

The Difference of these Accounts may, in my Opinion, be reconcil'd, by supposing, that the Explosion might have been heard abroad in such Places where it was more violent; and not in others where it was less so.

As for any thing (I presume you meant lambent Flame, Vapour, &c.) being perceiv'd on the Surface of the Ground, before or during the Earthquake, nothing of this kind has as yet been mention'd to me from any Quarter.

I find there has been a Report of a Meteor, like a Ball of Fire, appearing in the Morning before the Shock was felt; but it is, by the judicious Part of the World, rank'd among the other *Mirabilia* usually invented upon these Occasions to amuse the Vulgar. I am, Sir,

Your most obedient, &c.

J. Nixon.

LI.

*A Letter from the Rev. P. Doddridge D.D.
to Mr. Henry Baker F. R. S. containing
some Account of the late Earthquake felt at
Northampton.*

Northampton, October 17. 1750.

Read Oct. 25. 1750. **T**HE Shock of an Earthquake lately felt here, which has been so much talk'd of, and in some public Papers magnified far beyond the Truth, happened on *Sunday* the 30th of *September;*

September, about 20 Minutes after 12 at Noon. Our *Mercury* strangely fixed it at a Quarter before One; which is so palpable a Mistake, and contrary to the certain Knowledge of so many Hundreds of People, that I could not but be surpris'd to see it.

The Effects here were by no means so considerable as were represented, especially at *London*. I was at that time in Company with a pretty large Number of Friends, just returned from divine Worship, and hardly set down in the Parlour; but no one of us felt any thing of it; and if we heard any Noise, did not distinguish it from a Coach: But some Gentlemen, who were retired into their Studies up two Pair of Stairs, plainly felt it; yet they were not the twelfth Part of the Persons then in my House, who all, whether on the Ground, or first Floor, were quite insensible of it. However, it is certain that a great Number of Persons in different Parts of the Town, perceived themselves lifted up by it, as they were in their Houses, tho' hardly any in the Streets took Notice of it. Those that accurately observed it, describe it as something horizontal rather than perpendicular. A Lady of my Acquaintance standing with her Face to the South-West, plainly felt her Heels lifted up, and was thrown so much on her Tocs, that she was in Danger of falling: And it was observed, that some Casements were moved outward, as if an Attempt had been made to force them open, and the Clattering of Sashes was as when a strong Wind blows against them.

In the long Street that runs from South to North, it was observed, that the Shock was felt more on the Eastern than the Western Side of the Way; and I

think the whole Eastern Part of the Town was most affected. Dr. *Stonehouse*, who lives in that Part of it, felt it with great Violence, as if a loaded Waggon had run strongly against the gable End of his House: And tho' the Walls are remarkably thick, he was greatly alarm'd with an Apprehension that they would have fallen.

What further confirms this Remark of the horizontal, or at least oblique Direction of the Impulse is, that a Cradle was rock'd by it. In the House of Mr. *Yeoman*, where our little philosophical Society meets, it threw down a Board from the Tester of a Bed; yet Mr. *Yeoman* himself did not feel it.

There was a Report, that in *Abington-Street* some Chimnies were thrown down; and this brought Numbers of People from different Parts of the Town, to survey the suppos'd Ruins; but it only served to illustrate the Uncertainty of Rumour. However, it was true that a few Bricks were thrown down from a Chimney in *College-Lane*.

It is very certain, that all who felt the Shock heard a hollow rushing Noise; which, so far as I can learn, seemed to come in a Direction from the South-West to the North-East. In Rooms where several Persons were together, some were strongly sensible of it, while others felt nothing at all: And (*cæteris paribus*) I think it was felt more sensibly by those above than those below, and by such as were sitting, standing, or leaning, rather than walking.

A lumbering kind of Noise was heard by some in lower Apartments, as if some one over their Heads had fallen down on a sudden, with a dead Weight; and

and some thought they heard such a Noise in the Floor beneath; some thought the Quivering of the Ground continued longer than others apprehended; But I have met with none who in this respect were so accurate in their Observations, as my ingenious Friend Mr. *Shippley*, who assures me that he felt four distinct Concussions (the second and third of which were much more violent than the first and last) all within 3 or at most 4 Seconds.

As far as I can learn from the most diligent Inquiry I can make, the Tremulation of the Ground extended itself at least 60 Miles in Length from South to North, and from West to East about 25, or at most 30.

