

The Beach Blanket Theory of the Universe

by R Brent Smith

A recent article triggered me to write this short bit of speculative science. A recent on-line article credited to The Canadian Press, written by Adithi Ramakrishan, writes about an observation by scientists working with the Dark Energy Spectroscopic Instrument. These scientists have been creating a map of how galaxies are moving across the universe. Based on their observations so far, they suggest that the acceleration of these galaxies seems to be weakening over time. This has consequences for our understanding of dark energy, an unidentified force that appears to be driving an accelerating expansion of the universe. This observation fits nicely with a bit of speculation about dark energy and dark matter that I included in one of my stories. I thought it worthwhile to pull that bit out and include it here.

I have always been bothered by the way dark energy and dark matter came into being. There was no discovery of these entities, just our own lack of understanding of how the cosmos is working. These entities are invented to explain something we don't understand. Not much different than creating Thor and his hammer to explain thunder or great dragons who eat the sun to explain solar eclipses. You can wrap them in science-speak but they are just fables invented to cover up our ignorance.

Dark matter was invented to explain why galaxies are not flying apart. Many galaxies are rotating faster than their gravitational pull can counteract. Stars should be flung out of these galaxies, but they are not. There must be some source of additional gravity holding them in place. Since there is not enough observable ordinary matter in these galaxies to provide this pull, dark matter was invented. It is this additional invisible matter in these galaxies that is providing

the missing gravitational pull. We can't detect this dark matter because it doesn't interact with anything, only providing mass and gravity. The search is on for this mysterious stuff. Numerous experiments have failed to detect anything.

Dark energy was invented to explain a different phenomenon. Distant galaxies appear to be accelerating away as if some invisible force is pushing them. The galaxy seems to be infused with this force. Once again, it is an indirect measurement, nothing has been found that supplies this force. So astronomers invented dark energy, the source of a mysterious unexplained force that is driving the expansion of the universe ever faster.

So physicists are busily searching for their elusive mythical dark things, their Loch Ness monsters. Like the search for Nessie, they have found nothing, so far.

So, I have a theory that eliminates the need for both of these dark figments of physicists' imaginations. I'll call it the Beach Blanket Theory of the Universe (BBTU). It goes something like this:

Imagine that you have a beach blanket, all scrunched up. You just came back from the beach so the blanket is full of loose sand. You toss the blanket onto your wood floor when you get home. The blanket's edges slide across the floor as it flattens onto the floor. As the blanket unfolds; the edges of the blanket are pushed outward by the unfolding parts closer to the centre. The sand trapped in the blanket will gather in the folds of the blanket and ride the blanket as it spreads across the floor. The outer edges of the blanket will move away from the centre faster and at an accelerating rate compared to the sections of the blanket closer to the center. This happens as folds closer to the centre unfold and push away those folds before them which are also unfolding and pushing the folds before them ever faster. From any point on the unfolding

blanket, it looks as if the rest of the blanket is accelerating away. The farther one looks, the greater the acceleration.

Now, let's look at the universe. They tell us that the universe started from a very dense initial seed and exploded out from there (Big Bang Theory). What if this dense seed was space time, folded up on itself. Space time is often referred to as the fabric of space. Space time is our blanket. Einstein's General Theory of Relativity tells us that gravity bends space time. But shouldn't the opposite be true – bent space time acts like gravity. We also know that space time is elastic. It doesn't like being bent or folded. We can see this in the orbit of our planet about the sun. Its gravity, the bending of space time according to relativity, only occurs where the Earth is located. As the Earth moves through space, space time bends around it and then returns to its original form – it is elastic.

So, we have a folded up fabric of space time. In the folds are regions of increase gravity where stars and galaxies form – the sand in the folds of our blanket. As space time unfolds/expands, these stars and galaxies ride within it, much like the sand rides on the blanket. The folds in space time create webs of enhanced gravity where the stars and galaxies form. This explains the distribution of galaxies and matter that we see today. They appear to be distributed across the galaxy in a web-like distribution. The unfolding of space time drives those galaxies to spread out, those further away accelerating away as space time everywhere unfolds.

We get to today. Space time is still a little wrinkled, those wrinkles, those bends in space time providing the extra gravity holding galaxies together and the continued unfolding of these wrinkles in space time driving the expansion of the universe.

In the future, the expansion will continue until space time is completely unfolded. As space time 'flattens' the expansion of the universe will stop and galaxies will lose that extra

gravity caused by the folding of space time in their location. Those spinning galaxies will start casting off their fastest moving stars. These galaxies will spread through their local space like spinning pizza dough.

So there it is. My beach blanket theory of the universe. I think that I have solved the mystery of dark matter and dark energy. I am expecting a call from the Nobel committee anytime now.