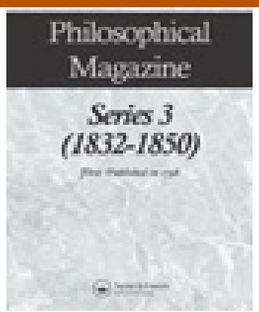

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XI. On a magnificent meteor seen in Nottinghamshire

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X. *On a Phænomenon in which the distant objects were seen inverted.* *By* Edward Joseph Lowe, *Esq.**

ON Thursday, April 17, 1845, at 2^h 20^m p.m., a curious and very unusual phænomenon was observed near Radford, which is situated about a mile W. of Nottingham.

A group of trees at the distance of two miles, and a hill (behind the trees) at the distance of four miles at the most remote portion from the place of observation, were seen inverted in the air and of a gray colour; the inverted phænomenon did not touch the objects of which they were the image, but appeared about 30′ elevated above them. There was a haze between the objects and the phænomenon; also the summits of the inverted landscape did not end in blue sky, but were observed also to end in haze. The breadth of the hill was 20°, which was inverted of an equal size, and appeared somewhat to resemble Pendle Hill in Lancashire. The phænomenon was seen for five minutes, and when left still visible; returning an hour afterwards it had vanished. No clouds were visible at the time, and the wind was very brisk.

The morning had been cloudless until 10^h a.m., then few cumuli clouds of small size floated over, increasing in abundance until 1^h p.m., when they began to disappear below the S.E. horizon; at 2^h p.m. sky almost cloudless and the weather warm, soon after perfectly cloudless; at 3^h p.m. cirrostrati formed themselves on N.W. horizon; these increased rapidly, and in an hour covered the sky, which remained overcast for the rest of the day. The barometer fell from 30·596 in. at 9^h a.m. to 30·560 in. at 9^h p.m. (attached thermometer 9^h a.m., 64°; 9^h p.m., 66°); the minimum temperature was 36°, and the maximum temperature 58°·7; the direction of the wind and clouds was from the N.E., and the distant prospect rather hazy. There is a valley of some considerable size in the direction of the phænomenon, but not much water; the principal portion is the river Leen, which is about seven yards wide, and does in some measure take its course in a direction from the observer to the phænomenon.

XI. *On a Magnificent Meteor seen in Nottinghamshire.* *By* Edward Joseph Lowe, *Esq.**

ON Thursday, April 24, 1845, a blue meteor, of a most unusual size and brilliancy, was seen near High Field House (lat. 52° 57′ 30″; long. 1° 11′ W.) in the above county.

The weather had been for the five days prior to the 24th hot, and almost cloudless; for the mean of clouds for that

* Communicated by the Author.

period only amounted to $\frac{2{\cdot}4}{10}$. The temperature had reached its greatest of heat on the 24th at 4^h p.m., viz. $+70^\circ{\cdot}1$, at which time the hygrometer was $+59^\circ{\cdot}2$; the wind nearly calm and veering to E., and in the evening to S. The barometer had been gradually falling from the morning of the 21st, and at 6^h p.m. a heavy thunder-storm passed over High Field House from the S. moving to the N.; the lightning was most vivid at $6^h\ 15^m$ p.m. In the morning a faint solar halo was formed, and in the evening an arc of a solar iris, very sensibly prismatic, was visible. At $9^h\ 35^m$ (mean time), the night, which was very dark, suddenly became light as day, and the objects near and distant were visible as plainly as in broad daylight: immediately a magnificent meteor, of a blue colour, was seen traversing the interval from the zenith, through the stars 21, 30, 40 and 41 of the constellation of Leo Minor, and the stars 95, 96, x, 59, τ and 75 of the constellation of Leo Major (a distance of 30°), which it accomplished in little less than three seconds of time: it exploded very near the star ϕ, Leonis Majoris, and, after falling in small fragments of light for the space of 1°, became suddenly extinguished. Its apparent size was very nearly equal to the disc of the moon, and perfectly round in form; but its brilliancy very far surpassed that luminary, and its intensity could not possibly have been less than three times as light as our satellite. No train of light was left behind the meteor, as is seen with the caudate meteors. It appeared of no considerable height above the surface of our earth. There were no clouds visible at the time; but a few cumuli appeared soon after, and the moon rose of a red colour.

Should any one have noticed this phænomenon in the azimuth of the meteor, a comparison of remarks would prove both interesting and important, for the height of the meteor above the surface of our earth might be ascertained.

XII. *Reduction of the Four Forms of ω in* Jacobi's *General Transformation of an Elliptic Function to one form only. By the* Rev. Brice Bronwin*.

THE constants in Jacobi's transformation of an elliptic function are all expressed by the two series of quantities—

$$\sin^2 am\,(4\omega),\ \sin^2 am\,(8\omega) \ldots\ldots \sin^2 am\,(2n-2)\,\omega,$$
$$\sin^2 co\,am\,(4\omega),\ \sin^2 co\,am\,(8\omega) \ldots\ldots \sin^2 co\,am\,(2n-2)\,\omega.$$

* Communicated by the Author.