Re: Eclipse and EINSTEIN

Source: http://sci.tech−archive.net/Archive/sci.astro/2006−03/msg00554.html

- *From*: Scott Miller <jsfmiller@xxxxxxxxxxx>
- *Date*: Tue, 28 Mar 2006 20:14:02 −0500

There is so much wrong with this post, one wonders where to begin.

charleswehner@xxxxxxxxxxx wrote:

> Another total eclipse of the sun is almost upon us, in 2006. Perhaps it is timely to remind you of a prediction by Einstein, made ninety years ago.
>
> He predicted that the sun would bend light.

And, an expedition in 1919 clearly demonstrated this. More recently, the host of gravitational lenses observed with the aid of the Hubble Space Telescope do the same.

> It had long been known that matter (or material) has mass (or weight). What he had found that that pure energy − even in the absence of metter − also carried mass.
>
> Light is often called "electromagnetic", but this is misleading. Electrons are matter − and there is no matter in light. Electromagnetic radiation is really just magnetic radiation which has the power to influence electricity. So we would expect light to be mass−free.

No, it is not misleading − Maxwell clearly showed that changing electric fields produce changing magnetic fields, which can then form changing electric fields − wave phenomena moving away from the oscillating charge at the speed of light. Your AM and FM radio signals, as well as television signals, are examples of this.

> What happens when energy collides with matter? We know that when matter collides with matter, the speed of motion is shared by the two bodies involved. However, if energy − as light − collides with matter, it cannot slow down. Light travels either at the speed of light, or does not exist.
>
> So light will either bounce off the material, or be absorbed by it.

> If a particle of material absorbs light, it should do nothing at all. Only if the light has mass can it have momentum, and only if it has momentum can it pass that on to the particle. The fact that particles move faster when warmed up (Einstein's first study − Brownian Motion) means that the light that warms them must have mass.

Wrong again − light particles do have momentum. At this point, any extention of this false premise of yours is also false.

> That the mass of matter can attract the mass of matter was known. The force is proportional to the first mass times the second mass divided by the distance between them squared. This is gravity.

No, that is the Newtonian explanation of the force of gravity acting between pairs of bodies − force is not gravity.

> The mass of energy was something new. Would the mass of energy attract the mass of other energy? Passing beams of light through a tiny pinhole showed that the same rule applied − mass one times mass two divided by distance squared. This interaction between light and light is called diffraction.

This actually is not a valid explanation of diffraction and I challenge you to demonstrate it mathematically otherwise.

> In 1916 Einstein was asked whether this new mass that he had found − the mass of energy − would also interact with the mass of matter.
>
> He said that as the mass of the energy was tiny, you would need a huge piece of matter to influence it convincingly. Why not use the SUN?
>
> Three years later, there was an eclipse of the sun − just like the one tomorrow. Scientists followed the paths of bodies, such as stars, that were disappearing in an almost straight line behind the sun.
>
> During the eclipse, it could be seen that these stars rose up in a curve, and did not disappear behind the edge of the sun at all. Could this be Einstein's hybrid of gravity and diffraction? Could this be the pull of the sun on the light?

Actually, what you claim was not seen. What was measured was the angular distribution of stars seen near the Sun and these were compared to the angular distribution of the same field in the absense of the Sun.

> There is, however, just one other possibility that springs to mind. If the gravitational pull of the sun has drawn a "mist" of gas towards the sun, or if the eruption of sunspots has splashed gas into the environment, the light might be bent by REfraction, rather than DIFfraction.

I think the mist is drawn in on your brain. There is no observational support for it about the Sun.

> The density of the gas in the vicinity of the sun, and its refractive properties needs to be known, before the bending of light rays by gravitational diffraction can be confirmed. Nevertheless, during the 1919 eclipse, the scientists were adequately persuaded of the accuracy of Einstein's prediction, and the mass of energy became an established fact.
>
> I have written a GO−article "Graviffraction − Einstein's Dream" for those who are interested in such matters. It is available on the Web.
>
> So tomorrow there may well be people tracing the paths of celestial bodies across the edge of the sun, and testing again Einstein's prediction.
>
> Charles Douglas Wehner

I've got a novel idea. How about actually learning a little bit of physics − anything would be better than what you demonstrate. Then come back.
.