

Re: what is the relation between force and energy?

Source: <http://sci.tech-archive.net/Archive/sci.physics/2004-10/5339.html>

From: N:dlzc D:aol T:com \(\dlzc\) (*net_at_nospam.com*)

Date: 10/19/04

Date: Mon, 18 Oct 2004 17:00:01 -0700

Dear TomGee:

"TomGee" <lvlus@hotmail.com> wrote in message

news:cc2dde17.0410180700.2d5bc7c4@posting.google.com...

> "N:dlzc D:aol T:com \(\dlzc\)" <N: dlzc1 D:cox T:net@nospam.com> wrote in

> message news:<Wcycd.2397\$SW3.1334@fed1read01>...

>> *Dear TomGee:*

>>

>> > *But wasn't it Einstein who claimed in GR that curved space, and not*

>> > *gravitation, is real? Or was that just media hype, or more*

>> > *Theoretical Physics?*

>>

>> *Gravitation is the name that Newton (or someone before him) gave it.*

>> *Gravitate is what bodies do. Curvature of spacetime is the model GR*

>> *proposes to describe the phenomenon.*

>

> *So you concede it was Theoretical Pysics. Spacetime is not a real*

> *place, so it is only a model, as you say, just like mine.*

Does your theory agree with experiment? I had heard you were hung up on velocity, without respect to mass...

> *But many*

> *claim it is reality, and that's the rub, where they argue*

> *nonsensically that curved space exists!*

It agrees with experiment. It fails miserably at the quantum level, where neither time nor space have meaning.

> *Never mind that Einstein*

> *failed to explain where the power of curved space comes from – that*

> *power it must have in order to force objects to change directions*

> *continually into its curved shapes.*

No "power" required, since everything is following a geodesic, aka "a straight line for a body of that size, at that speed".

sci.physics: Re: what is the relation between force and energy?

- > *And never mind that "frame*
- > *dragging" is no less expected from gravitation than it is from "curved*
- > *space".*

I believe that frame dragging will be discernable, once we can get a little closer to some massive, rapidly spinning bodies. Light should be preferentially slightly blue-shifted on one side, and slightly red shifted on the other. Of course Gravity Probe B's results will be in before we have space travel... ;>)

- > *Some people still take the leap of faith from reality to*
- > *fantasy as it regards spacetime. I seem to remember that Einstein*
- > *specifically stated that GR was not a replacement for gravitation,*
- > *only an alternative explanation. Why then do some argue vehemently*
- > *that GR has replaced Newtonian gravitation?*

Because they sell lots of massively parallel computer architecture, and they get more accurate results. It is about science, and that is about measurement. Newton doesn't do the advance of the perihelion of Mercury, even though it gets about 9 sig figs right...

- > *Are they trying to*
- > *convince themselves of that? Or trying to convert others to their*
- > *silly beliefs?*

And what are you doing? It appears the same, but with and any quantification.

David A. Smith