

Re: Expansion of the universe

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From: Luke Valens (flyboy1986_at_yahoo.com)

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Sam Wormley <swormley1@mchsi.com> wrote in message news:<gGy8d.335202\$Fg5.107@attbi_s53>...

> *john wrote:*

> > *Ok, so the universe is expanding because every point in the universe*
> > *seems to be moving away from every other point. This seems a fair*
> > *asumption, however something troubles me here. When we look back into*
> > *space it seems we also look back in time. Now let say the universe is*
> > *15b years old and we have a really super telescope the can see some*
> > *distant galaxy at a distance of 12b light years from earth, therefore*
> > *we are looking 12b year back in time. This suggests that if we can*
> > *see this distance from every direction then the diameter of this*
> > *'sphere' of the visible universe is 24b light years across. Surely so*
> > *far back in time when the universe was only 3b years old how could it*
> > *have expanded from the single point of a big bang to such a size.*
> > *When the universe was 3b years old, the greatest distance any matter*
> > *could have travelled is only 3b light years is it not?*
> > *can someone help me out here?*
> > *john.*

>
> *We only see a small fraction of possibly an infinite universe.*

>
> *No Center*
> <http://www.astro.ucla.edu/~wright/nocenter.html>

>
> *Also see Ned Wright's Cosmology Tutorial*
> <http://www.astro.ucla.edu/~wright/cosmolog.htm>
> http://www.astro.ucla.edu/~wright/cosmology_faq.html

>
> *WMAP: Foundations of the Big Bang theory*
> http://map.gsfc.nasa.gov/m_uni.html

>
> *WMAP: Tests of Big Bang Cosmology*
> http://map.gsfc.nasa.gov/m_uni/uni_101bbtest.html

String theory tells us that the big bang could actually have been our "brane" bumping into another "brane", causing a release of energy.

My understanding of all this: String theory provides that the most basic unit of anything is a "string", or a small, vibrating, open or

closed loop of energy. The way this string vibrates determines the matter or energy that it makes up. It is theorized that these strings can expand to enormous sizes, eg the size of our universe. Such a string would be a 3 dimensional "flattened bubble", referred to as a membrane, or "brane". Many branes could exist as parallel universes, floating in a higher dimensional space. These branes would kinda be like slices of bread, with a different universe on each slice (remember that our entire observable universe is confined to our own slice of bread; we cannot see other slices). Every open string has its two endpoints permanently fixed on the brane, but gravitons (closed, free-floating loops of string) can "emanate" from the brane. So, it is theorized that when two branes collide, they release energy. This is used to explain the big bang, but in this theory all the matter did not have to be confined to a single point.