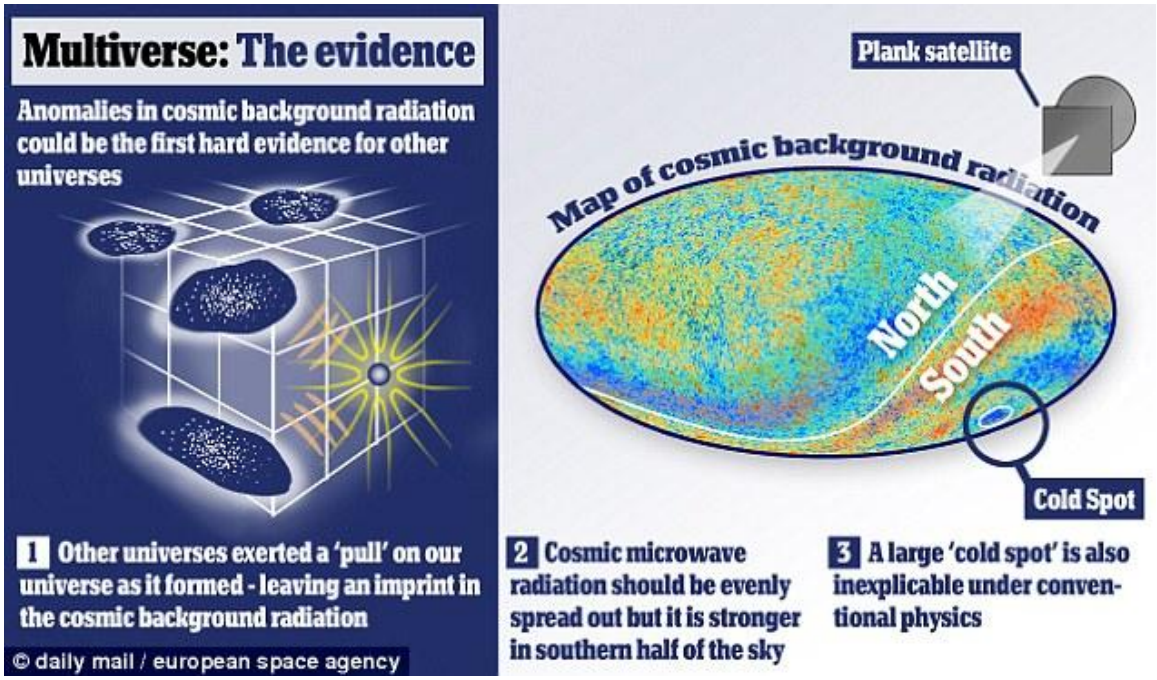
Is our universe merely one of billions? Evidence of the existence of 'multiverse' revealed for the first time by cosmic map

- Scientists studied radiation data gathered by Planck telescope
- Claim anomalies show gravitational pull from other universes
- Could be the first real evidence to support controversial theory

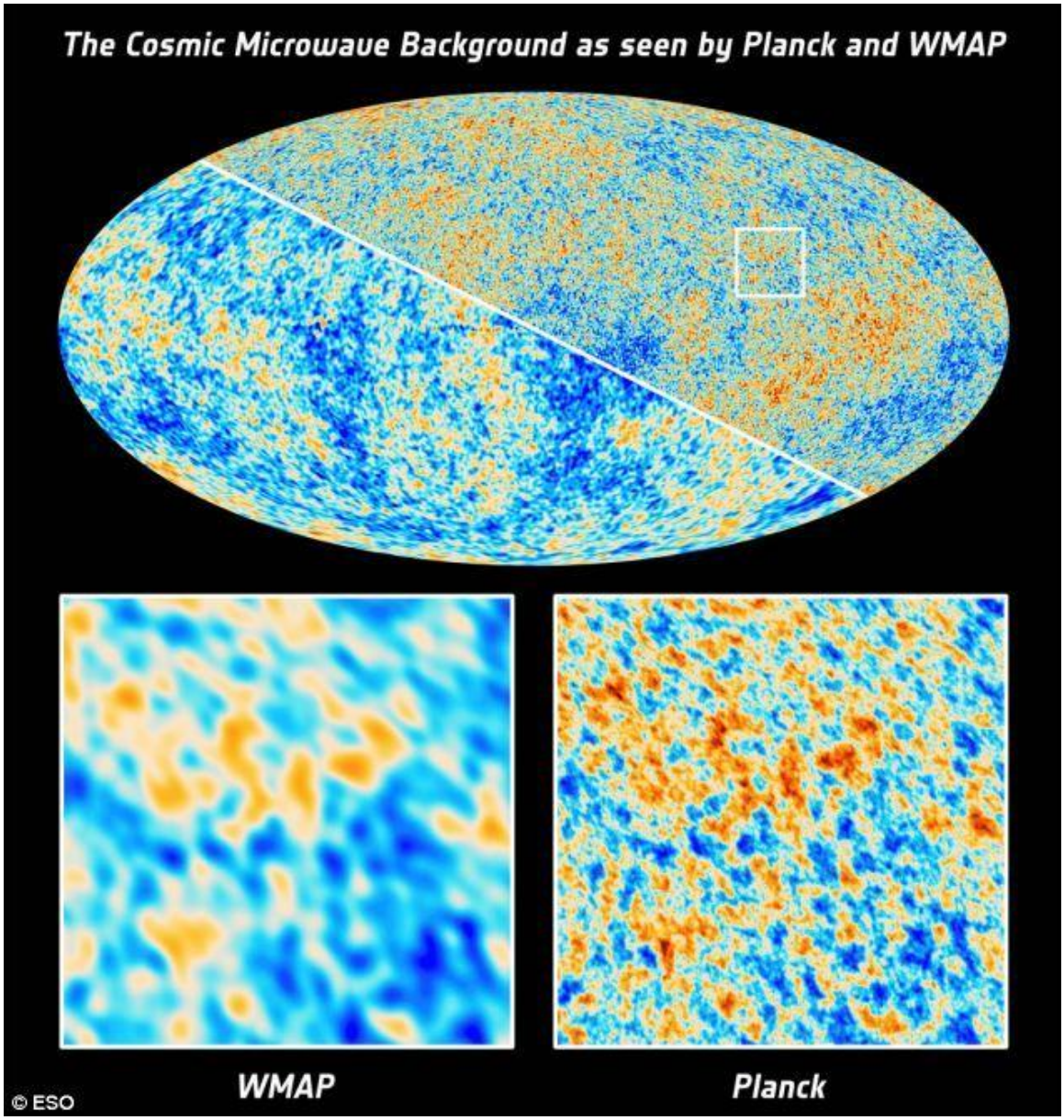
The first 'hard evidence' that other universes exist has been found by scientists.
Cosmologists studying a map of the universe from data gathered by the Planck spacecraft have concluded that it shows anomalies that can only have been caused by the gravitational pull of other universes.
The map shows radiation from the Big Bang 13.8billion years ago that is still detectable in the universe - known as cosmic microwave radiation.



Scientists had predicted that it should be evenly distributed, but the map shows a stronger concentration in the south half of the sky and a 'cold spot' that cannot be explained by current understanding of physics.
Laura Mersini-Houghton, theoretical physicist at the University of North Carolina at Chapel Hill, and Richard Holman, professor at Carnegie Mellon University, predicted that anomalies in radiation existed and were caused by the pull from other universes in 2005.

Now that she has studied the Planck data, Dr Mersini-Houghton believes her hypothesis has been proven. Her findings imply there could be an infinite number of universes outside of our own.
She said: 'These anomalies were caused by other universes pulling on our universe as it formed during the

Big Bang.
'They are the first hard evidence for the existence of other universes that we have seen.'



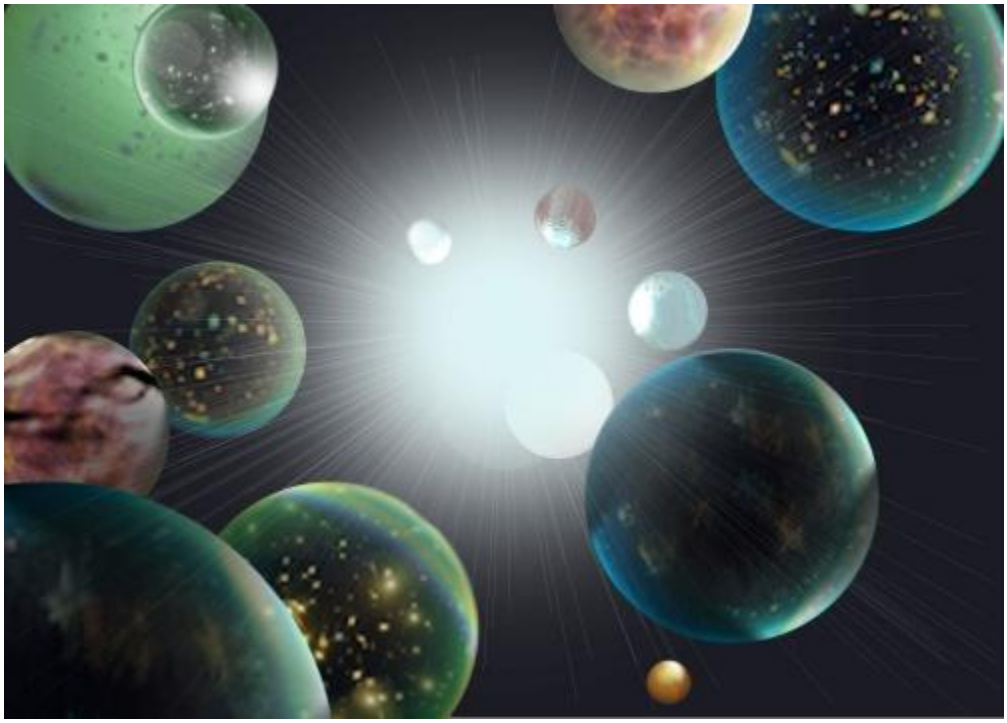
Detailed: Planck data has been used to create a map of light from when the universe was just 380,000 years old

Although some scientists remain sceptical about the theory of other universes, these findings may be a step towards changing views on physics.

The European Space Agency, which runs the £515million Planck telescope, said: 'Because precision of Planck's map is so high, it made it possible to reveal some peculiar unexplained features that may well require new physics to be understood.'
Cambridge professor of theoretical physics Malcolm Perry told the Sunday Times that the findings could be real evidence of the existence of other universes.
While George Efstathiou, professor of astrophysics at the university, told the newspaper: 'Such ideas may sound wacky now, just like the Big Bang theory did three generations ago. But then we got evidence and now it has changed the whole way we think about the universe.'

, Then it could debunk some of the discoveries physicists were hoping to make at the Large Hadron Collider, the huge, multi-billion-dollar particle accelerator in Geneva, Switzerland, at which researchers recently discovered the famous "Higgs boson."
It would also suggest that we might be living in a "multiverse"—a universe that is much bigger than was once thought and in which the laws of physics take different forms in different places.
An article, published by Simons Science News, explains some of this.
Linking to an influential paper by UD physics professors Stephen M. Barr, David Seckel, then-graduate student Vivek Agrawal, and John F. Donoghue, a professor and colleague at the University of Massachusetts, Amherst, the article examines the "principle of naturalness," which for decades has been thought to govern the size of the numbers appearing in the laws of physics.
Generally, whenever some quantity was found to be much smaller than what physicists had thought to be its "natural" value, some new force, mechanism, or symmetry was discovered that explained the anomaly.
The UD professors' 1997 publication remains one of the major documents on the subject.
"It all has to do with one of the main theoretical puzzles in fundamental physics," explains Barr. "Why is the mass of the Higgs particle 17 orders of magnitude smaller than its 'natural' value?"
Two explanations have been proposed, and both of them predict new phenomena that should be seen by the LHC. But so far, there is no hint of them.
"That is why our radical proposal nearly 15 years ago is attracting increasing attention," he adds.
Their idea is that the Higgs boson mass has to have an "unnaturally" small value for life to be possible. In other words, if it didn't, we wouldn't be here.
Barr explains that one way to account for this is to say that the Higgs boson mass varies place to place (which can happen in a multiverse) and only in those rare places where it has the right, unnaturally small value would life emerge and someone exist who could measure it.

Fine-tuning for life in the multiverse



Multiverse

Before embarking upon his ultimately successful quest to discover the laws of planetary motion, Johannes Kepler tried to explain the sizes of the orbits of the planets from first principles: developing a mathematical model of the orbits based upon nested Platonic solids. Since, at the time, the solar system was believed by most to be the entire universe (with the fixed stars on a sphere surrounding it), it seemed plausible that the dimensions of the solar system would be fixed by fundamental principles of science and mathematics.

Even though he eventually rejected his model as inaccurate, he never completely abandoned it — it was for later generations of astronomers to conclude that there is nothing fundamental whatsoever about the structure of the solar system: it is simply a contingent product of the history of its condensation from the solar nebula, and could have been entirely different. With the discovery of planets around other stars in the late twentieth century, we now know that not only do planetary systems vary widely, many are substantially more weird than most astronomers or even science fiction writers would have guessed.

Since the completion of the Standard Model of particle physics in the 1970s, a major goal of theoretical physicists has been to derive, from first principles, the values of the more than twenty-five "free parameters" of the Standard Model (such as the masses of particles, relative strengths of forces, and mixing angles). At present, these values have to be measured experimentally and put into the theory "by hand", and there is no accepted physical explanation for why they have the values they do.

