

Re: Bill Bryson and the big bang

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From: Franz Heymann (*notfranz.heyman_at_btopenworld.com*)

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"greywolf42" <mingstb@marssim-ss.com> wrote in message
news:10dlpq6e25326b9@corp.supernews.com...
> *Bjoern Feuerbacher* <feuerbac@thphys.uni-heidelberg.de> wrote in
message
> news:cbbflo\$jpu\$1@news.urz.uni-heidelberg.de...
> > greywolf42 wrote:
> > > *Bjoern Feuerbacher* <feuerbac@thphys.uni-heidelberg.de> wrote in
message
> > > news:cb8p1t\$e1c\$2@news.urz.uni-heidelberg.de...
> > >
> > >> *Jonathan Silverlight* wrote:
> > >>
> > >>> In message <cb6fqj\$pim\$2@news.urz.uni-heidelberg.de>, *Bjoern*
> *Feuerbacher*
> > >>> <feuerbac@thphys.uni-heidelberg.de> writes
> > >
> > >
> > >>> *By crossing two very intense laser beams, one can indeed*
produce
> > >>> *matter.*
> > >>>
> > >>> *Interesting! Is that a practicable method of producing*
antimatter?
> > >>>
> > >>> *Depends on what you mean by "practicable"... You need a lot of*
energy
> > >>> *to do that.*
> > >
> > > *And you need to understand that Bjoern made up the crossed laser*
beams.
> >
> > *I did not "make it up". I simply misremembered it, and freely*
admitted
> > *this, after it was pointed out that I am wrong.*
> >
> > *Stop lying.*
>

sci.physics: Re: Bill Bryson and the big bang

> *As far as I can tell, there are *no* crossed laser beam experiments.*

There

> *was no such experiment for you to misremember.*

You've had your mileage on this. Now stop playing silly buggers. It simply illuminates your vacuity.

> > > *Theoretically, it would take gamma-ray lasers (at a minimum).*

And

> > > *experimentally, photons don't seem to create charged particles except in*

> > > *the near vicinity of charged particles.*

> >

> > *Experimentally, it was shown that gamma rays interacting with a laser*

> > *produce electron-positron pairs. The link to the relevant experiment*

> > *was given in this thread.*

>

> *The experiment Franz came up with (E144) had nothing to do with crossed*

> *lasers (or even gamma rays with lasers). It was an electron beam - photon*

> *experiment.*

Ye gods, yet again?

> > *Stop lying.*

>

> *There are no crossed laser experiments.*

You bloody arsehole

>

> *There is also (AFAIK) no gamma-ray - laser experiment.*

>

>

[http://66.102.7.104/search?q=cache:OX1eX0yiaEAJ:www.hep.princeton.edu/~mcdon](http://66.102.7.104/search?q=cache:OX1eX0yiaEAJ:www.hep.princeton.edu/~mcdonald/e144/ssitalk.pdf+laser+%22positron+production%22&hl=en)

> *ald/e144/ssitalk.pdf+laser+%22positron+production%22&hl=en*

>

> *From the abstract of E144: "A signal of 106 +- 14 positrons above background*

> *has been observed in collisions of low-emittance 46.6-GeV electron beam with*

> *terawatt pulses from a Nd:glass laser at 527 nm wavelength in an experiment*

> *at the Final Focus Test Beam at SLAC."*

>

> *And the introduction is: "This paper discusses recent experimental results*

> *obtained by the E-144 collaboration on the interactions of electrons and*

> *photons in very intense electromagnetic fields."*

Re: Bill Bryson and the big bang

- >
- > *It seems that you are wrong again. However, your confusion is*
- > *understandable, if you simply read the title of the paper. Or,*
- perhaps you
- > *continue to be confused by the *theoretical* claim made in the*
- abstract (or
- > *by the title): "The positrons are INTERPRETED as arising from a*
- two-step
- > *process in which laser photons are backscattered to GeV energies by*
- the
- > *electron beam, followed by a collision between the high energy*
- photon and
- > *several laser photons to produce an electron positron pair. These*
- results
- > *are the first laboratory evidence for inelastic light-by-light*
- scattering
- > *involving only real photons." (emphasis added)*

You are, of course, free to INTERPRET it in another way. Why do you not do so?

- >
- > *But regardless of theoretical hype and salesmanship, the experiment*
- remains
- > *one of multi-GeV electrons hitting laser photons. And multi-GeV*
- electrons
- > *hitting *anything* have sufficient energy to produce*
- electron/positron pairs
- > *(which only takes 1.022 MeV).*

That was handwaving.

Please estimate the relative cross sections for the process described by you, and the process described by the authors of that paper. Did you really think that they did not consider as many alternatives as they could conceive of before making such a strong statement?

How about reading the whole paper?

Franz