looking out I was surprised to see a beautiful arch of about the breadth of the milky way, and having the same somewhat misty appearance, although rather brighter and decidedly more distinct in outline, extending across the heavens from E. to W., or more accurately from a point a little N. of E., overhead a little S. of the zenith, to another point a little S. of W. A fog was rising in the W., which speedily obscured that portion of the arch; and this fog extending rapidly, in twenty or twenty-five minutes the whole appearance was obliterated.

I presume it was an aurora borealis, or some other electrical phenomenon; but although I have frequently seen auroras, and occasionally very beautiful ones, in the north of England, I never before saw anything exactly like that above described. It appeared to be at a great height in the atmosphere; and I may add that, by watching the Pleiades and other stars through it, I ascertained that it had a motion in a southerly direction.

The short time during which I had the opportunity of noticing it prevents me from giving a more particular description.

### XXI. *Weather Maps.*

By F. GALTON, Esq., M.A., F.R.S., &c. &c.

FIGURES of certain maps were exhibited by Mr. Galton, showing the state of the weather over Europe three times a day, in the month of December 1861.

By a method of symbols, the height of the barometer, temperature of the air, and evaporation, amount of cloud, rain, snow, and the direction and force of the wind, are simultaneously presented to the eye.

It will be remembered that Mr. Galton has intimated his intention of presenting copies of these maps, when completed, to those who contributed statistics for their formation.

## XXII. *Results of Barometrical Observations at Exeter.*

By H. S. EATON, Esq., M.A., Librarian.

THE following Tables, relating to the monthly range of the barometric pressure at Exeter, have been compiled principally from the register kept at the Rooms of the Devon and Exeter Institution, at the Cathedral Yard, Exeter.

From the commencement of the series up to the year 1852 the barometer employed (an ordinary mercurial barometer) was not of the best construction, and on this account no use has been made of the results in obtaining monthly averages. Fortunately, however, from 1848 to 1852 simultaneous observations were taken with a standard instrument at the residence of Dr. Shapter, near the Institution, which have afforded an equation, by which the readings of the instrument have been corrected as far as practicable; they have further been reduced to the temperature 32° and sea-level. In 1852 the instrument was replaced by Dr. Shapter's standard barometer.

For the first twelve years, observations were taken daily at 8 A.M., 2 P.M., and 10 P.M.; then, till 1852, at 9 A.M. and 9 P.M., and since that time at 9 A.M. and 3 P.M. From this it is obvious that, for the last few years especially, the observations were not made sufficiently often to determine the monthly range with anything like accuracy; I have accordingly had recourse to the registers kept by Dr. Shapter, Mr. Ellis, and Mr. Vicary, who gave every facility for their examination, and to whom my best thanks are due.

The monthly means since 1849 are from observations at 9 A.M. and 3 P.M., with a standard instrument; but they have not been continued for a sufficiently long period to determine the true monthly values.

The results of a rough set of observations for forty-seven years