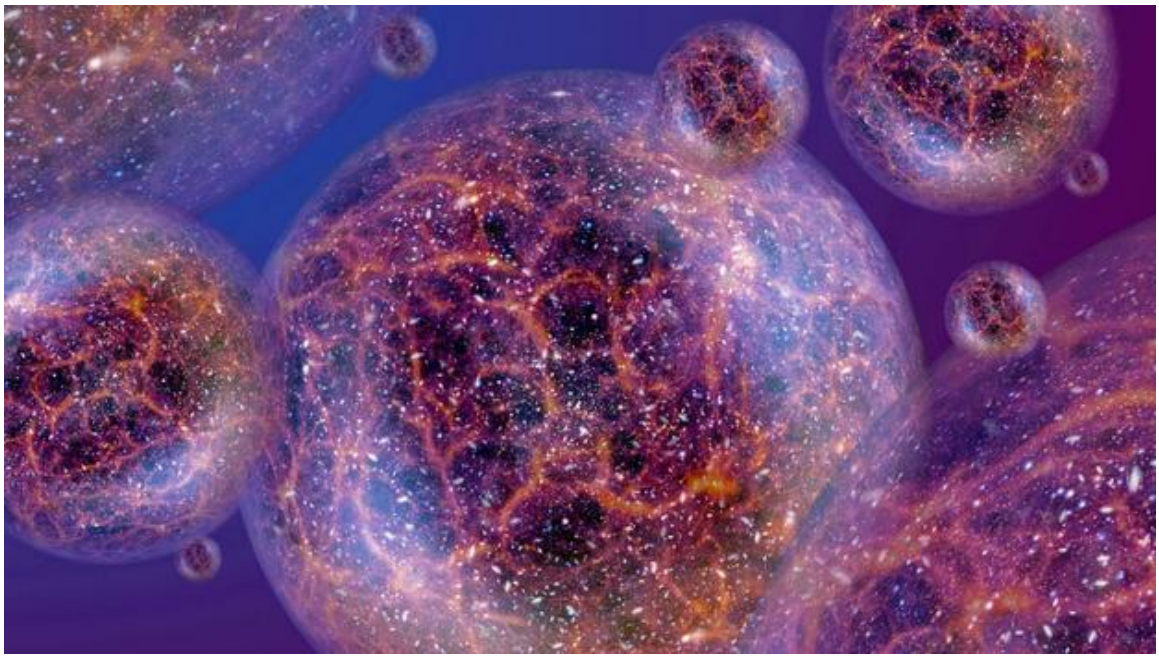
Further, many of these values appear to be "fine-tuned" to allow the existence of life in the universe (or at least, life which resembles ourselves) — a tiny change, for example, in the mass ratio of the up and down quarks and the electron would result in a universe with no heavy elements or chemistry; it's hard to imagine any form of life which could be built out of just protons or neutrons.

The emergence of a Standard Model of cosmology has only deepened the mystery, adding additional

apparently fine-tunings to the list. Most stunning is the cosmological constant, which appears to have a nonzero value which is 124 orders of magnitude smaller than predicted from a straightforward calculation from quantum physics.
One might take these fine-tunings as evidence of a benevolent Creator, or of our living in a simulation crafted by a clever programmer intent on optimising its complexity and degree of interestingness. But most physicists shy away from such deus ex machina and "we are in machina" explanations and seek purely physical reasons for the values of the parameters we measure.
Now let's return for a moment to Kepler's attempt to derive the orbits of the planets from pure geometry. The orbit of the Earth appears, in fact, fine-tuned to permit the existence of life. Were it more elliptical, or substantially closer to or farther from the Sun, persistent liquid water on the surface would not exist, as seems necessary for terrestrial life.
The apparent fine-tuning can be explained, however, by the high probability that the galaxy contains a multitude of planetary systems of every possible variety, and such a large ensemble is almost certain to contain a subset (perhaps small, but not void) in which an earthlike planet is in a stable orbit within the habitable zone of its star. Since we can only have evolved and exist in such an environment, we should not be surprised to find ourselves living on one of these rare planets, even though such environments represent an infinitesimal fraction of the volume of the galaxy and universe.
As efforts to explain the particle physics and cosmological parametershave proved frustrating, and theoretical investigations into cosmic inflation and string theory have suggested that the values of the parameters may have simply been chosen at random by some process, theorists have increasingly been tempted to retrace the footsteps of Kepler and step back from trying to explain the values we observe, and instead view them, like the masses and the orbits of the planets, as the result of a historical process which could have produced very different results.
The apparent fine-tuning for life is like the properties of the Earth's orbit — we can only measure the parameters of a universe which permit us to exist! If they didn't, we wouldn't be here to do the measuring.
But note that like the parallel argument for the fine-tuning of the orbit of the Earth, this only makes sense if there are a multitude of actually existing universes with different random settings of the parameters, just as only a large ensemble of planetary systems can contain a few like the one in which we find ourselves. This means that what we think of as our universe (everything we can observe or potentially observe within theHubble volume) is just one domain in a vastly larger "multiverse", most or all of which may remain forever beyond the scope of scientific investigation.
Now such a breathtaking concept provides plenty for physicists, cosmologists, philosophers, and theologians to chew upon, and macerate it they do in the book Universe or Multiverse? In this volume, a number of active and eminent researchers in the field address the issues and describe recent developments. The book is far from a cheering section for multiverse theories: both sides are presented and, in fact, the longest chapter is the one which deems the anthropic principle and anthropic arguments entirely nonscientific.

Multiverse theory, NO just one extra.

There's a vast amount of fun to be had with the possibilities that other universes exist, so how should we react to claims that some of these might be real?



I'm talking about the multiverse theory; the mind-bending idea that there are many if not innumerable other universes beyond our own. There's a vast amount of fun to be had with the possibilities of multiple universes, and contemplating infinite possibilities soon gets silly. Which isn't to say serious people haven't given the multiverse serious thought. Enough of them with enough differing and overlapping hypotheses and terminologies to ensure reality-blurring confusion as you bounce about between "parallel worlds", "divergent timelines", "quantum universes" and "n-dimensional branes".

NO just one the 5th dimension

The Infinite Universe vs the Myth of the Big Bang:
Red Shifts, Black Holes, Acceleration, Life.

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Cosmology.com

Abstract

The creationist theory of the Big Bang was proposed by a Catholic Priest and implies the existence of a

creator. Why the Universe should have had a beginning, or why it would have been created, cannot be explained by classical or quantum physics. To support the myth of the Big Bang, estimates of the age and size of the cosmos, including claims of an accelerating universe, are based on an Earth-centered universe with the Earth as the measure of all things, exactly as dictated by religious theology. However, distance from Earth is not a measure of the age of far away galaxies. The myth of the Big Bang cannot explain why there are galaxies older than the Big Bang, why fully formed galaxies continue to be discovered at distances of over 13 billion light years from Earth, when according to Big Bang theory, no galaxies should exist at these distances. To support the Big Bang Myth, red shifts are purposefully misinterpreted based on Pre-Copernican geo-centrism with Earth serving as ground zero. Red shifts are variable, effected by numerous factors, and do not provide measures of time, age or distance. Nor can Big Bang theory explain why galaxies collide, why rivers of galaxies flow in the "wrong" direction, why galaxies clump together creating great walls of galaxies which took from 80 billion to 150 billion years to form. Big Bang theory requires phantom forces, constantly adjusted parameters, and *ad hoc* theorizing to explain away and to cover up the numerous holes in this theory. The Big Bang is a myth, major portions of which have been repeatedly falsified. The preponderance of evidence supports the reality of an infinite cosmos which consists of multiple "Hubble Length Universes" which constantly recycles itself. An infinite, eternal, cycling universe has no creator, was not created, dispenses with the need for a "creator god" and does not place Earth at the center of the cosmos. The infinite universe is peppered with infinite gravity-holes ranging in size from those smaller than a Planck length to universe-in-mass holes (Joseph 2010). Super-massive holes in the center of galaxies, galaxy-in-mass holes in galactic clusters, and a universe-in-mass black hole on the outskirts of this Hubble length universe, explains why galaxies cluster together, why galaxies are moving in every conceivable direction and at variable speeds, and why the velocity of distant galaxies are accelerating. The universe is not expanding or accelerating. Distant galaxies are accelerating to their doom, their velocities and red shifts increasing and their illumination dimming as they orbit toward the event horizon of a universe-in-mass black hole on the outskirts of the observable Hubble length universe. Black holes, including those smaller than a Plank length, continually destroy and reassemble matter beginning with hydrogen atoms, thereby giving rise to molecules, planets, stars, new galaxies, and Hubble Length Universes which are also recycled. If there was a big bang, it was not the beginning, but a continuation, emerging from the quantum electro-dynamic continuum and eventually collapsing, and then repeating the "big bang" cycle, which also maintains the cycle of life. Through stellar nuclear-synthesis hydrogen becomes carbon, and stars provide the ingredients for life. In an infinite cosmos consisting of infinite universes, life has had infinite time to arise from energized aggregates of complex chemical compounds produced by stars created from hydrogen atoms produced by black holes which consist of gravity. There was no Big Bang beginning. The Big Bang is religion masquerading as science. The cosmos is infinite and eternal, continually recycles itself, and has no beginning, and, no end.

Keywords: Big Bang, Cyclic Universe, Infinite Universe, Red Shifts, Black Holes, Galaxies, Expanding Universe, Accelerating Universe, Hubble Constant, Hubble's Law

1. The Myth of the Big Bang: When Religion Masquerades as Science

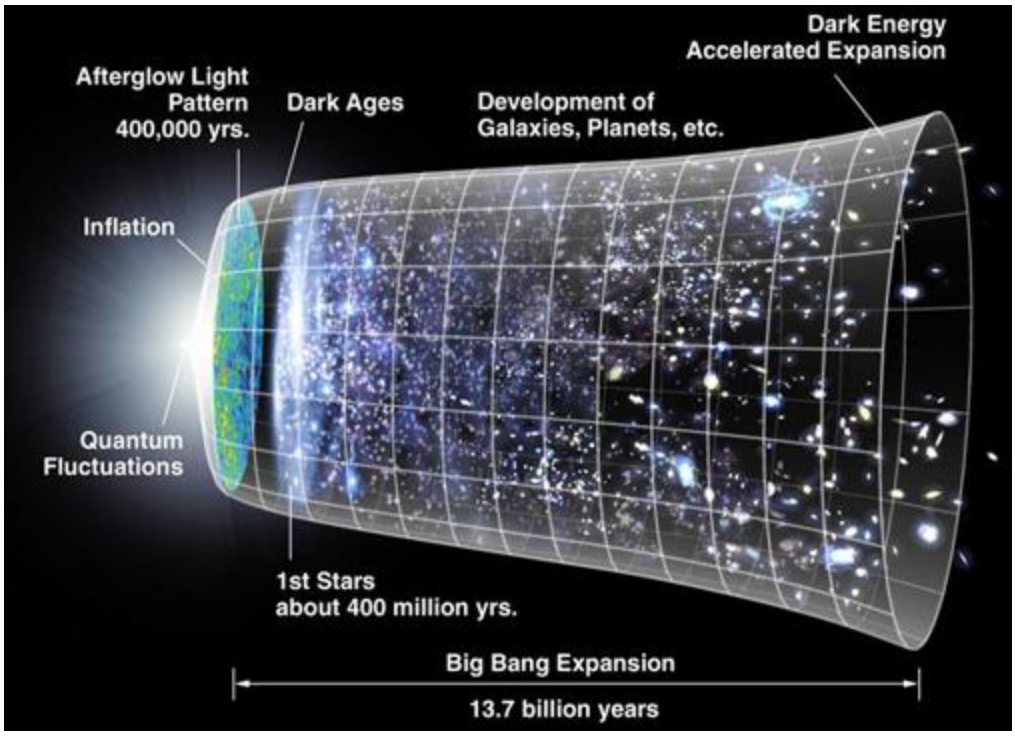
> "The universe... the region observed appears as a small, homogeneous, but insignificant portion of a universe extended indefinitely both in space and time" - Edwin Hubble, Royal Astronomical Society Monthly Notices, 17, 506, 1937.

The cosmos is infinite, eternal, and has no beginning and no end. What we call the

"known" universe is not just a big piece of a greater *whole*, or one universe among a multiverse, but an insignificant micro-macro-molecular micro-universe among an infinity of similar micro-universes.

If, from an infinite perspective, or a metaphorical "god's-eye-view", we could gaze upon the infinite cosmos as a *whole* we would discover that our *known, observable* "Hubble length" universe is an atom-sized fragment of an infinite ensemble of molecular building blocks which make up and create *cosmic-super-structures*, much like elementary particles, atoms, and molecules comprise tables and chairs. Further, the infinite universe continually recycles matter, breaking down photons and protons by stripping away energy and gravity, and reassembling liberated elementary particles to create hydrogen atoms (Joseph 2010), thereby giving rise to molecules including planets, stars, galaxies, and the chemicals, gasses and metals necessary for life. An infinite universe has no creator and dispenses with the need for a creation event, or a creator god.

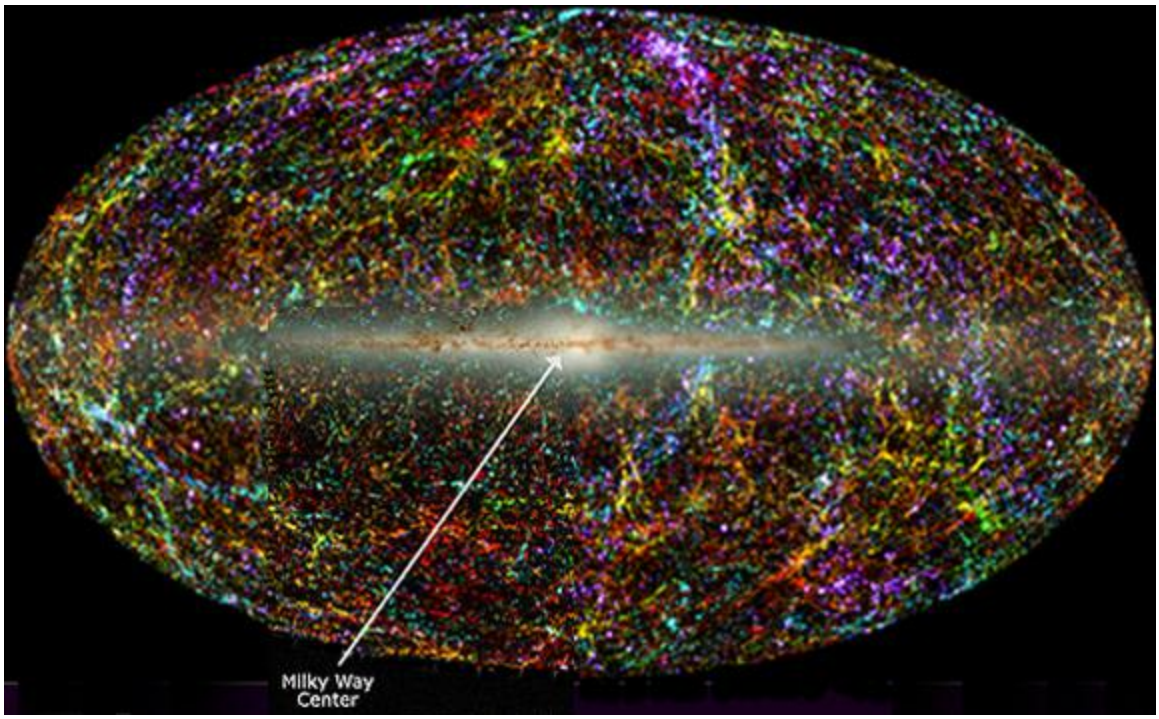
By contrast, Big Bang theology is predicated upon the Biblical belief in *creation*, which implies a creator, and thus a creator god. In fact, the Big Bang was proposed by a Catholic priest who wanted to make the Bible scientific (Lemaître 1927, 1931a,b). In Big Bang theology the universe was created through unknown mechanisms for unknown reasons which cannot be explained by science. Nor can the advocates of the Big Bang explain why the universe had a beginning, and, they are forced to ignore the obvious: what existed before the beginning? How did the *beginning* begin? What caused the Big Bang creation event? Quantum physics, classical physics, particle physics, general relativity, and so on are completely unable to even address these questions. No facts, no evidence, no theories, not even a reasonable scientific hypothesis has been put forward to explain why the universe should have had a beginning or what caused the so called "Big Bang." Because the very foundations of this theory cannot be explained by or are contrary to physics, the acolytes of Big Bang theology claim the laws of physics did not yet apply, before and at the moment of the Big Bang, and this is because these laws had not yet been created. Therefore, the standard Big Bang explanation is the "Universe was self-creating." However, this is not science, but theology. Belief in the absence of evidence and in the face of disconfirming evidence, is not science, but the domain of faith which belongs to the realm of religion. In fact, the Judeo-Christian religion employs identical terminology when describing "god" as the creator; that is, "god the creator became god the creator at the moment of creation, and thus god is self-creating."

