Re: How can light travel without losing energy?

Source: http://sci.tech−archive.net/Archive/sci.physics.research/2005−09/msg00223.html

- *From*: nmm1@xxxxxxxxxxxx (Nick Maclaren)

- *Date*: Tue, 13 Sep 2005 02:48:34 +0000 (UTC)

In article <dfsahtqlc1@xxxxxxxxxxxxx>,
Einar Andreas RÃ¸dland <e.a.rodland@xxxxxxxxxxxxx> writes:
|>
|> The suggestion you put forward, that light might interact with
|> something producing more photons but with less energy each, would
|> cause the light to be spread so we would see distant objects as
|> blurred at best.

(a) I didn't say that and (b) as I said, exactly the same argument
applies to light that enters a refracting medium or is reflected
off a 'surface'. While it is pure speculation that another such
phenomenon would exist, it is equivalently speculative to say that
one doesn't. Which is what YOU are doing.

|> Secondly, your suggesting would have increased the
|> number of photons; "classical" tired light models retain the number of
|> photons; in reality, the density is reduced as illustrated in the link
|> I gave.

Not in the steady state :−)

Also, to argue that my speculation is invalid because it conflicts
with another speculation you say is wrong must be the weakest of
all possible arguments. It isn't EVEN a straw man argument!

|> However, no matter what, any theory or model can be argued to be
|> possible. Even the circle−within−circle model for explaining planetary
|> motion is possible in the strict sense of the world: it's just that it
|> was a total failure as a scientific theory.

That is true only of untestable hypotheses, which are generally
regarded as not science. I am talking solely about testable ones.

|> Thus, when one small assumption−−−that distant objects are receeding
|> from us−−−is able to explain a large number of observations without
|> having to rewrite known laws, it seems like a good explanation: it is
|> one that is likely be enable us to generalise and make predictions.

That is seriously wrong. It isn't one small assumption − it is a
good many, some of which are major. For example, most of the
evidence is based on the assumption that the laws of physics and
the values of physical constants are essentially constant over
time and space. This is DESPITE the (leading, if not established)
theories of the big band that say that such laws were created or
changed as it occurred.

Just because an assumption is generally believed does not make it
any less of one than an assumption that is new. People who claim
that they are entitled to claim their assumptions are the default
are not scientists but dogmatists.

|> > But can anyone provide any REAL evidence that physical constants
|> > have been EXACTLY the same as they were shortly after the big
|> > bang?
|>
|> In what sense is there any "REAL evidence" that the motions of the
|> planets is not governed by circles−within−circles?

Both models make predictions, which are different and testable.
The epicycle theory does not match observation. Yes, it is possible
that there is some OTHER epicycle theory that DOES match observation,
but I have not heard of it.

|> Any description of nature is likely to break down when you push it far
|> enough. With the Big Bang theory, you have to push it quite far; with
|> tired light, you don't even have to start pushing.

It is very easy to knock over straw men. You have used them several
times in this posting alone.

|> Tired light, however, doesn't even get to this stage. And the dark
|> matter problem of galaxies and clusters would still have to be solved.
|> Thus, tired light is as dead as a scientific theory as the good old
|> circles−within−circles theory. It was worth looking into to see if
|> there might be something there...but there wasn't.

What you call classical tired light may be, but you are attempting
to claim that a whole class of hypotheses have been proven wrong
because a few of them (selected by you) have been. That is a
classic straw man argument.

The point about distinguishing between hypotheses that have been
conclusively disproved and those that have merely been deemed very
unlikely (or disproved in only some forms), is what happens when
flaws start to show up in the accepted theory. If you have
erroneously classified something as conclusively disproved and
it was merely poorly formulated, you can spend a long time looking
for solutions where they don't exist.

Regards,
Nick Maclaren.

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- ***Follow−Ups***:
  - ***Re: How can light travel without losing energy?***
    - ◊ *From:* Einar Andreas Rødland

- ***References***:
  - ***How can light travel without losing energy?***
    - ◊ *From:* BJ
  - ***Re: How can light travel without losing energy?***
    - ◊ *From:* Igor Khavkine
  - ***Re: How can light travel without losing energy?***
    - ◊ *From:* Nick Maclaren
  - ***Re: How can light travel without losing energy?***
    - ◊ *From:* Einar Andreas Rødland
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