

Re: Late 17th-century physics question

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- *From:* "Igor" <thoovler@xxxxxxxxxxx>
 - *Date:* 27 Nov 2006 09:40:01 -0800
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Front Office wrote:

josefmatz wrote:

Newton was also inventor of differential analysis. In those days there was no mathematical tools for electromagnetism. Some effects were known only but no electromagnetic theory which came much later. So anyway they had no theory.

Josef Matz

"Front Office" <YoMo.nospam@xxxxxxxxxxx> schrieb im Newsbeitrag news:TdmdnWg-juuOkvbYnZ2dnUVZ_ridnZ2d@xxxxxxxxxxxxxxxx

Isaac Newton's Universal Gravitation was maligned during his life as "invoking occult agencies" because of its force-at-a-distance aspect.

In those days, force was considered to be conveyed ONLY by actual physical contact between material bodies.

Does anyone know how the forces associated with magnetism and electricity were explained in those days?

Thanks for any insight into this matter.

Bob

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Re: Late 17th-century physics question

There must have been a theory or explanation, one equivalent to the earlier dominant theory of gravity, namely that of Descartes which postulated vortexes of invisible matter circling the sun and guiding the planets in their orbits.

Descartes used no calculus to derive that idea or theory.

Was there anything equivalent for the electric and magnetic forces in those days, to explain their force-at-a-distance aspects?

Bob

It was all explained by aether. Or smoke and mirrors. The first people to really quantify electromagnetic interactions were Coulomb in the late eighteenth century, followed by Ampere, Oersted, and Faraday in the early nineteenth. Then Maxwell capped it all off by writing down the final form of the equations that we have today. Throughout it all, the assumption was that there had to be some sort of medium through which radiation and forces could be propagated. Today, we know that aether is just a silly as action at a distance.

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