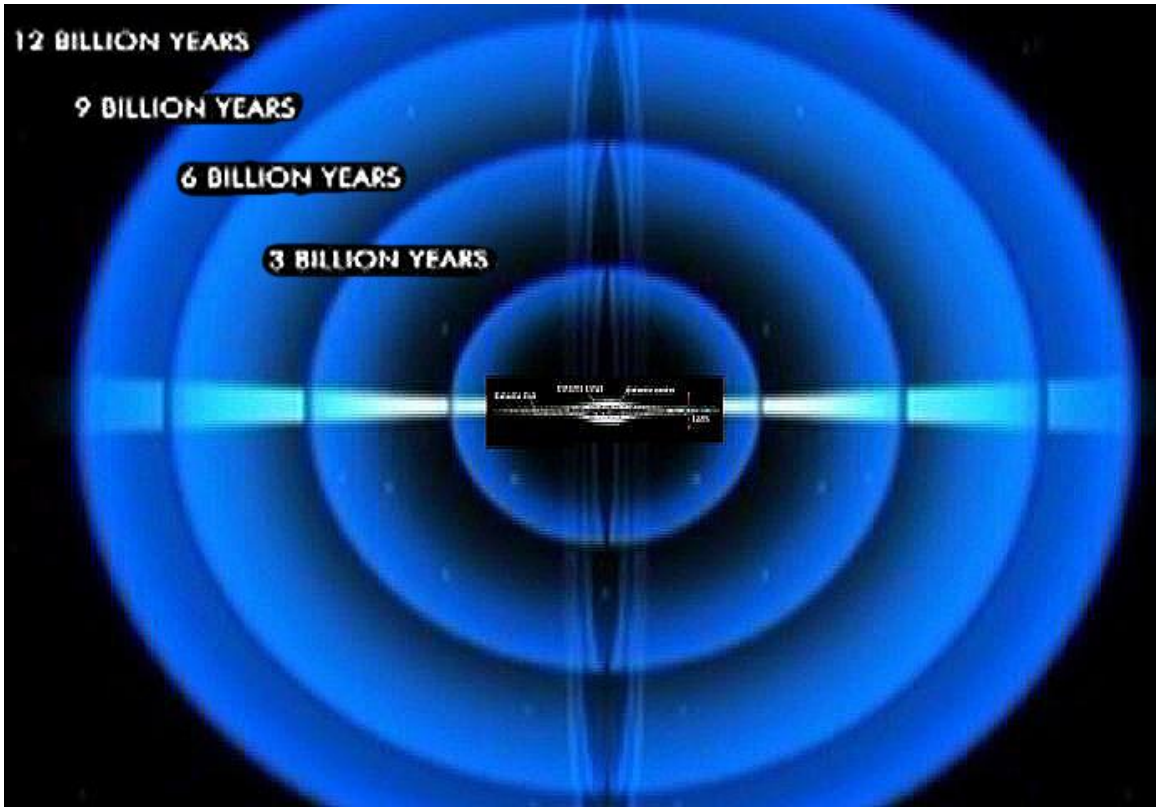


and it this mystical construct which provides the supernatural foundations for the myth of the Big Bang.

> "The universe was created out of nothing...and one which has an underlying, one might say 'supernatural' plan." -Arno Penzias Nobel Prize for Physics in 1978 for discovery of the cosmic background radiation of the 'big bang."

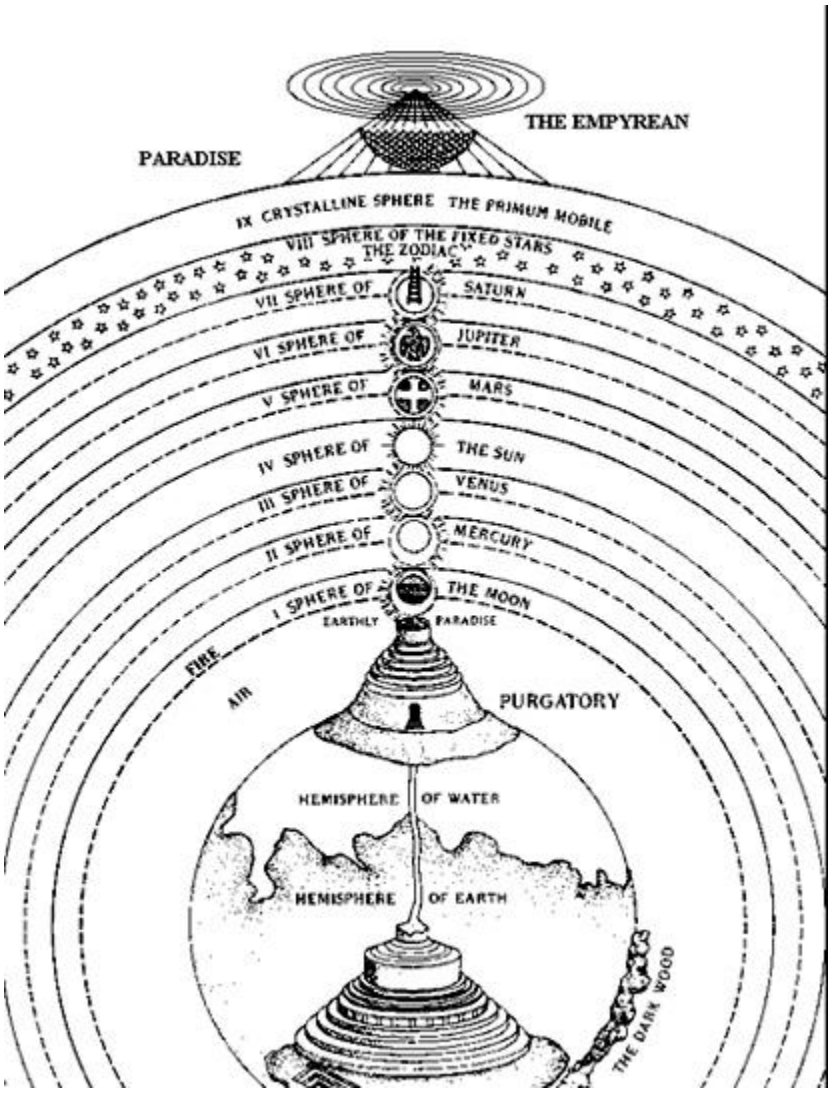
Not only are the acolytes of the Big Bang religion unable to scientifically explain *the beginning* but data marshaled in support of a Big Bang universe are predicated upon phantom energies and invisible undetectable substances (Bhattacharjee, 2010; Caldwell and Kamionkowski, 2009; Huan et al., 2010; Jamil. 2010; Perlmutter, 2003; Santos et al., 2010) which can't be explained by a coherent all-inclusive scientific theory. Rather than coherent mutually supportive data which can be tested and falsified, advocates instead change their parameters to nullify falsification, and rely upon simulations, interpretations based on questionable assumptions, *ad hoc* theorizing, constantly adjusted theoretical appendages, and estimated distances and ages relative to an Earth-centered geo-centric universe as dictated by the Jewish-Christian Bible and Catholic religion which for almost two thousand years placed Earth at the center of the universes. Therefore, data marshaled in support of the Big Bang place Earth at the center of the universe, with claims of age, distance, expansion, acceleration all relative to where the Earth is now (Perlmutter et al., 1998; Schmidt et al., 1998).





Thus, in the religion of the Big Bang, Earth serves as ground zero and the measure of all things. Thus according to Big Bang theology, a star is "13 billion years old" because it is "13 billion light years from Earth." A star, and thus the universe, is "accelerating" compared to stars closest to Earth (Perlmutter et

al., 1998; Schmidt et al., 1998). Stars display red-shift or blue-shift in relation to movement toward or away from Earth (Perlmutter et al., 1998; Schmidt et al., 1998). Although most cosmologists will deny it, their Big Bang interpretations of data require it: a geo-centric universe with Earth as the center and measure of all things--exactly as demanded by the Judeo-Christian religion.



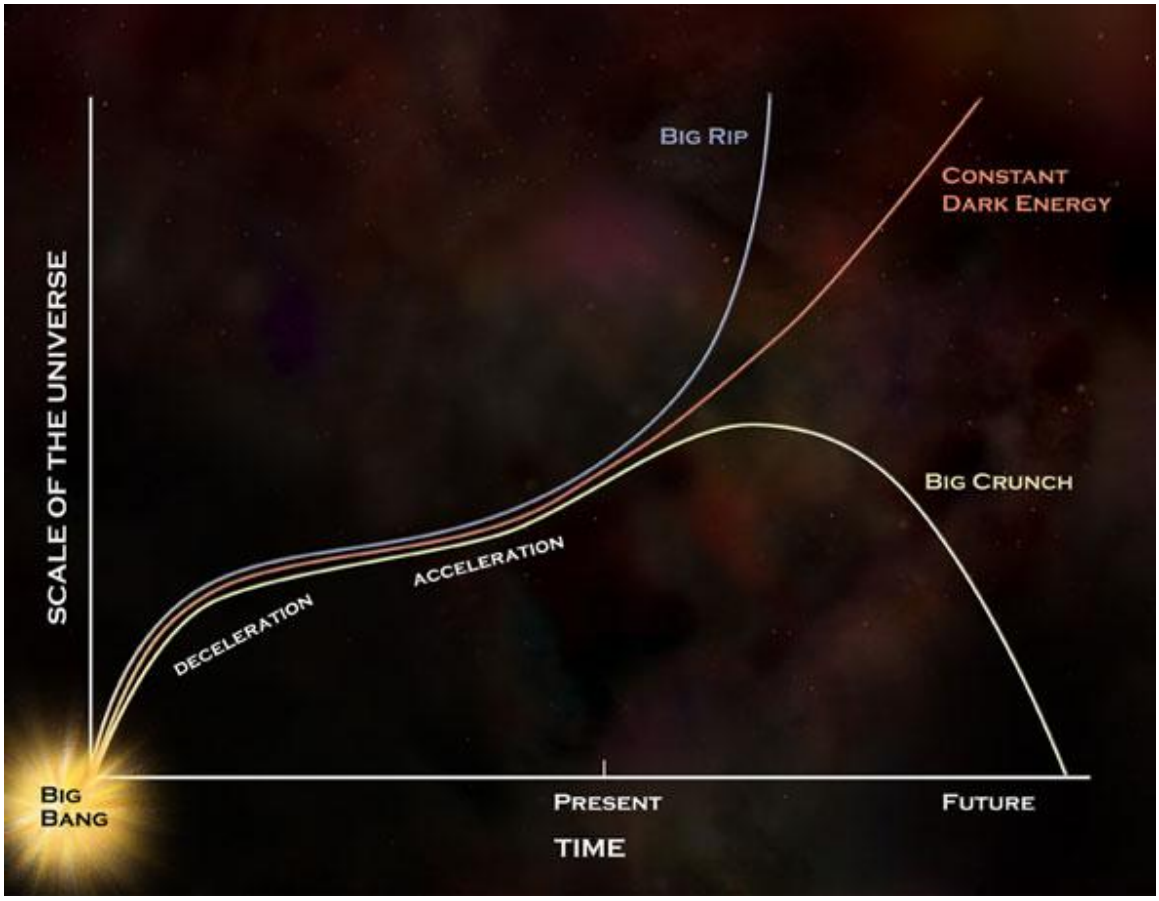
The "Big Bang" is religion masquerading as science. Its the Biblical story of Genesis dressed up in the language of science. The theory was in fact proposed to make the Bible scientific.

> "...there is no doubt that a parallel exists between the big bang as an event and the Christian notion of creation from nothing." -George Smoot, 2006 Nobel Prize in Physics.

The "Big Bang" model and the concept of an expanding universe was in fact first proposed by Monsignor Georges Lemaître (1927, 1931a,b), a high ranking Catholic Priest and a member of the Pope's Council of Scientists. Lemaître (1931a,b) called his theory the 'hypothesis of the primeval atom" and described it as "the Cosmic Egg exploding at the moment of the creation." In 1949, Fred Hoyle who championed the "steady state" theory of an infinite universe (Hoyle, 1948; Bondi and Gold 1948) ridiculed Lemaître's theory, calling it the "big bang." Hoyle was not alone. Einstein rejected Lemaître to his face at the 1927 Solvay conference, saying "your physics is abominable" (Deprit, 1984).

