Re: [OT] history of science: cases of mainstream in error

Source: http://sci.tech−archive.net/Archive/sci.math/2008−12/msg03274.html

- *From*: David Bernier <david250@xxxxxxxxxxxx>
- *Date*: Fri, 26 Dec 2008 11:26:45 −0500

Michael Press wrote:

> In article <gj0di30q16@xxxxxxxxxxxxxxxxx>,
> David Bernier <david250@xxxxxxxxxxxx> wrote:
>
> > I'm interested in compiling a list of cases in the history
> > of science where the mainstream view was in error in a period
> > when the mainstream was challenged, where mainstream means
> > natural philosophers, physicists, biologists, etc.
> >
> > For example, in an other thread, I mentioned that physicists
> > gave a low maximum age to the sun before radio−activity
> > and nuclear reactions were discovered, which was
> > in quite sharp disagreement with estimates from earth scientists
> > for time needed to form of the Grand Canyon
> > [this may or may not have been a point of disagreement, because
> > it depends on what geologists theorized or knew about its
> > formation] , and a large amount of fossil evidence,
> > volcanoes, mountain formation and erosion, sedimentation,
> > and all else that geologists study].
>
> You need to be careful about ascribing views. Calculations
> on the energy content of a Sol sized lump of coal, or on
> the energy available from the gravitational collapse of
> a Sol sized mass do not automatically lead one to deduce
> conclusively an upper limit on the age of Sol; but rather
> to expect the unexpected.

Right. I'm trying to find who was being careful about the
origin of the energy of the sun in the 1800's. Maybe some
were careful and said or wrote nothing.

I've found some original writings from the 1800's by Lord Kelvin, who is
known for thermodynamics, and others. But it's much harder to try
to establish what the physics and astronomy community at large

thought about geological time or solar physics in the 1800's .
Here's an excerpt from MacMillan's magazine, 1862,
written (or spoken in a lecture?) by Kelvin:

<< What then are we to think of such geological estimates as 300,000,000 years for the denudation of the Weald ? Whether is it more probable that the physical conditions of the sun s matter differ 1,000 times more than dynamics compel us to suppose they differ from those of matter in our laboratories; or that a stormy sea, with possibly Channel tides of extreme violence, should encroach on a chalk cliff 1,000 times more rapidly than Mr. Darwin s estimate of one inch per century? >>

Source:
http://zapatopi.net/kelvin/papers/on_the_age_of_the_suns_heat.html#fn9

> Take for example a current model that light travels through
> empty space. Where is the foundation for such a physical
> view of matters?

I read R. Feynman's book "QED". In the first few pages, he discusses
the double−slit experiment with light, and how one can get interference
patterns (from waves) or one bright line (if one slit is blocked).

I don't know what one should say about the position of unseen photons.

David Bernier
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