

camentorum, an cerevisiæ illius, an naturæ beneficio disrupti & expulsi sint. Ex segmentis frustulorum valde convexis, quæ hic mitto, & quæ adhuc adservo, judicare licet, vix ullum illorum calculorum nucem moschatam superasse, plures vero minores fuisse. Interea tamen solutionem calculorum in vesica haud prorsus impossibilem esse, mihi evincere videntur, licet res forte quam rarissime contingat. Vale mihi que fave.

*Dab. Helmstadii in Academia Julia ipsius Calendis Octobris, M DCC XXX.*

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IV. *A Letter from the Reverend William Derham. D. D. Canon of Windsor, and F. R. S. to Sir Hans Sloane, Bart. Præf. Coll. Med. & R. S. concerning the FROST in January, 173<sup>i</sup>.*

THE late Frost having been almost as intense as any that hath been for many Years, I send you my Account of it; which if you think worth the Cognizance of the *Royal Society*, be pleased to impart it to them.

In the *Philosophical Transactions* for November and December, 1709, Numb. 324, I have given an Account of some of the most remarkable Frosts that I could find any Relation of; and particularly of that great and, I had almost said, universal one in 1708, which the Society had very good Histories of from divers Parts, and which, in that *Transaction*, I have given an Account of from the Original Papers, which  
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the Society was pleas'd to do me the Honour to entrust me with.

In that *Transaſtion* I have made it very probable, that the greateſt Deſcent of the Spirits in the Thermometer, was on *December 30, 1708*, when my Glaſs was within one Tenth of an Inch as low as it is with artificial Freezing with Snow or Ice and Salt : And in the late Froſt it was almoſt, if not altogether, as low.

The *Freezing-Point* of my Thermometer is 10 Inches (which I call 100 Degrees) above the Globe of Spirits ; and the moſt intenze Freezing (according to the Methods I have mentioned in that *Transaſtion*) is juſt at, or very little within the Ball. And on *January 30*, about Sun-riſing, the Thermometer was but an Inch, or 10 Degrees above the Point of extreme Freezing ; and on *February 3*, at only half an Inch, or 5 Degrees. And conſidering that the Thermometer I obſerved with in 1708, was leſs accurate, and differently graduatēd from that which I now have, I am apt to think, that the Froſt on *February 3* laſt, was altogether as intenze as that on *December 30, 1708*. For although a Frigorifick Mixture funk the Spirits but one Tenth lower in the old Thermometer, and about 5 or 6 Tenths in that I now obſerve with, yet I take the Difference to be little, or none at all, by reaſon of the Tenderneſs of the new above the old Glaſs.

And this Degree of Cold I take to be as exceſſive as in any of the Years mentioned in the ſaid *Transaſtion* ; yea, any of the Years, when the *Thames* at *London* was frozen over : I am ſure colder than in the Year 1716,

when that River was frozen over for several Miles, and Booths and Streets were made on the Ice, an Ox roasted thereon, &c. For the lowest Point of Freezing in 1716, was on *January 7*, when the Spirits fell to 35 Degrees only of the Glass I now make use: But the true Cause of the freezing of the *Thames* that Year was not barely the Excess of the Cold, but the long Continuance of it: Which was also the principal Cause of those remarkable Congelations of that River in 1683 and 1708, when I saw Coaches driven over the Ice, large Fires made on it, &c. I am, with great Respect,

*Honoured S I R,*

*Upminster, Feb.*  
13th, 1739.

*Yours,*

WILLIAM DERHAM.

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V. *A Letter to Cromwell Mortimer, M. D. Secr. R. S. containing several Experiments concerning Electricity; by Mr. Stephen Gray.*

*S I R,*

**I**N the Year 1729 I communicated to Dr. *Desaguliers*, and some other Gentlemen, a Discovery I had then lately made, shewing that the Electrick Vertue of a Glass Tube may be conveyed to any other Bodies, so as to give them the same Property of attract-  
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