If there was an explosive creation event, the universe should expand and then collapse. The universe did not collapse. As there is so much data which contradicts uniform expansion as predicted by the Big Bang, such as the superstructures consisting of hundreds of millions of galaxies clumped together in a series of

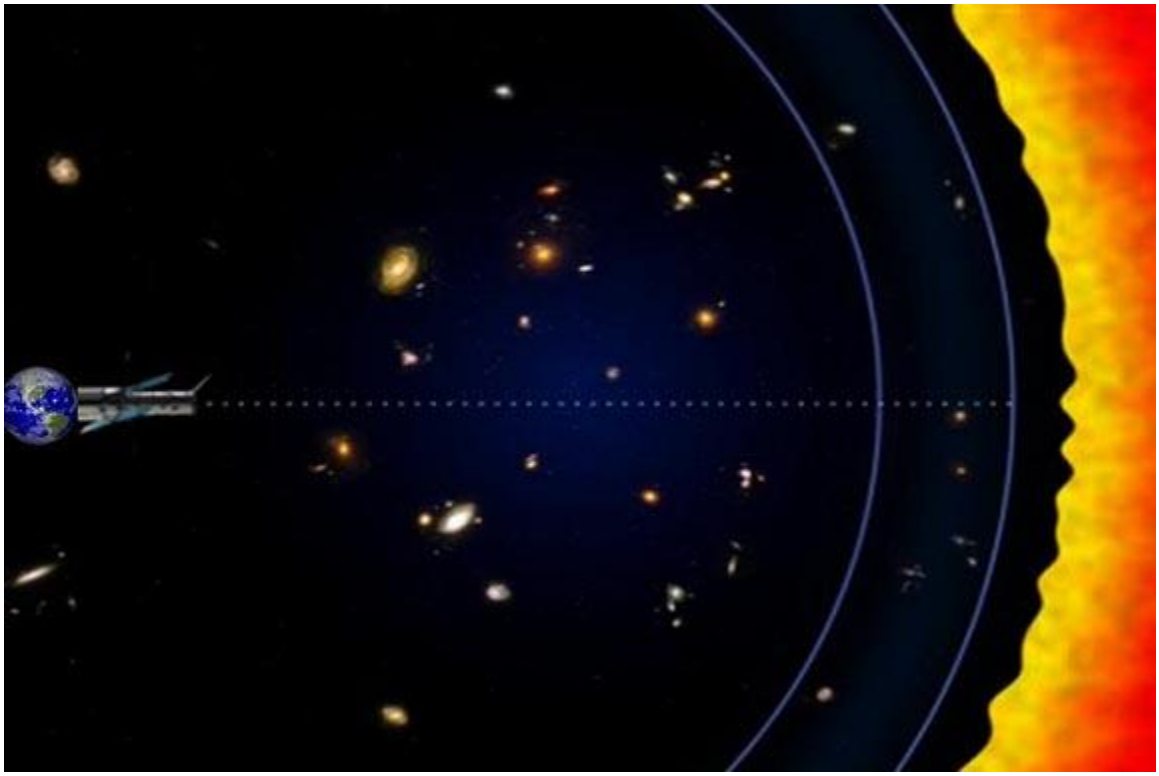
giant walls, proponents instead propose that after the creation the universe slowed down, then it speeded up, then it slowed down, then it speeded up, then it accelerated but not all regions of the universe accelerate at the same speed, and so on. And to explain this speeding up and down, phantom invisible forces are invented. A major requirement of the Big Bang is faith, and a rejection of the scientific method which requires that theories be testable and then abandoned if falsified. Instead, the acolytes of this religion simply adjust their parameters, invent more invisible constructs, engage in more ad hoc theorizing, and embrace supernatural phantom forces to explain away the failures of this theory.



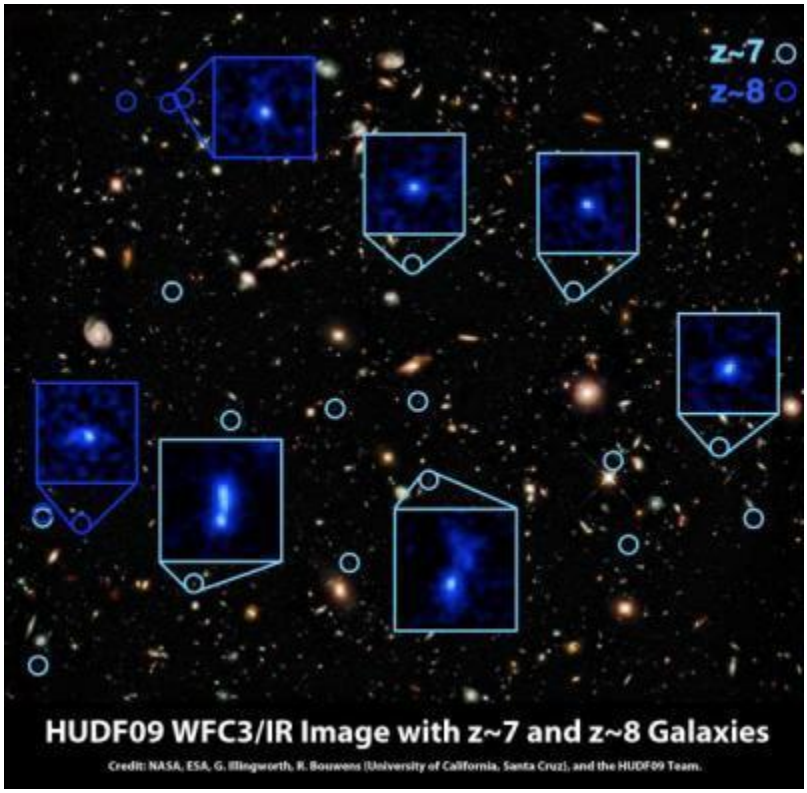
According to Big Bang theology, since the universe was created, it has a birth date. Initially, based on data provided by Hubble (Hubble 1929a,b, 1936a,b,c; 1937a,b; Hubble and Humason, 1931, 1934), it was determined that the *creation* was just 2 billion years ago. However, once it was discovered that Earth was 4.6 billion years in age, and that there are galaxies which are also older than the Big Bang, this birth date was moved to 8 billion, then 15 billion then 22 billion years (Abell et al., 1988; Freeman 1992; Gott et al., 1976 Peebles 1992; Jayawardhana, 1993); which should tell us that no one knows the age of the universe. Current estimates, which are accepted by NASA and consensus, is the Universe was created 13.75 billion years ago (Benett et al. 2003).

However, since arriving at a 13.75 billion year birth date, new problems have surfaced and old problems have again reared their galactic head. For example, our Milky Way galaxy is believed to be 13.6 billion years in age (Pasquini et al., 2005); meaning it was established within one million years of the Big Bang,

which is not consistent with theory. The Milky Way is also orbited by the ancient metal poor Sagittarius Dwarf Elliptical Galaxy (SDG), which is believed to have contributed stars which were captured by the Milky Way billions of years ago (Chou, et al., 2009; Ibata et al., 1997; Majewski et al., 2003). The Canis Major Dwarf Galaxy (CDG) is yet another older, metal poor satellite of the Milky Way and may have contributed stars to this galaxy (Martin et al., 2004). SDG and CDG are probably billions of years older than the Milk Way, and thus older than the hypothetical Big Bang. A number of very ancient globular clusters have also been discovered, and which may be over 16 billion years in age (Van Flandern 2002)



According to current Big Bang theology, the universe should come to an end 13.75 billion light years from Earth, and that with extended viewing times with the Hubble and other telescopes, it should be possible to observe the point where the universe begins. And just prior to the beginning, there should be nothing but light and nebulous balls of gas. In 2004, this prediction was put to the test and the Hubble telescope was pointed at what was believed to be empty space for an extended period of time. However, contrary to prediction, prolonged observation of ultra deep space using the Hubble Wide Field Camera 3 did not reveal the beginning, but instead revealed fully formed galaxies, at distances, from Earth of approximately 13.1 billion light years (American Astronomical Society 2010).



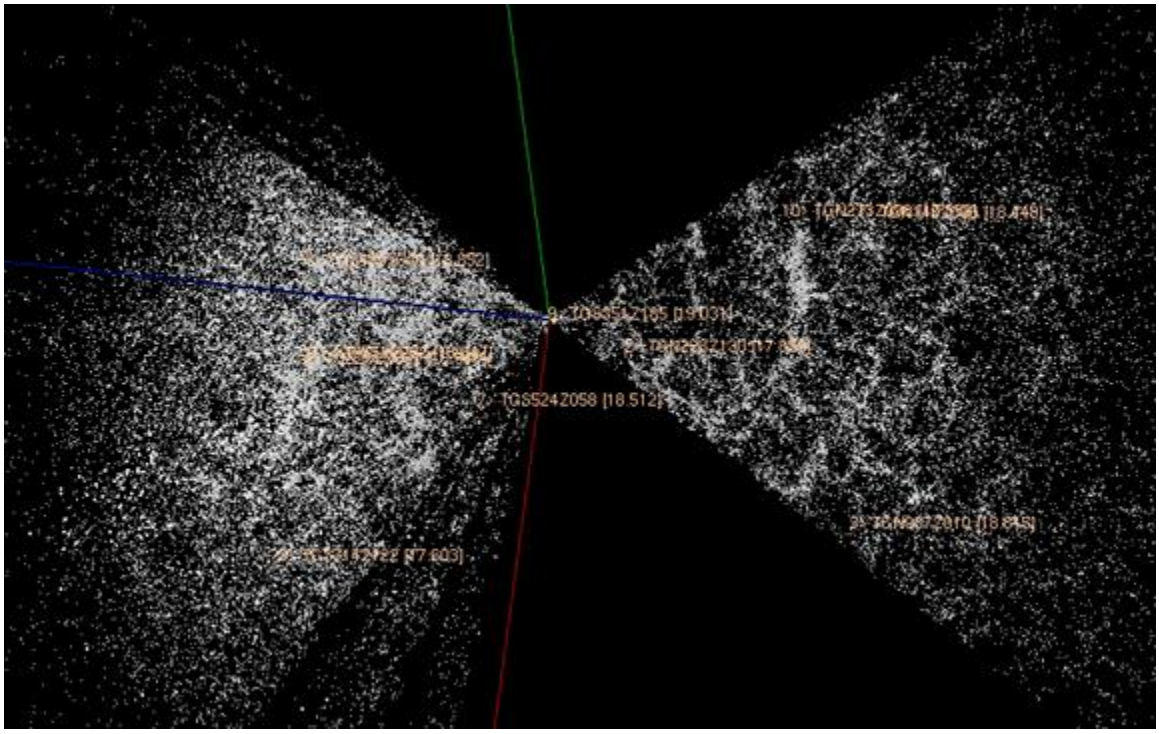
The 13.1 billion light year distance of these fully formed galaxies, of course, is an estimate based on an Earth-centric conception of the universe. The defenders of Big Bang theology like to pretend the age of various galaxies can be determined based on how far they are from our planet, as if Earth is ground zero for the Big Bang, and the measure of all things. In fact, distance is not related to age. Distance is relative. Further, distance from Earth can only provide a minimum age estimate. In fact, these ancient fully formed galaxies must have already been billions of years in age, over 13 billion years ago which again makes them older than the Big Bang.

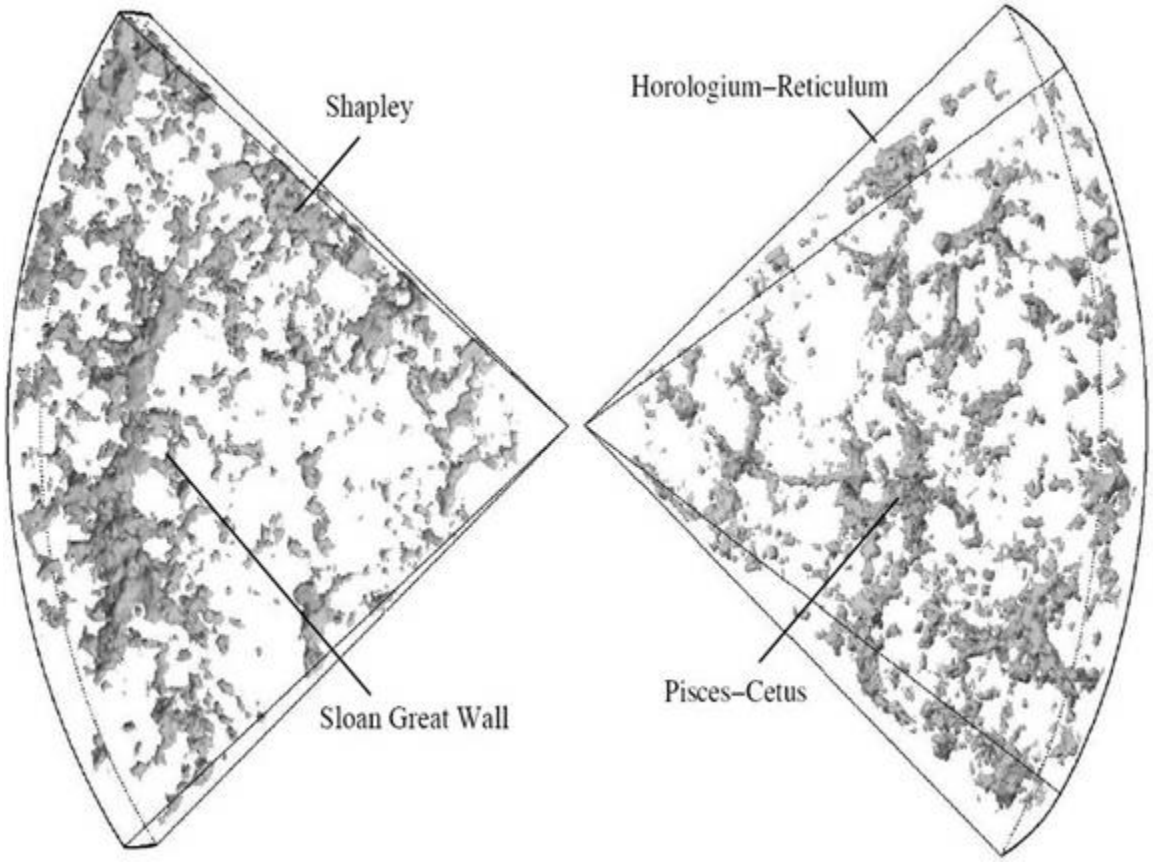
NASA and the Big Bang theologians have sought to explain away these unexpected discoveries, by claiming these distant fully formed galaxies are probably metal poor, and therefore "primitive" (American Astronomical Society 2010). However, these claims are not based on data, but are interpretations and hypothesis based on belief in the Big Bang. If there was a Big Bang, then the discovery of galaxies where no galaxies should exist, must mean these are primitive galaxies which are metal poor. Given the distance and faint light, the exact nature of these galaxies could not, in fact, be determined. Rather, based on estimates of red shift values (between z=7 and z=8.5) it can only be deduced they are at least 13.1 billion light years distant relative to the Earth. Therefore, it is not known if these distant fully formed galaxies are metal poor. In fact, metal poor is not an indication of "primitiveness" or youthfulness as SDG and CDG and other fully formed ancient galaxies near our Milky Way are also metal poor. In fact, distant quasars and galaxies have been determined to be metal rich (Van Flandern 2002); and these discoveries also defy the Big Bang.

The clumpy distribution of matter also defies Big Bang predictions as all galaxies should be evenly distributed on the outer rims of the expanding explosive force. And yet, ancient galaxies orbit the Milky Way, there are nearby galaxies over 13 billion years in age (Pace and Pasquini 2004) and ancient fully formed galaxies are located over 13.1 billion light years distant from the Milky Way. Moreover, galaxies

move in the *wrong* directions and at different speeds, with galaxies crashing into one another from every conceivable direction. In fact, the Andromeda and Milky Way galaxies will collide in just a few billion years (Cox and Loeb 2008).