It did not affect either *Newport-pagnel*, or *Towcester*, to the South; but was felt very near the latter, and at least 6 Miles South of this Place, and all the Way between that and *Nottingham*, and a little beyond it Eastward; it scarce reached *Higham-Ferrers*, and was not felt at *Coventry*, and but very feeble within 5 or 6 Miles to the East of it: But its greatest Violence seemed to have been spent on the Villages of *Creton*, *Cottesbrook*, *Kilmarsh*, *Maidwell*, *Eveston*, and some other small Towns within 4 or 5 Miles of *Market-Harborough*, mostly between us and that Place.

At *Creton*, a Friend of mine was so moved, as he sat at Dinner, that his Elbow struck against the Wall, tho' he sat at some Distance from it; the Roof of the House gave a great Crack; and in a neighbouring House a brass Kettle was thrown down, as in another a Plate of Pewter was.

At *Cottesbrook*, *Kilmarsh*, and *Weston*, the Congregations, which were not yet come out of their respective Churches, were all exceedingly terrified; some shrieked out, others quitted the Place; and the worthy Clergyman at *Weston with Sutton* near *Harborough*, says, in a Letter published in our *Mercury*, dated the 2d instant, ‘ that, as they were singing after Sermon (he adds, a Quarter before One) the whole Congregation were thrown into the utmost Consternation, so that the Singers could hardly prevail on themselves to finish the Anthem.’ He adds, ‘ that he thought that Part of the Church betwixt the Chancel and the Pillar next to it, would have sunk into the Earth; and that it was attended with a loud and dreadful Noise, from a sort of subterraneous Explosion.’

At *Maidwell*, Mr. *Scawen*, leaning upon a large Marble Chimney-Piece, was violently shaken; and in the neighbouring Parish of *Kilmarsh*, Mrs. *Hanbury*, who was then reading by her Fire-side, her Chair being tilted forward, was thrown down on her Hands and Knees; and the whole Parish at Church were so alarm’d, that they broke up the Assembly, and ran out into the Church-yard; but the Minister persuaded some of them to return, and dismissed them (as I am told) with an *extempore* Prayer proper to the Occasion.

Some strange Stories have been told of much more violent Effects produced elsewhere; particularly that a Chafin was open’d at a Garden at *Daventry*; but I can find no real Foundation for them.

No Building, that I can learn, has any-where been thrown down; but I am very credibly informed,
that

that a Beam in the new Toll-house near *Harborough* was split by the Shock: and one tragical Effect is certain; I mean, that Mrs. *Alicock*, Wife to the chief Gentleman in *Loddington*, who had been deliver'd of her first Child a few Days before, and was in a very fine Way, was so alarmed with the Accident, that she expired within a few Hours, to the great Grief of all that knew her.

I was surpris'd to see how little the Inhabitants of *Northampton* were impress'd with this awful (tho' by no means supernatural) Event: The Sound of such a Shock was, in a manner, grown familiar to their Ears, by what they had heard from *London*, and other Places. Many did not themselves perceive it; others found it very gentle; and in a very few Hours it seem'd to have affected them no more than a Shower of Rain.

I observe, that most Accounts from the Northern Parts date the Shock later than we felt it here; but that may perhaps be accounted for by the Difference of Clocks; but where they were most exactly adjusted, all agree pretty well as to the Time. I find also, that the Degree of the Shock was very different in nearly contiguous Places. Thus at *Easton-Maudit* it was hardly felt at all; but at *Castle-Asby* was very violent. It was sensibly perceived at Lord *Pomfret's*, and not at all at *Towcester*, tho' within half a Mile of it; and, generally speaking, the higher Places were most affected, tho' in some it was quite otherwise.

It had been calm cloudy Weather for several Days before; and what little Wind there was to be perceived was generally North-West. The Height of
the

the Barometer was as follows, on and about this remarkable Day; *viz.*

<i>Thursday, Sept. 27.</i>	29—95
<i>Friday, Sept. 28.</i>	29— 9
<i>Saturday, Sept. 29.</i>	29—88
<i>Sunday, Sept. 30.</i>	29—79
<i>Monday, Oct. 1.</i>	29—68
<i>Tuesday, Oct. 2.</i>	29—80
<i>Wednesday, Oct. 3.</i>	29—83

The Morning on which this *Phænomenon* happened was remarkably calm; but quickly after the Shock the Wind rose, and Clouds which had covered the Heavens for several Days, were pretty much dispersed. On *Monday*, and on *Tuesday* and *Wednesday*, the Sun shone clearly all Day long. There was a Report, that, on the Morning of that *Sunday*, about 4 o' Clock, a Ball of Fire was seen; but I could not trace it to any Certainty. On *Monday* Night the Sky in the East was as red as Blood; and, on *Tuesday* Night, we had absolutely the finest *Aurora Borealis* that I remember to have seen; of which I shall add a short Account, by way of Postscript, when I have added a miscellaneous Circumstance or two to those I have mentioned concerning the Earthquake.

