

Re: Search for Higgs Boson not dangerous.

Source: <http://sci.tech-archive.net/Archive/sci.physics/2004-08/8585.html>

From: TomGee (lvlus_at_hotmail.com)

Date: 08/28/04

Date: 28 Aug 2004 00:21:10 -0700

Bjoern Feuerbacher <feuerbac@thphys.uni-heidelberg.de> wrote in message news:<cgnosr\$P41\$1@news.urz.uni-heidelberg.de>...

> TomGee wrote:

> > Bjoern Feuerbacher <feuerbac@thphys.uni-heidelberg.de> wrote in message news:<cgl5bk\$bvH\$2@news.urz.uni-heidelberg.de>...

> >

> >> TomGee wrote:

> >>>

> >>>> "Old Man" <nomail@nomail.net> wrote in message news:<DaydnV08J62AyLfcRVn-pA@prairiewave.com>...

> >>>>

> >>>>> Rather than an explosion of matter, the Big-Bang was / is an

> >>>>> explosion of space, and not at just one point, but at all points.

> >>>>> Local mass / energy exists in an inertial reference frame that

> >>>>> co-moves with the expansion.

> >>>>>

> >>>>> So you believe that as the universe expands, space and all

> >>>>> objects/systems in it move along with it as if fixed in the space they

> >>>>> occupy?

> >>>>

> >>>>> It seems the latter would be correct since

> >>>>> objects/systems appear to be independently moving away from each

> >>>>> other. If the former were true, that requires some sort of universal

> >>>>> absolute force to impose itself upon all objects/systems in relation

> >>>>> to the space they occupy, and in relation to all of space.

> >>>>

> >>>>> Err, how does this follow?

> >>>>

> > In an explosion, matter flies outward from its center in all

> > directions due to the impetus provided by the forces of the explosion,

> > and such matter moves independently of the space it moves through. In

> > a landmine explosion, e.g., the air through which the metal fragments

> > fly does not expand or move along with them. In order for objects to

> > move along with the expansion of space as if they are fixed in the

> > space they occupy, something must fix them "in place" like a glue

> > would fix ants on the surface of an expanding balloon.

>

> The force which fixes them there is simply inertia.

sci.physics: Re: Search for Higgs Boson not dangerous.

>

And just how does inertia fix them in place?

>

> >>> *Such a force is not evident, but if you have a theory about it, let's have*
> >>> *it.*

> >>

> >> *The theory which says that the universe "carries" objects with it as it*
> >> *expands is called General Relativity.*

> >>

No, that is incorrect. GR says no such thing. References, please.

> >

> *The geodesic equation of GR (that's the analogue of Newton's first law,*
> *essentially – it tells us how things move as long as no forces act on*
> *them) tells us that as long as no forces act on an object, its*
> *coordinates will not change. Nevertheless, since the distance between*
> *any two objects is given by $a(t) * \sqrt{dx^2 + dy^2 + dz^2}$, where $a(t)$*
> *is the so-called "scale parameter" (I give here only the simplest*
> *example, a flat universe; for the general case, read up on*
> *"Robertson–Walker metric"), the distances between objects increases with*
> *time, even if their coordinates stay the same.*

>

But doesn't that contradict the basis of the spacetime diagram where distance remains the same through time? (Kitty Ferguson, "Stephen Hawking Quest For A theory Of Everything", Bantam Books, 1991, pp 100–105). Remember that anything is possible with math constructs, as Einstein proved with his "static universe". Now GR talks about a rocketship fixed on the surface of the earth while actually moving through time, but he made that up so as to explain his curved–space theory. GR states that curved space "moves along" with massive bodies in their travels through space, but I don't think Einstein meant that space moves along with the bodies, just the curvature effect caused by mass. Is that what you refer to with your references to GR? If so, the analogy does not fit your point.

>

> *How else would you call that than "space carries objects along with it"?*

>

I have never heard it said that way. I have heard it said that objects move through space due to the effects of the BB, and that space, and thus our universe, is expanding due to the BB, but I have not heard it said that space carries objects along with it as it expands. You either have a new theory or you are not quite comprehending the essence of that which we speak.

>

> *One could perhaps also say "object stay where they are, but the space*
> *between them expands" – that has the same effect.*

>

No, not so. As the space expands, objects would separate all the more as more space is added. BTW, where do you propose all the new space is coming from? If it is not from the BB, how is it created and expanded? As the u. expands, it seems that objects are moving more apart, as if space were moving them apart or as if their inertia due

sci.physics: Re: Search for Higgs Boson not dangerous.

to the BB were moving them apart. I would go with the latter cause of the effect, as space has not a power with which to move mass, nor to curve space, for that matter, as Einstein contended.

I also think that space is absolute except where the BB has emptied out (and apparently is still emptying out) positive and negative energies into empty space which is now not empty but filled with such energies of which some have been converted into mass, and that space is now our universe.

Cheers,
TomGee