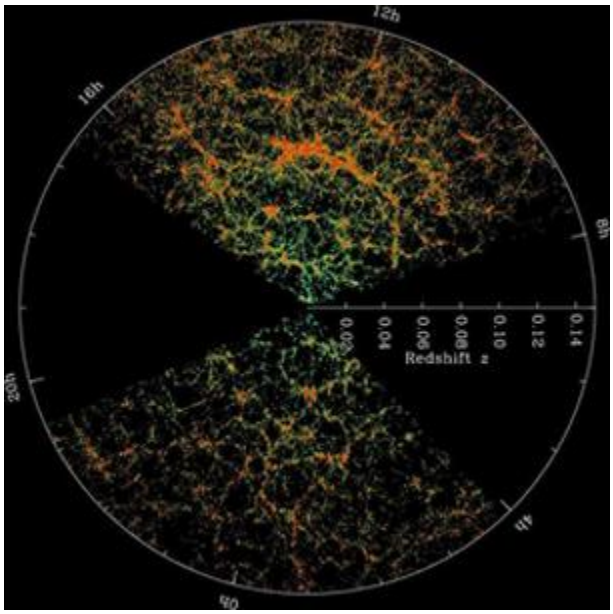
Millions of galaxies over one hundred million light years across, all moving in the same direction, have pierced the center of the local super cluster of galaxies located in the vicinity of the Centaurus and Hydra and constellations. However, adding to this anomaly is the very fact that throughout the known, Hubble length universe, hundreds of millions of galaxies have clumped together, forming super clusters and a series of great walls of galaxies (Geller and Hurcha, 1990; Gott et al. 2005; Tully 1986) which are separated by vast voids of empty space. Some of these elongated super clusters have formed a series of walls, one after another, spaced from 500 million to 800 million light years apart, such that in one direction alone, 13 Great Walls have formed with the inner and outer walls separated by less than 7 billion light years. It has been estimated that some of these galactic walls may have taken from 80 billion (Tully 1986) to 100 billion (Van Mitchell 1997; Flandern 2002), to 150 billion years (Lal 2010; Lerner 1990) to form

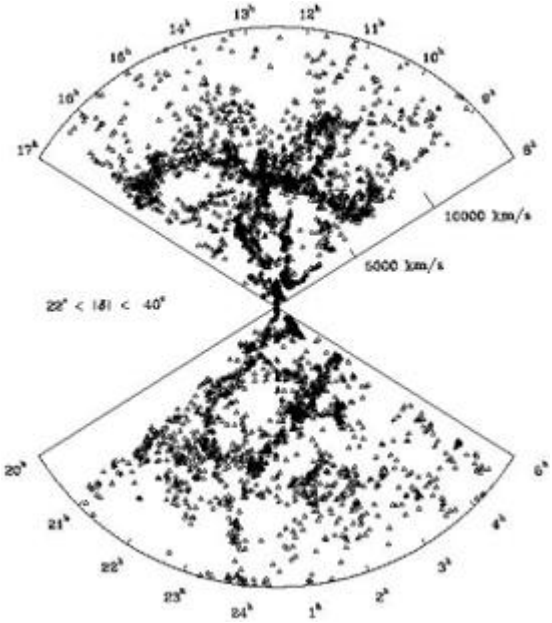


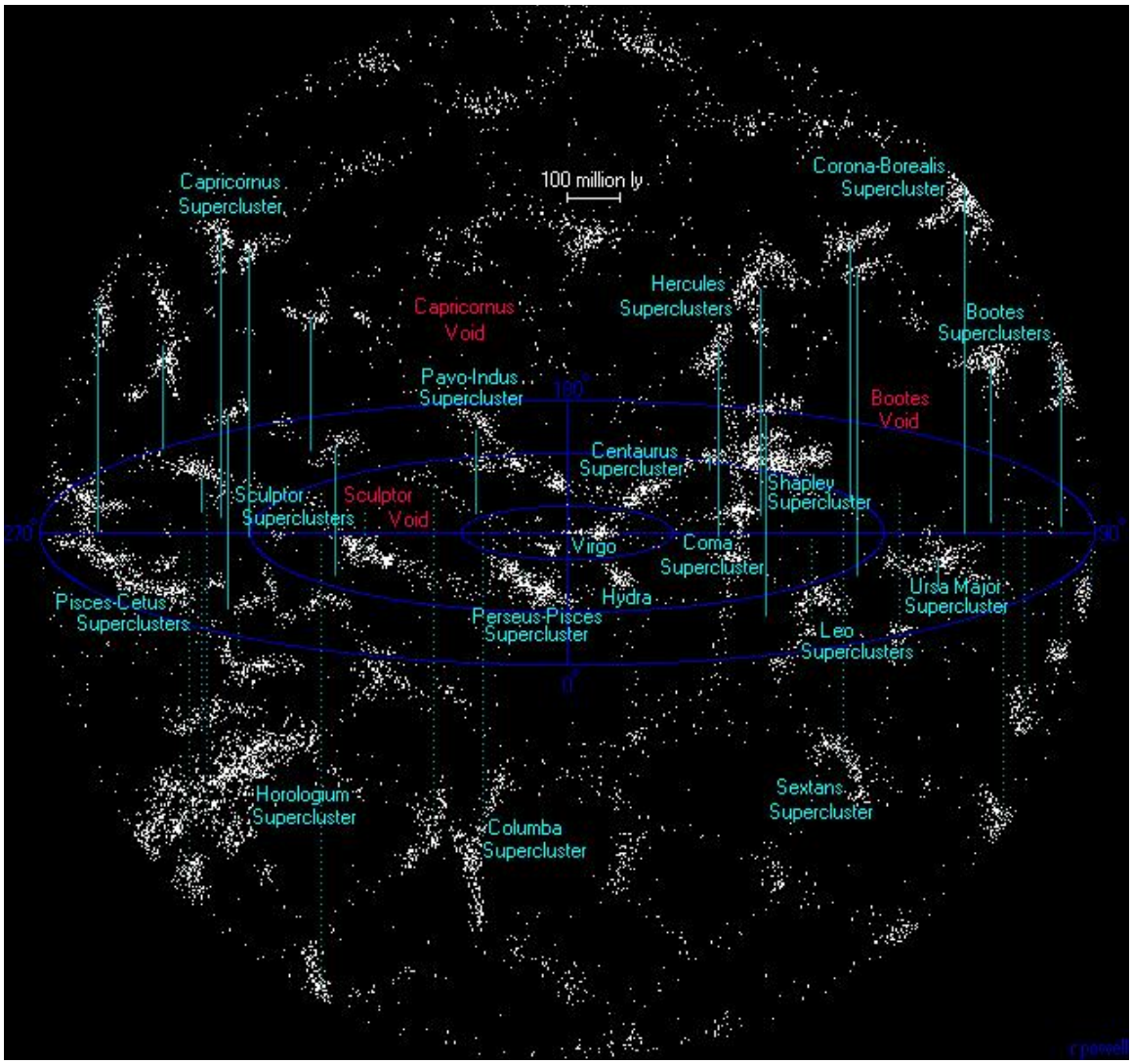


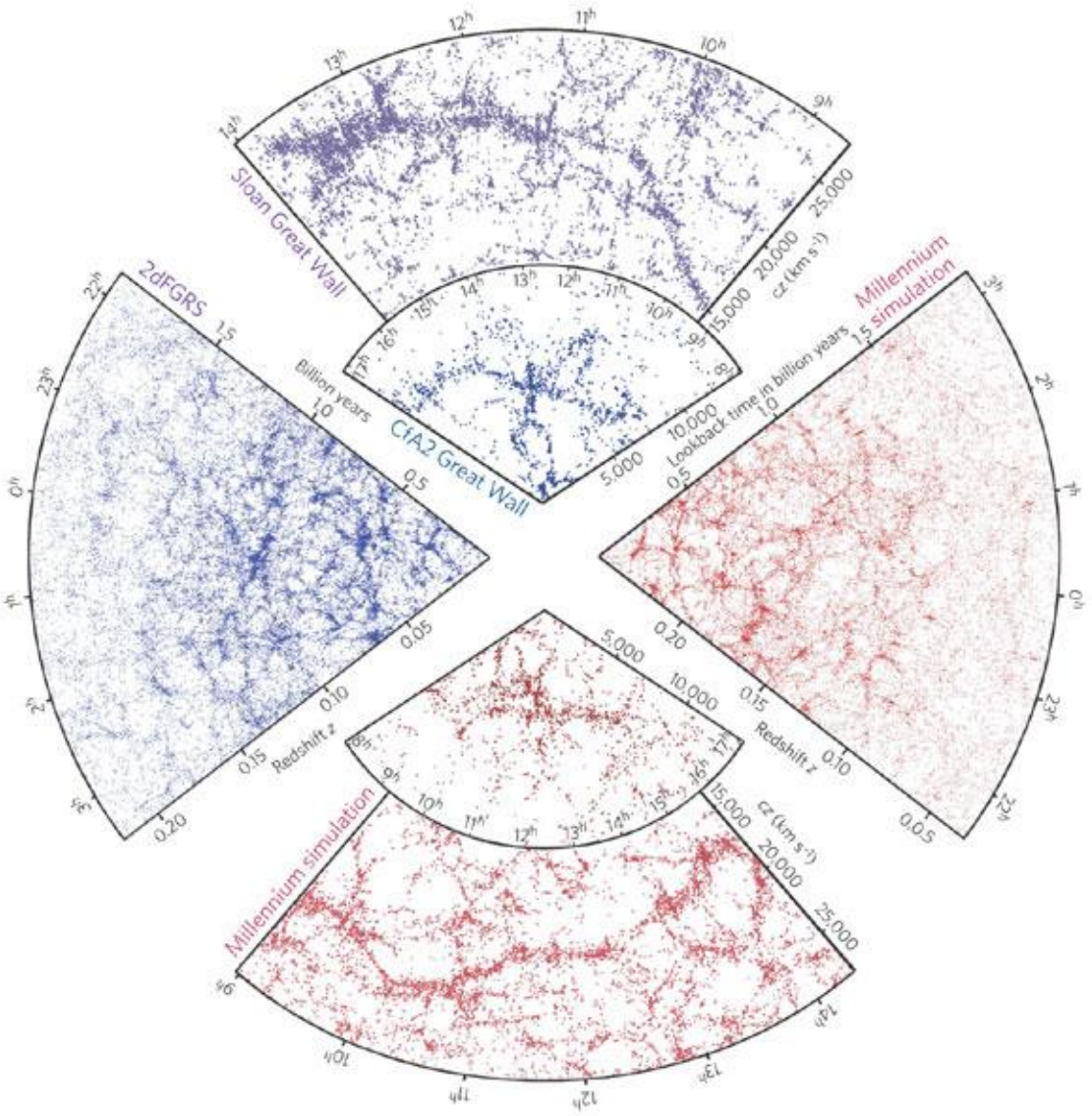
Sloan Great Wall, and other great walls Credit: W. Schaap (U. Gorningen). The Sloan Great Wall spans

over one billion light years

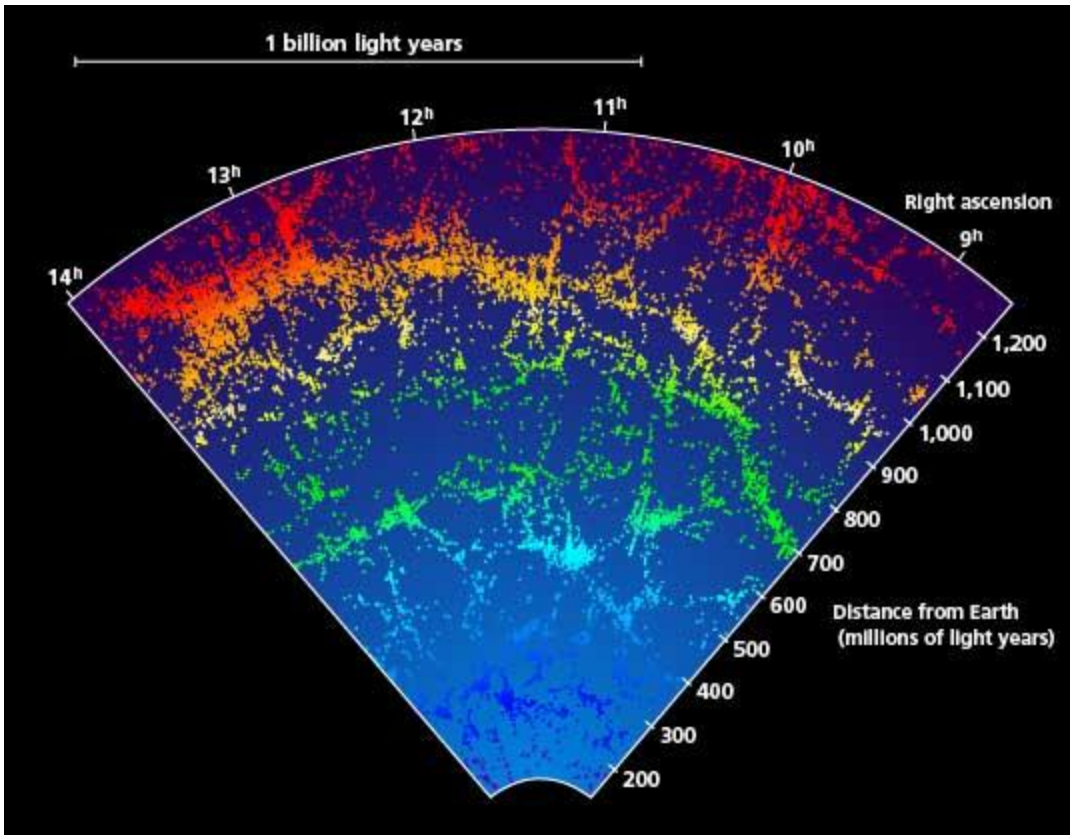





100 million ly
Capricornus Supercluster
Corona-Borealis Supercluster
Hercules Superclusters
Capricornus Void
Bootes Superclusters
Pavo-Indus Supercluster
180°
Bootes Void
Centaurus Supercluster
Shapley Supercluster
Sculptor Superclusters
Sculptor Void
270°
90°
Virgo
Coma Supercluster
Hydra
Ursa Major Supercluster
Pisces-Cetus Superclusters
Perseus-Pisces Supercluster
Leo Superclusters
0°
Horologium Supercluster
Columba Supercluster
Sextans Supercluster



The small slice at the top shows the Sloan Great Wall, and beneath it the CfA2 Great Wall: The Coma cluster is at the centre. The Coma cluster is one of the largest observed structures in the Universe, containing over 10,000 galaxies and extending more than 1.37 billion light years in length. Credit: Springel et al., 2006.



To explain away this overwhelming pattern of disconfirming evidence, Big Bang theologians have invented "dark energy" and "great attractors" so as to explain why a created universe did not spread out uniformly at the same speed and in the same spoke-like directions as predicted by theory. Therefore, because of these invisible, undetectable, phantom forces, the Big Bang universe slows down, then suddenly speeds up, then slows down, then accelerates. with different regions all moving at different velocities and different directions. This isn't science. Its nonsense.