I am told, that, in some Places, two Shocks were felt, nearly at the same time, and within a few Seconds of each other. This is said to have been the Case at *Nosely* in *Leicestershire*, which stands very high; and at *Yelvertoft* in this County. But I have received the most certain Account of this from *Hill-Morton*. Mr. *Pool*, who keeps the Turnpike there,
and

and is remarkably curious, for a Man in his Sphere of Life, informs me, that he felt himself moved, as he sat in his Chair, in such a manner, that he thought somebody had been at the Door; or (if I understand him right) as if something had fallen against it: And when he came to the Door, about two or three Seconds after, he felt a Motion that he certainly knew to be an Earthquake.

I do not hear of any thing seen in or upon the Ground; unless the Case of a good Woman at *Welden* may be counted an Exception; who says, that, while she was shaken by it, she saw the Ground move around her.

Mr. *Scawen* is very confident, that he heard that rushing Noise (so generally spoken of by all who observed any thing extraordinary) not only before, but after the Shock; and that he could by both trace the Direction mentioned above.

I shall only add, that a very worthy Lady of this Town (Niece, as I remember, to Sir *Hans Sloane*) observed, that, just before the Shock, her Birds drooped remarkably, and hid their Heads under their Wings: A Circumstance which is often observed in *Italy*, and other Places where these *Phænomena* are frequent.

These are the most material Circumstances I have yet had an Opportunity of collecting; and if any thing else, which seems at all worthy of Notice, should occur, I shall be very ready to impart it.

P. S. The principal Circumstances attending the *Aurora Borealis* mention'd above, were as follows:

On

On *Tuesday*, the Second of this Month, as I was walking home from a neighbouring Village, between Six and Seven in the Evening, the Sky being remarkably clear, and the Moon then shining with delightful Lustre, I happened to turn, and observe in the North-East a pretty large Cloud, nearly in the Form of a Globe; which seem'd first of a whitish, then of a very luminous Appearance. It seem'd connected with a Cloud, which was dark, and somewhat bluish, which spread itself (almost like a vast Beam of a Building) from the North-East to the North-West. At each End it was a little bent towards the Horizon; but by far the greater Part was in a horizontal Position, and seem'd to occupy the Northern Part of the Heaven, from the Altitude of 10 to about 15 Degrees. The Cloud I first mention'd soon appear'd like a Globe of lucid Fire, much brighter than the Moon; and shot Coruscations, sometimes in a perpendicular Direction, but much more towards the dark horizontal Beam, if I may be allow'd so to describe it (thro' which, by the way, I could not then discern any Stars). Thro' this the Light darted from North-East to North-West; so that at length it seem'd all in a Blaze; and from it there shot up several luminous Pillars, perpendicular to the Horizon, and directed towards the Zenith. They were of very unequal Lengths, and some of them appear'd in a conical rather than a cylindrical Form. As those to the West brightened, those first rais'd disappeared; till at length all the horizontal Tract of Light vanished, and some long truncated Pillars, often
 varying

varying their Length, remained in the West; often rising almost to the Zenith, but generally seeming to hang between 30 and 70 Degrees, so far as I could conjecture. When this beautiful Appearance ceased, the Sky appeared reddish in the East; what before constituted the lucid Globe, seemed resolved into light Clouds, of various Forms; and that Part of the Horizon looked much as it does in a Summer's Morning, when the Sun is within a few Minutes of its rising, and tinges the Clouds of a light Red. But all this seemed to disperse in a few Minutes, about Seven; and I neither saw nor heard of any thing remarkable.

LII.

An Account of the Earthquake which happen'd about a Quarter before One o'Clock, on Sunday, September 30. 1750. by Mr. ——— Steward to the Earl of Cardigan.

Deene, Oct. 2. 1750.

Read Oct. 25. 1750. **I**N the Morning there was a gentle westerly Wind, something cool; but for some time before the Earthquake happen'd, it was quite calm and close, and much warmer. The Air was very dry, and filled with Clouds that had no Motion, but prevented the Sun's appearing (I think) all Day. The Noise that preceded the Earthquake was, for a few Seconds, like the rumbling
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of