

Re: Michelson–Morley & Miller

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Date: Wed, 13 Oct 2004 17:28:06 -0700

Dear Kenneth Ellested:

"Kenneth Ellested" <ke@jydsk–data.dk> wrote in message
news:nQbbd.3199669\$6p.536327@news.easynews.com...

...

>>> *How is "propagation of em" defined today – is it assumed that there*

>>> *isn't a "medium"?*

>>

>> *It is explained in terms of fields on spacetime. No medium required.*

> *And there I have it again. It's terrible hard to imagine "Einsteins*

> *universe".*

> *When I think of waves and propagation, I will automatically think medium.*

> *How can you "transfer" light from A to B through "nothing"?*

All particles can be made to behave as light does, regarding
self–interference, refraction, even polarization (if you use quantum spin
as the analogue). So how do particles move through "nothing"? This
includes, photons, electrons, neutrons, nuclei, even molecules larger than
C–60 buckyballs.

> *How can gravity work through "nothing"?*

Since gravity is curvature of "nothing", gravity doesn't have to work
through it.

> *How can magnetism work through "nothing"?*

This "nothing" is called spacetime, and is the product of the mass and
energy of this Universe.

> *If you now say that "nothing" IS "fields on spacetime" – then "nothing"*

> *is actually something.*

Nothing is the absence of all somethings. Nothing is an absolute, and
there are no absolutes in this Universe. To say that there is "nothing
here", is to say that nothing can be measured to be in some particular
volume. And this would be untrue, since any volume of any finite size will

contain, at minimum, photons en route to some destination.

> *And this something must exist everywhere we can see the forces work.*

Spacetime. "Extension of mass–energy."

> *In other words – in "my universe" I can intercept a light wave wherever I
> want in space and stop it's motion (stop it from propagating any
> further – even reflect it). If the wave doesn't exist, how can I then
> stop it?*

Same can be said for any particle.

> *This is extremely hard to imagine – why do I need an IQ worth 500+ to
> figure it?*

No, you just need to get out more. Can you imagine the taste of Dom
Perrignon, unless you taste it?

> *Well, in the meantime I will go try to figure what "fields on spacetime"
> is.*

A subset of all the values that can be assigned to any region of spacetime.
Like the orientation and thickness of red fibers in a quilt... only one
that is four dimensional.

I wonder what the granny that made it looks like?

David A. Smith