Moreover, predications based on the Big Bang can account for less than 20% of the mass and density of the known, observable Hubble length universe (Lerner 1991; Mitchell 1997; Van Flandern 2002). Nor can this theory explain gravity, the discordant data on red shifts, galaxy distribution, colliding galaxies, the abundance of hydrogen and helium, the existence of elementary particles, and why the movement of distant galaxies appears to be speeding up, and so on (Arp et al., 2004; Eastman, 2010; Lal 2010; Lerner 1991; Mitchell 1997; Hoyle et al., 2000; Ratcliffe, 2010; Sidharth and Joseph 2010; Van Flandern 2002). Inflation, for example, requires a density at least 20 times larger than that predicted by big bang nucleosynthesis (Hoyle et al., 2000; Lerner 1991; Mitchell 1997; Van Flandern 2002), the theory's explanation of the origin of the lightest elements. That density, like the missing matter, excessive gravity, expansion, the clumping of galaxies, distant stars, etc., can be accounted for not by a Big Bang, but an infinite universe peppered with infinite holes in space time which continually breaks down, recreates, and recycles matter (Joseph 2010). Only the addition of *ad hoc* hypothetical appendages and parameters which are constantly adjusted have prevented the Big Bang theory from complete collapse.

The fact is, the Big Bang has been repeatedly falsified. The Big Bang is a myth. There was no "big bang" or creation event. The Big Bang is religion masquerading as science.

The overall pattern of data is easily explained not by a "Big Bang" beginning, but a universe which is

eternal, infinite, and whose structure and properties continually destroys, recycles, and recreates matter beginning with hydrogen atoms. Thus the recycling/recreating model (Joseph 2010), differs from the "steady state" model of Hoyle and colleagues (Hoyle, 1948; Hoyle et al., 2000; Bondi and Gold 1948) which envisioned a universe which continually creates *new* matter ex nihilo. As detailed in this article and elsewhere (Joseph 2010; Joseph and Schild 2010a), galaxies, stars, planets, moons, molecules, atoms, and so on, are continually recycled and destroyed, and matter and energy, including hydrogen atoms, are continually recycled and recreated via *gravity holes* also known as "black holes", "Planck Particles" and "Gravitons" depending on their size and mass (Joseph 2010). These *holes* and the energies and particles they liberate, radiate and expell, not only explains the existence of matter and the abundance of hydrogen, but contributes to what appears to be an expanding, accelerating universe and what has been called "gravity", "gravity waves", "dark matter" and "dark energy."

Thus, the universe is not expanding, but is constantly being recycled by molecular and macro-molecular universe-in-mass black holes which strips matter of all constituent elements leaving only points of singularity, around which matter is reassembled; and the cycle continues for all eternity. If there was a big bang, it was not the beginning, but a continuation, which means the universe is eternal, and this precludes a creation event and a creator; a position which is anathema to the scientific establishment and those who believe in god, creationism, or the supernatural.

The infinite, eternal universe has no creator, dispenses with the need for a "creator god," does not rely on phantom, invisible forces, and does not place Earth at the center of the universe as does Big Bang theology. Further, an infinite universe explains not just the fabric of the cosmos, but the cosmic origins, distribution, and evolution of life; which the religious fanatics, the Darwinists, and subscribers to magic wish us to believe is restricted to and was created only on Earth.

There was no Big Bang. There was no creation event. There is no creator god. Earth is not the center of the universe. The Universe is infinite, eternal, and has no beginning, and, no end.

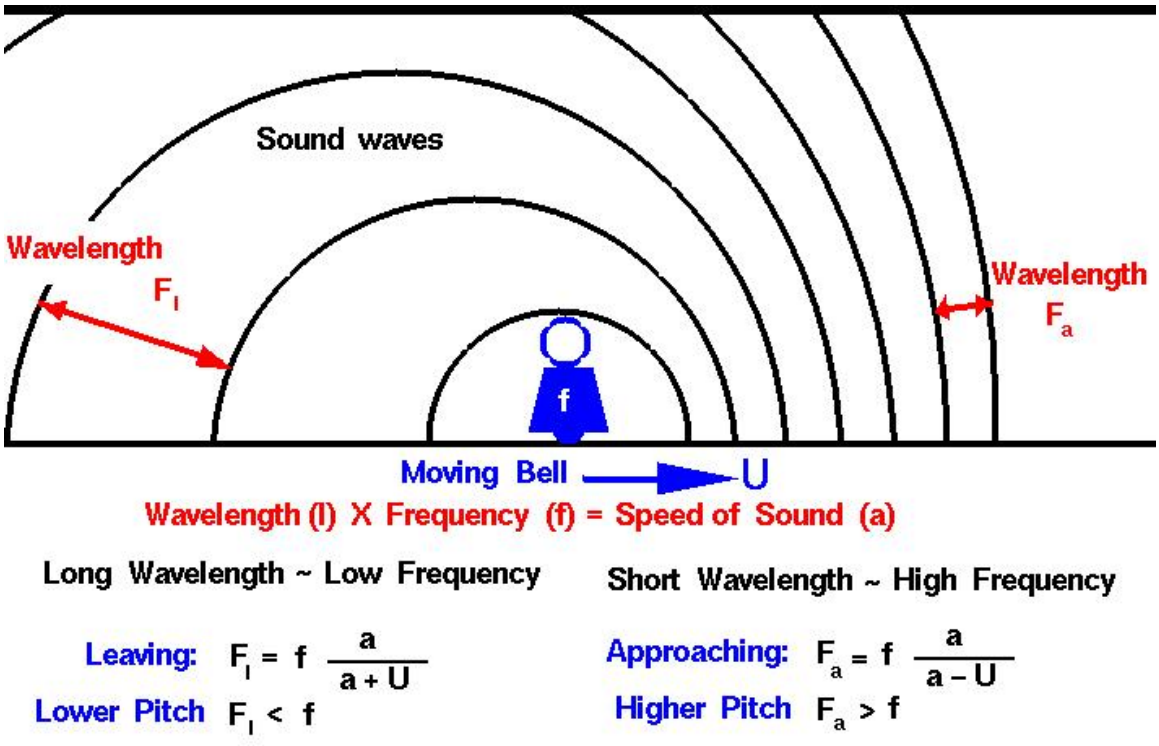
2. The Myth of the Red Shift

Lemaître's relativistic cosmology was based on the belief that the universe was created from a "primeval atom" and the radius of the universe increases over time because of the explosion from the creation event. Lemaître (1927, 1931a,b) proposed, therefore, that the expansion of the universe explains the redshift of galaxies following the "creation." Lemaître derivation antedated Hubble's formulation by two years. Even so, it became known as Hubble's law and provided the numerical value of the Hubble constant which in turn has been employed to describe the hypothetical expansion rate and age and size of the universe (Hubble 1936a, 1937a,b, 1953).

There is however, nothing constant about the "Hubble Constant" which initially predicted the universe was expanding at a rate of about 160 km/sec per million-light-years (Lerner 1991; Mitchell 1997). This expansion rate meant the universe had been created 2 billion years ago. When it was subsequently determined that Earth was over 4 billion years old, and thus 2 billion years older than the Big Bang (BB), the Hubble Constant was adjusted and then adjusted again, and adjusted yet again as yet more discomfirming evidence began to pour in (Lerner 1991; Mitchell 1997; Van Flandern 2004). The "Hubble Constant" therefore, has been repeatedly and continually falsified. And yet, the proponents of BB theology continue to cling to this measure which essentially means whatever they want it to mean.

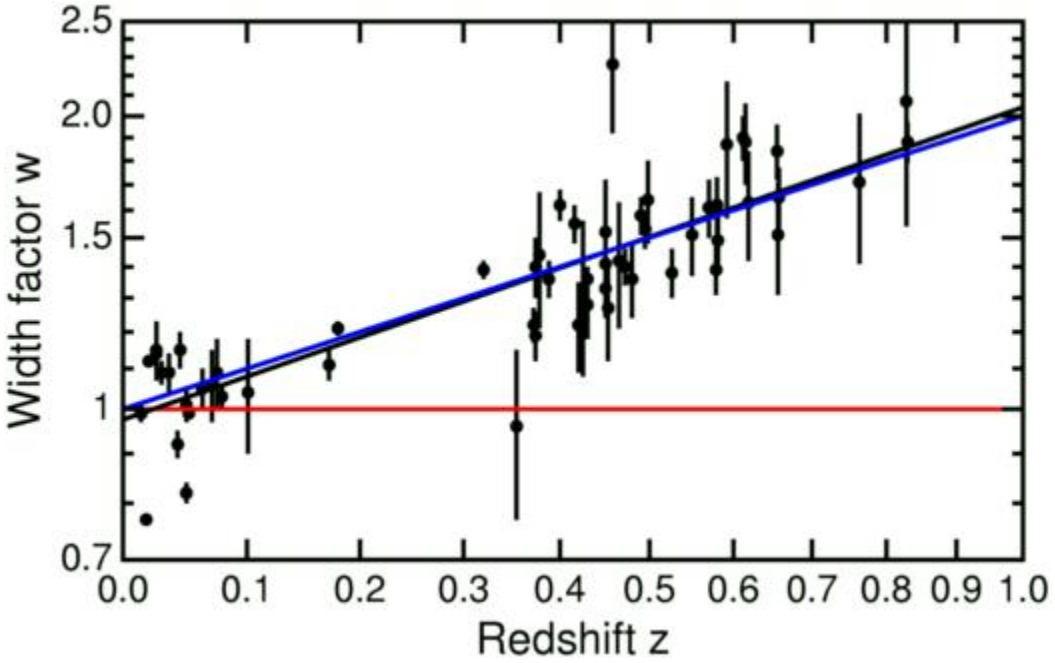
Hubble's Law/Constant, and thus estimates as to the age and supposed expansion rate of the universe are also predicated on a complete and purposeful misinterpretation of a phenomenon referred to as "standard candles" (distant galaxies whose absolute luminosity supposedly does not vary with distance) and "red shifts" i.e. the changes in the wavelengths of light as an object moves toward or away from an observer (Hubble 1929, 1930, 1936a,b; Hubble and Humason, 1931, 1934; Hubble and Tolman 1935). The

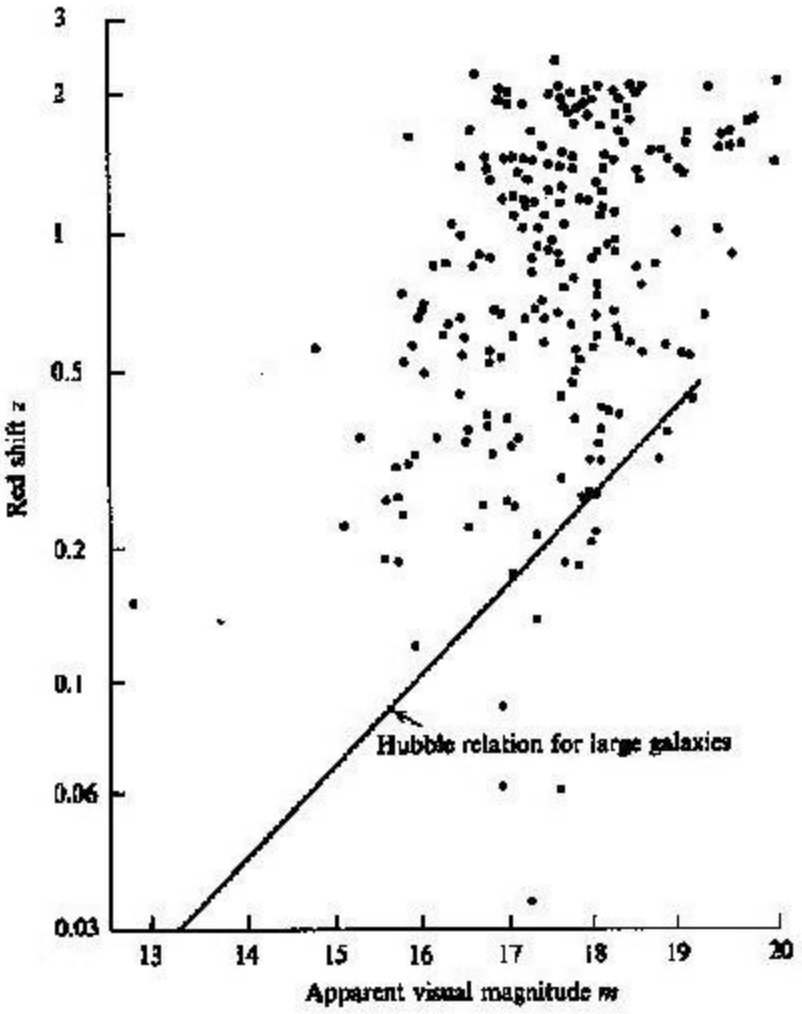
concept of "red shift" is based on the Doppler effect; i.e. wave lengths of light contract or expand as they approach and then speed toward or away from Earth. Thus, for red shifts to have any meaning, the Earth becomes the center of the universe; which, of course, is absurd.



The Big Bang theory continues to crumble under the cruel light of objective scrutiny. For example, Hubble's original standard candles turned out not to be single stars, but clusters of galaxies of various ages and distances. Further, Lemaître and Hubble theorized that red shifts and blue shifts were indications of distance and "apparent velocity" and therefore could be considered proof the universe is expanding in all directions (Lemaître (1927, 1931a,b; Hubble 1936a, 1937a; Hubble and Tolman 1935) with Earth located in the center, which is absurd. Hubble also erroneously assumed all stars emitted the same amount of light and illumination (Hubble, 1929, 1936a, 1937a; Hubble and Humason, 1934). All stars are identical in a Hubble universe. Therefore, stars which are more faint must be further away than those more luminous (Hubble 1929) and as based on their red shift, they must be speeding away; that is speeding away from Earth.

Velocity is not a property of the Doppler effect. Velocity is also unrelated to distance. Hubble's concepts of red shifts, velocity, and illumination are so preposterous that even ardent BB supporters have been left "perplexed how he (Hubble) could reach such a conclusion—galactic velocities seem almost uncorr


Width factor w
Redshift z
2.5
2.0
1.5
1
0.7
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0



Red shifts of QSOs.

Red shifts provide only gross approximations of distance. The greater the distance, the greater is the discrepancy between red shifts.

