At this time I could see that the Pleiades were partly covered, although not hidden, by a part of this streamer. At 6.35 it faded away. At 6.40 light clouds began to rise in the W. and S.W., and as I recognised this phenomenon as auroral, having seen similar clouds on other occasions of auroral displays, I carefully watched them, and saw at 6.50, in the S.W., a crimson-coloured patch, undefined in shape, originating from the light clouds. At 6.55 there shot up from the S. beautiful red, crimson, and blue streamers, which converged in the zenith. At 6.58 other bands of crimson and blue arose due S., and joined the others in the zenith. At 7.0 I was quite astonished to see the aurora appear in the S.S.E., by which time the previous brilliant display in the S. had dimmed, and the whole of them formed a southern canopy. During this southern display, the northern parts were quite dark, with heavy looking clouds; but at 7.5 the clouds slightly broke up, and I saw a faint redness in the N.E., about 45° above the horizon. By this time the southern streamers and patches began to spread and assume a mottled appearance, which reached by 7.10 the N.W. At 7.15 the N.W. and E. were quite dark and cloudy, and there remained only slight traces of the aurora in the S.W. high up in the heavens, and by 8.35 it had entirely disappeared. JOHN JEREMIAH

Park, Tottenham, Feb. 4

DOUBTLESS many of your readers witnessed the magnificent aurora which occurred on Sunday, February 4. If any one else has noted the position of the radiant point, as seen from this station, the following observations, made somewhat roughly, from this place (lat. 53° 17′ 8″ N., long. 6° 10′ 22″ W., nearly) may be of use in determining approximately the height of that point above the earth.

At 7.15 (Greenwich time) its zenith distance was 23°; its bearing in azimuth 4° E. of S. At 7.30 its zenith distance was the same; its azimuth 15° E. of S. At 9.10 its zenith distance was 13°; its azimuth 1° W. of S. M. H. CLOSE

Newton Park, Blackrock, Dublin, Feb. 5

LAST evening (Sunday, Feb. 4) there was a brilliant display of aurora visible in North Devon with some unusual features. At 6 o'clock the sky was clear, except a cloud of deep rose aurora over Orion, and another detached portion toward the west. This soon developed into a cloudy arch of the same colour stretching from east to west; then, a little south of the zenith between the Pleiades and Aldebaran, this arch culminated to an obtuse point of white cloud, something like a broad gothic arch. The northern half of the heavens was quite clear, but a series of radiations towards the south, and spreading east and west, issued from this point. For some time it seemed doubtful whether it was aurora, or a peculiar appearance of the clouds caused by high air currents, and a refraction of light from the sun's rays in the higher regions of the atmosphere. At one time there was some appearance of spiral radiations, or drift of cloud from this point near the zenith, with a distinct but irregular gap of clear sky, somewhat similar to the Coalhole in the galaxy near the Southern Cross; but this did not last long, although the general appearance was continued for more than half an hour, with varying play of light, over a space of about 140° of the southern heavens, with pretty well-defined eastern and western boundaries of deep rose colour, culminating in the white focus near the Pleiades, which appeared the centre of action. The rose colour was chiefly confined to the eastern and western boundaries, with intermitting starts of whitish radiation toward the south. Occasionally well-defined streaks of a lighter tint crossed the western portion of the rosy cloud, which appeared to originate from the light of the sun, now, of course, far below the horizon. At length the eastern portion became less brilliant, but still Orion was enveloped in a steady rosy haze, although it gradually became fainter, until, a little before 7 o'clock, the rosy colour below Orion toward the eastern horizon became as brilliant as ever, and soon a straight broad ray of rose colour started up from the horizon. This was not curved or arched, like the whiter radiations which seemed to originate from near the zenith; nor was it, like them, intermittent and wavy; but had the appearance of a broad beam of rosy light originating below the horizon, and darting straight upward in a diagonal direction, proceeding over Castor and Pollux and Jupiter. Then the north side of this became of a peculiar light bluish green; if I may be allowed to coin a word, it was of a moonshiny colour. If the moon had been a few days younger, I should have thought it originated from the moon. This very peculiar and distinct broad beam or bar of light almost developed prismatic colours from its southern rosy edge to its northern bluish-green well defined border. There was also a somewhat indistinct tendency to the same prismatic appearance, spreading some little distance over the heavens on the south side of this beam near the zenith. The northern segment of the sky from Castor and Pollux to about direct west was still perfectly clear, both from cloud and aurora, right down to the horizon; there was a bank of cloud along the southern horizon. About 7 o'clock there was an appearance of rosy tint to the north of the peculiar straight bank spoken of, and this reached as far as the pointers in the Great Bear. About the same time there was a peculiar development of white cloud from the zenith toward the north-west, streaked and fringed with well defined radiations, and this gradually increased until the northern portion of the heavens, which had hitherto been quite clear, was covered to within 30° of the horizon, the border of this cloud being very distinctly and deeply serrated with fan-like shapes radiating from near the zenith. The phenomena I have described occupied more than an hour, and my attention was now drawn from it until after 8 o'clock, when the whole heavens were cloudy, but behind and between the clouds the rosy tint was still visible as an irregular arch stretching from north to west. As the clouds broke off the whitish wavy radiation could be occasionally seen still issuing from near the zenith, and across the western part of the rosy arch were occasionally seen the straight diagonal bars of a brighter shade, apparently caused by the light of the sun, but the clouds obscured most of the phenomena. At a last look near 9 o'clock the clouds had somewhat cleared, and there were two brilliant arches, more like the regular aurora from the north-west horizon towards the zenith, at right angles to the more cloudy arch, which had been visible for some time stretching from the north to the west. W. SYMONS

Barnstaple, Feb. 5

LAST evening (Sunday, February 4) the sky presented a weird and unusual aspect which at once struck the eye. A lurid tinge upon the clouds which hung around suggested the reflection of a distant fire, while scattered among these torn and broken masses of vapour having a white and phosphorescent appearance, and quickly altering and changing their forms, reminded me of a similar appearance preceding the great aurora of October 1870. Shortly some of these shining white clouds or vapours partly arranged themselves in columns from east to west, and at the same time appeared the characteristic patches of rose-coloured light which are seen in an auroral display.

About 8 o'clock the clouds had to a certain extent broken away, and the aurora shone out from behind heavy banks of clouds which rested on the western horizon, the north-eastern horizon being free from cloud and shining brightly with red light. And now, at about 8.15, was presented a most beautiful phenomenon. While looking upwards I saw a stellar-shaped mass of white light form in the clear blue sky immediately above my head, not by small clouds collecting, but apparently forming itself in the same way as a cloud forms by condensation in a clear sky on a mountain top, or a crystal shoots out in a transparent liquid, leaving, as I fancied, an almost traceable nucleus or centre with spear-like rays projecting from it; and from this in a few seconds shot forth diverging streamers of golden light, which descending met and mingled with the rosy patches of the aurora hanging about the horizon. The spaces of sky between the streamers were of a deep purple (the effect of contrast), and the display, though lasting a few minutes only, was equal if not excelling in beauty, though not in brilliancy, the grand display in 1870, before alluded to, in which latter case, however, the converging rays met in a ring or disc of white light of considerable size.

What struck me particularly was the aurora developing itself as from a centre in the clear sky, and the diverging streamers apparently shooting downwards, whereas in the ordinary way the streamers are seen to shoot up from the horizon and converge overhead. The effect may have been an illusion, but if so it was a very remarkable one. Examined with one of Mr. Browning's direct seven-prism spectroscopes, I saw the principal bright line in the green everywhere (the other lines were not visible), and noticed the peculiar flickering in that line which I noticed in 1870, and which has also I think been remarked by Sir John Herschel. The general aurora lasted for some time till lost in a clouded sky, and in fact rain was descending at one time while the aurora was quite bright. Strong wind prevailed during the