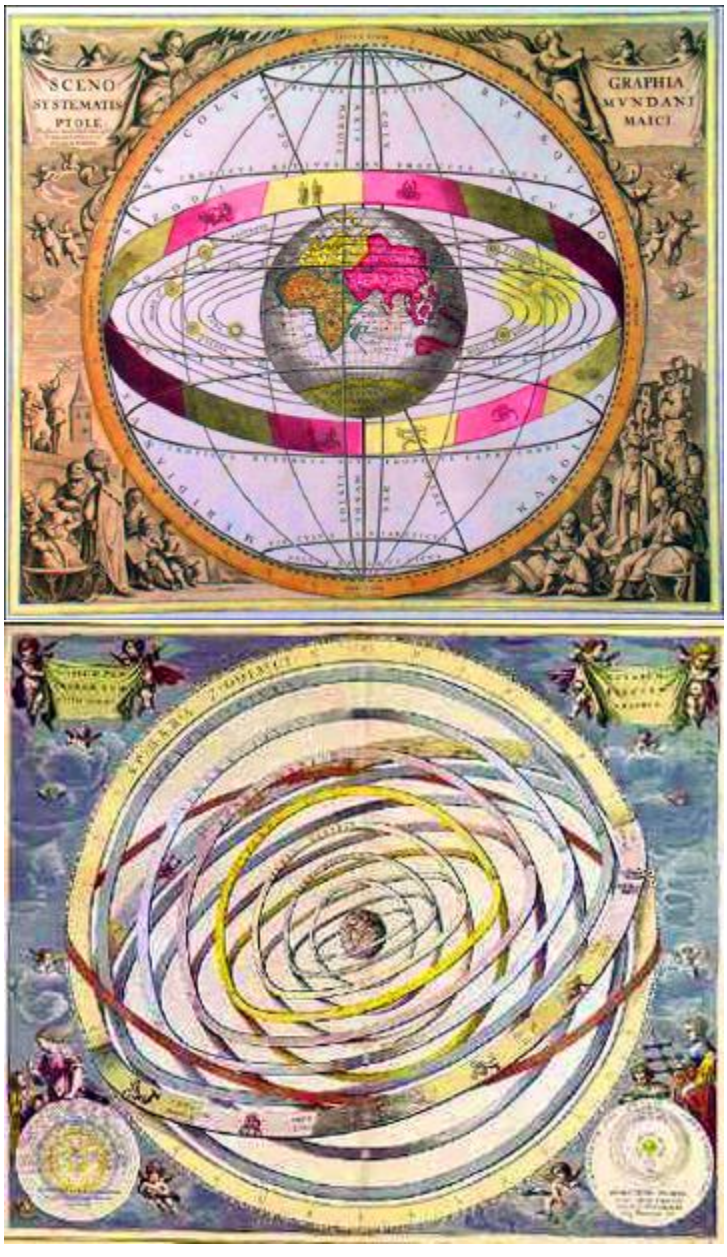
In fact, even Hubble was forced to admit: red shifts give only a gross approximation of a star's distance. Nevertheless, although Hubble's laws and constants have been repeatedly falsified and shown to have no validity, belief in "red shifts", "standard candles" and the dimness of stars, as determinants of the age, velocity, and expansion of the universe (and thus "proof" of the BB) are de rigueur by consensus in the cosmological community. To even question this dogma is considered heresy and is the equivalent of standing up in a fundamentalist church and shouting that Jesus is not god.

3. Earth is Not the Center of the Universe

For thousands of years it has also been the Christian-religious view that Earth is the center of the universe. Despite the Copernican revolution, an Earth-centered universe remains the standard. All measures of time, distance, acceleration and age, place Earth at the center of the universe, at ground zero (e.g., Perlmutter et al., 1998; Schmidt et al., 1998). In modern cosmology, Earth is still the measure of all things. The consensus view among astronomers is that red shifts, and the Hubble constant can be used to calculate the age, velocity, and distances for stars that are assumed to be extremely far away as based on

how faint or bright they appear relative to other stars and from the vantage point of Earth (American Astronomical Society 2010; Hubble 1953; Perlmutter et al., 1998; Schmidt et al., 1998). Therefore, the general view is the universe was created around 13.8 billion years ago because of red shifts, the cosmic microwave background, and as some stars appear to be over 13 billion light years distant.
But 13 billion light years distant from what? Relative to what? To where Earth is now.
When the Hubble Law was formulated it was based on Vesto Slipher's (1915) measurements of the speed at which stars recede from the Earth! The Earth is placed smack dab in the center of the Universe.

(Left and Right Figures): Ptolemy's preCopernican geocentric universe



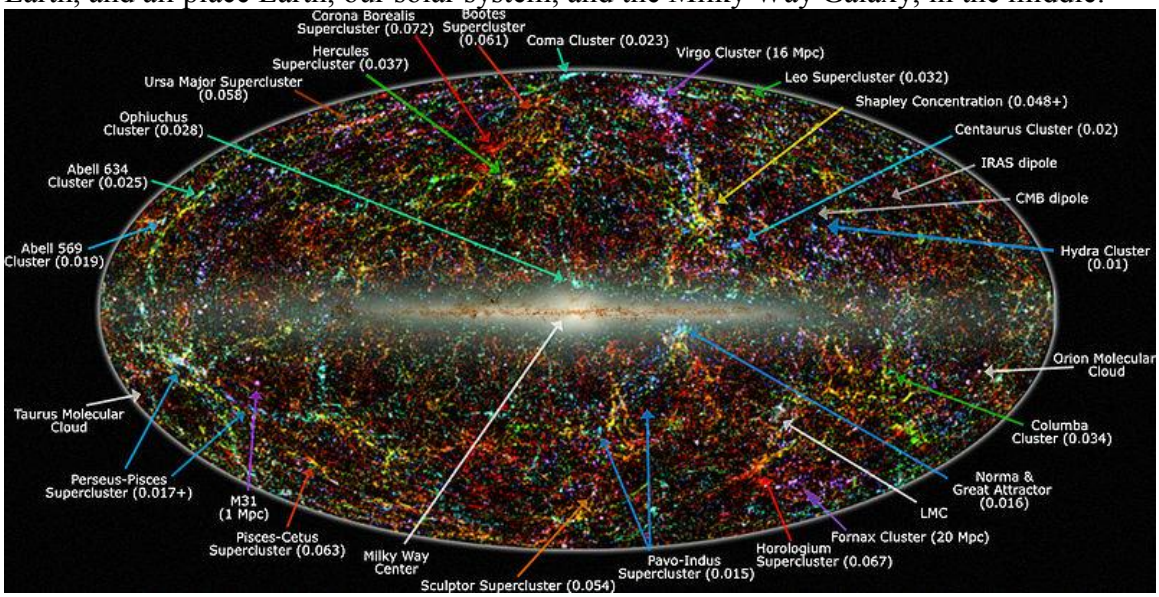
(Above) Big Bang Universe as Viewed From Earth

The preCopernican geocentric view of Earth as the center of the galaxy, and thus, *ground zero* is in fact the basis for claims that the universe is not just expanding, but accelerating (Perlmutter et al., 1998; Schmidt et al., 1998). As succinctly stated by Saul Perlmutter (2003) one of the *discoverers* of acceleration:

"In principle, the expansion history of the cosmos can be determined quite easily, using as a “standard candle” any distinguishable class of astronomical objects of known intrinsic brightness that can be identified over a wide distance range. **As the light from such beacons travels to Earth through an expanding universe,** the cosmic expansion stretches not only the distances between galaxy clusters, but also the very wavelengths of the photons en route. **By the time the light reaches us, the spectral wavelength has thus been redshifted... That time interval is the speed of light times the object’s distance from Earth,** which can be determined by comparing its apparent brightness to a nearby standard of the same class of astrophysical objects... A collection of such measurements, over a sufficient range of distances, would yield an entire historical record of the universe’s expansion."

Time and distance are relative (Einstein 1905a,b), and all observations of far away galaxies and the so called*expanding, accelerating universe* are relative to Earth (Perlmutter et al., 1998; Schmidt et al., 1998), which becomes "ground zero" and is placed smack dab in the center of the known universe;

exactly where the Catholic Church put it over a thousand years ago (Randles, 1999).
Granted, almost all cosmologists, astronomers and astrophysicists will claim to disavow the geo-centric view of the cosmos. But the fact is, their disavowals are just not true. Even though our solar system has been consigned to an outer arm of the Milky Way galaxy, all models and maps of the known universe, the accelerating universe, and the so called Cosmic Microwave Background, are from the perspective of Earth, and all place Earth, our solar system, and the Milky Way Galaxy, in the middle.



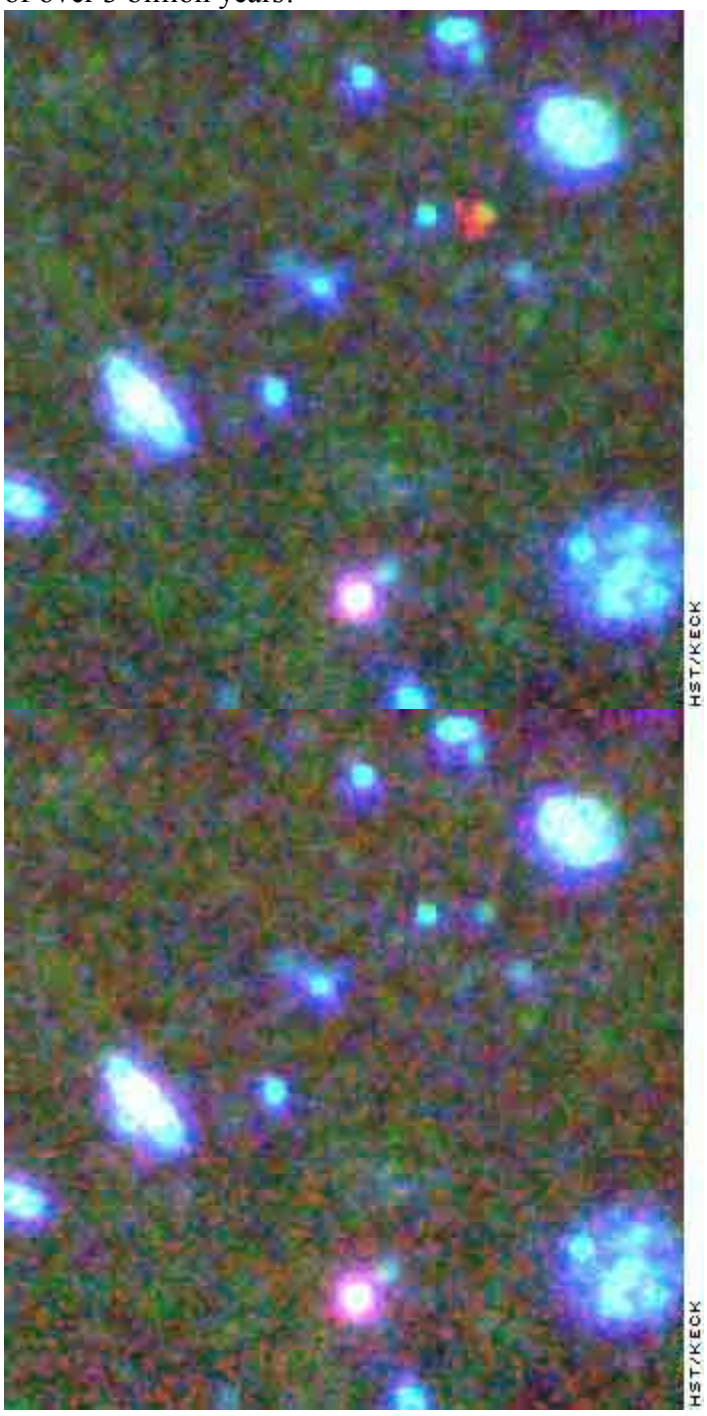
Thus, although Copernicus is credited with launching a cosmological revolution by placing the sun instead of Earth at the center of the solar system, much of modern astronomy and various aspects of astrophysics and quantum mechanics, are still based on an Earth/human/observer geo-ego-centricism which is mired in religion and Biblical-thinking. BB theology is religion dressed up in the language of science, with Earth and man, as the measure of all things.

> "The essential element in the astronomical and biblical accounts of Genesis is the same: the chain of events leading to man commenced suddenly, at a finite moment in time, in a flash of light and energy... is one of the main supports of the scientific story of Genesis." -Robert Jastrow, Astronomer, First chairman of NASA's Lunar Exploration Committee
>
> "It would be very difficult to explain why the universe should have begun in just this way, except as the act of a God who intended to create beings like us." -Stephen Hawkins, a Brief History of Time

4. Time is Not Distance: Seeing Red Becoming Blue

Distance from Earth has nothing to do with time or the age of the universe. Red shifts and blue shifts are relative to the movements of Earth and our own Milky-way galaxy and may reflect expansions and contractions of space, not time. Moreover, they are effected by numerous variables (Arp 1998, 2003; Ratcliffe 2010), including cosmic dust (Hoyle et al., 2000; Mitchel 1997) and their orbital direction as related to our planet. Thus, as a star or galaxy orbits away from Earth, we see a "red shift" and when it circles round the red shift will change, eventually becoming blue as it now heads in the direction of Earth (Joseph 2000a). Of course, these changes may occur over 100s of millions or even billions of years. Red shifts, in fact, are incredibly variable, and can change drastically in magnitude in just a few years. Consider, for example, galaxy STIS 123627, also referred to as "Sharon". In 1999 it was reported that Sharon is the most distant galaxy every discovered, over 12.5 billion light years away with a suggested spectroscopic redshift of z = 6.68 (Chen et al., 1999). The redshift value z is a measure of the stretching

of the wavelength or "reddening" of starlight due to the expansion of space relative to the position of Earth. However, Sharon no longer exhibits the same red shift previously observed. Further, it was subsequently estimated to be not 12.5 but maybe 9 billion light years away (Stern et al., 2000). An error of over 3 billion years!



Left: STIS 123627 "Sharon" displays a "red shift" (upper right). Right: "Sharon" no longer displays the same "red shift."

Red shifts do not measure time, and provide only gross approximations of distance, and these

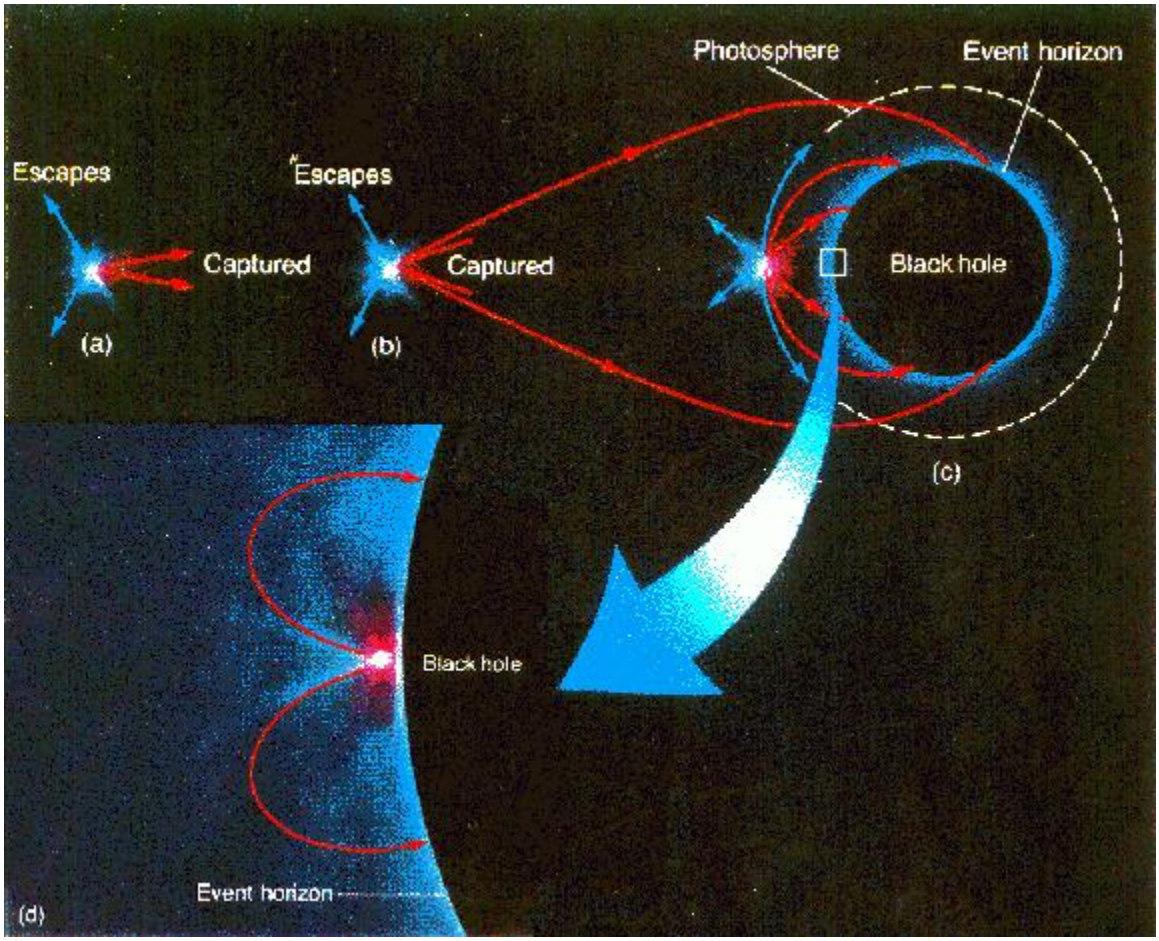
approximations may change drastically over just a few years of time. Hubble in fact discovered that the correlations between increasing red shifts and the increasing distance of galaxies were inexact and inaccurate and prone to error (Hubble 1937). Red shifts can only be employed as very rough estimates. Doppler and Einstein also concluded determinations of distance can only be approximate as based on the Doppler effect (Einstein 1905a). In fact, Hubble's interpretation is contradicted by Einstein's theory of special relativity, i.e. the Principle of Constancy of the Speed of Light (Second Postulate): Light always propagates through a vacuum (i.e. empty space or "free space") at a definite velocity, c, which is independent of the state of motion of the emitting body (Einstein 1905a, 1915).

Hubble later expressed considerable doubt about this assumed relationship between the Doppler/red shifts and time/distance and began to seriously suspect that the universe had no beginning and was in fact, infinite (Hubble 1937):

> "If the redshifts are a Doppler shift ... the observations as they stand lead to the anomaly of a closed universe, curiously small and dense, and, it may be added, suspiciously young. On the other hand, if redshifts are not Doppler effects, these anomalies disappear and the region observed appears as a small, homogeneous, but insignificant portion of a universe extended indefinitely both in space and time" -Edmund Hubble, 1937.

5. The Creation of Matter: Infinite Holes in the Fabric of Space-Time

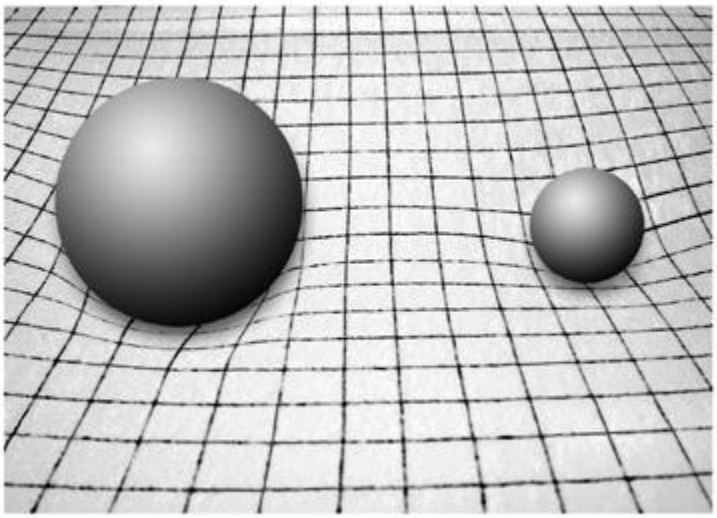
The reality of an infinite universe is based on observational data, general relativity, and quantum and classical physics; and from this a coherent picture emerges. The infinite, eternal universe continually recycles energy and mass at both the subatomic and macro-atomic level, thereby destroying and then reassembling atoms, molecules, stars, planets and galaxies (Joseph 2010; Joseph and Schild 2010a). And this has been ongoing for all eternity and is accomplished by mechanisms and activities associated with "black holes" (*gravity-holes*) of varying size, in the fabric of space-time.



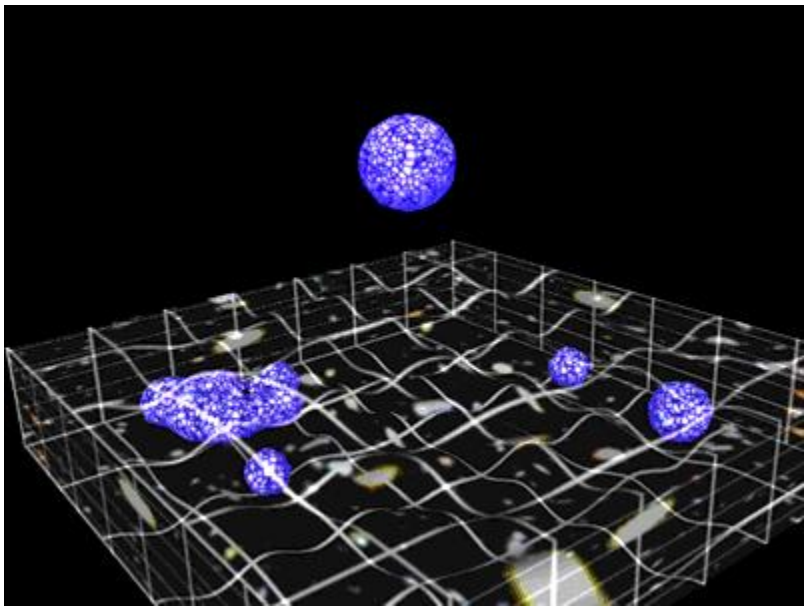
In quantum physics, the smallest unit of space has a Planck length which is defined as 10^{-33} cm (Eisberg and Resnick 1985). Space smaller than a Planck length cannot be conceptualized by quantum mechanics or classical physics. Geometry ceases to exist, Cartesian coordinates, x, y and z, cannot be applied, and time ceases to have meaning (Garay 1995). Einstein's and Newton's theories of gravity both predict that if mass is shrunk to a subatomic space smaller than a Plank length, its gravity will increase and it will punch an infinitely small black hole in the fabric of space-time. Therefore, a defining feature of these tiny spaces is gravity so powerful that it creates holes in space-time. Hence, holes may easily form within space smaller than a Planck length (Joseph 2010; Nouicer 2007; Scardigli 1999).

If elementary particles, including electrons, protons, or photons, were to interact with a Planck-sized object or force within a space smaller than a Planck length, or if they were to slam into a quark, lepton, electron, proton, or photon, this collision would release so much mass/energy/gravity it would immediately punch a hole in space-time. The *hole*<, however, is not really a hole, it is a particle of gravity, the graviton (Joseph 2010).

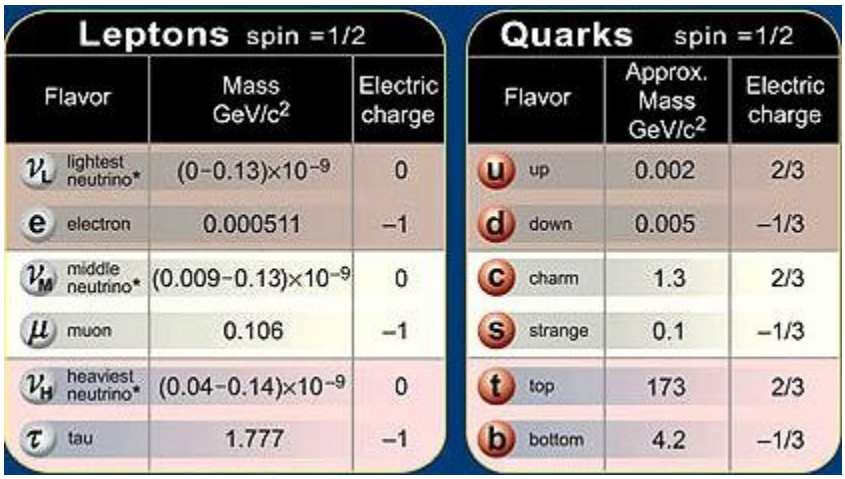
Quantum physics tells us that at the Planck length, coupled with the corresponding Planck energy (10^{19}GeV), that the gravitational forces between particles becomes incredibly powerful (Eisberg and Resnick 1985; Smolin, 2002). Because gravity becomes so powerful, these particles collapse and implode, liberating energy, and leaving behind only a concentrated mass of gravity, the graviton (Joseph 2010).



Holes smaller than a Planck length consist of graviton particles and gravity waves and are a source of infinite gravity (Joseph 2010). In local space graviton-holes counterbalance the gravitational pull of entire planets, thus giving rise to the false impression that gravity is weak. These infinitely small gravity-holes capture light expelling the wave and collapsing the photon or particle which is stripped down to gravity which becomes the hole.



Thus, these holes are formed via the liberation and radiation of electromagnetic energy and elementary particles which results in the breakdown and compression of photons, protons, electrons, with the compressed remnant contributing to the gravity-mass of the hole. Thus, holes in space time are associated with gravity, the breakdown and compression of photons and mass, the liberation/ radiation of electromagnetic energy (Giddings, 1995; Hawking, 1990, 2005; Preskill 1994; Russell and Fender, 2010; Thorn 1994) and the liberation of elementary particles, e.g. quarks and leptons (Joseph 201

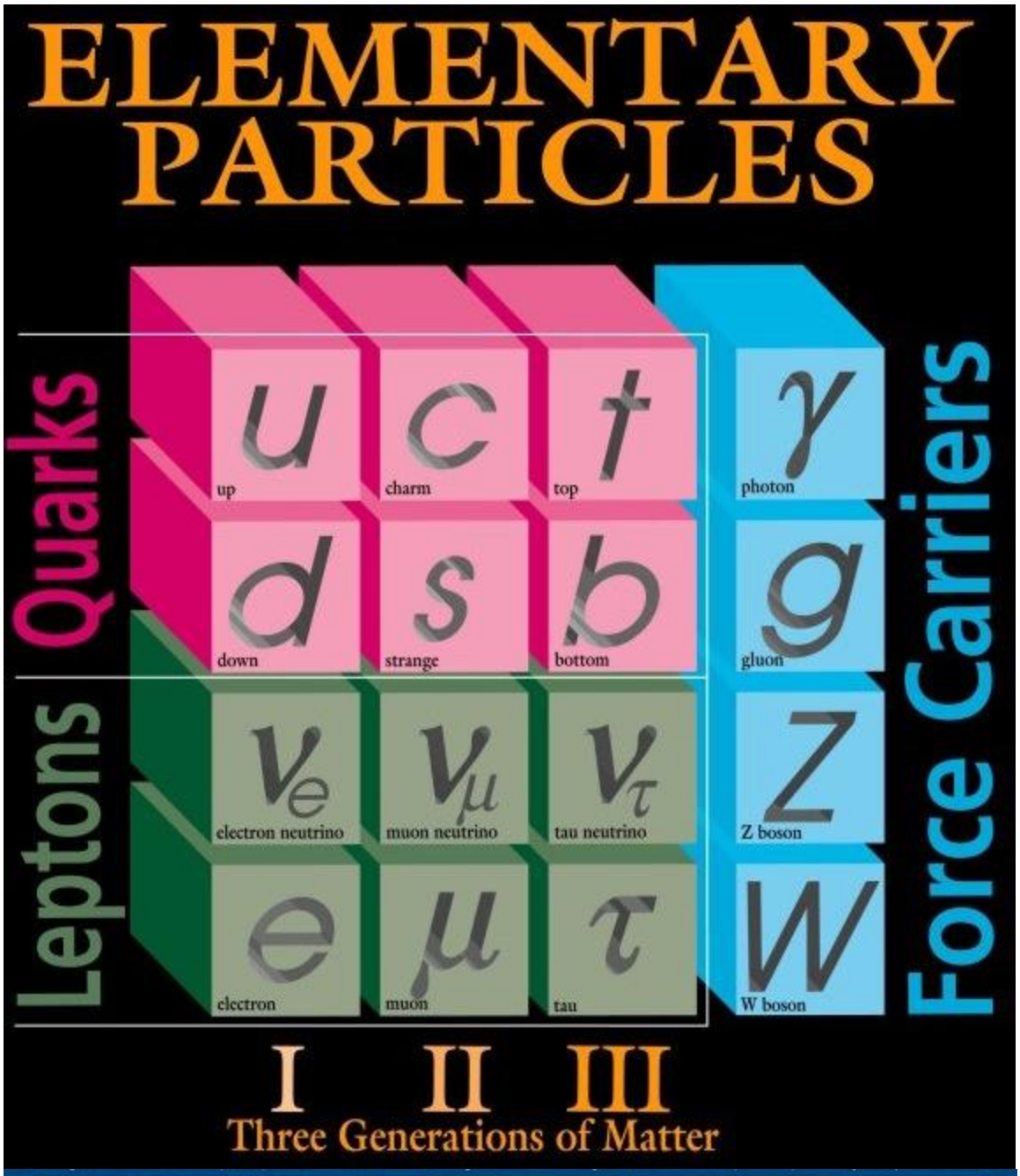


Leptons spin =1/2

Flavor	Mass GeV/c^2	Electric charge
ν_L lightest neutrino*	$(0–0.13)\times10^{-9}$	0
e electron	0.000511	−1
ν_M middle neutrino*	$(0.009–0.13)\times10^{-9}$	0
μ muon	0.106	−1
ν_H heaviest neutrino*	$(0.04–0.14)\times10^{-9}$	0
τ tau	1.777	−1

Quarks spin =1/2

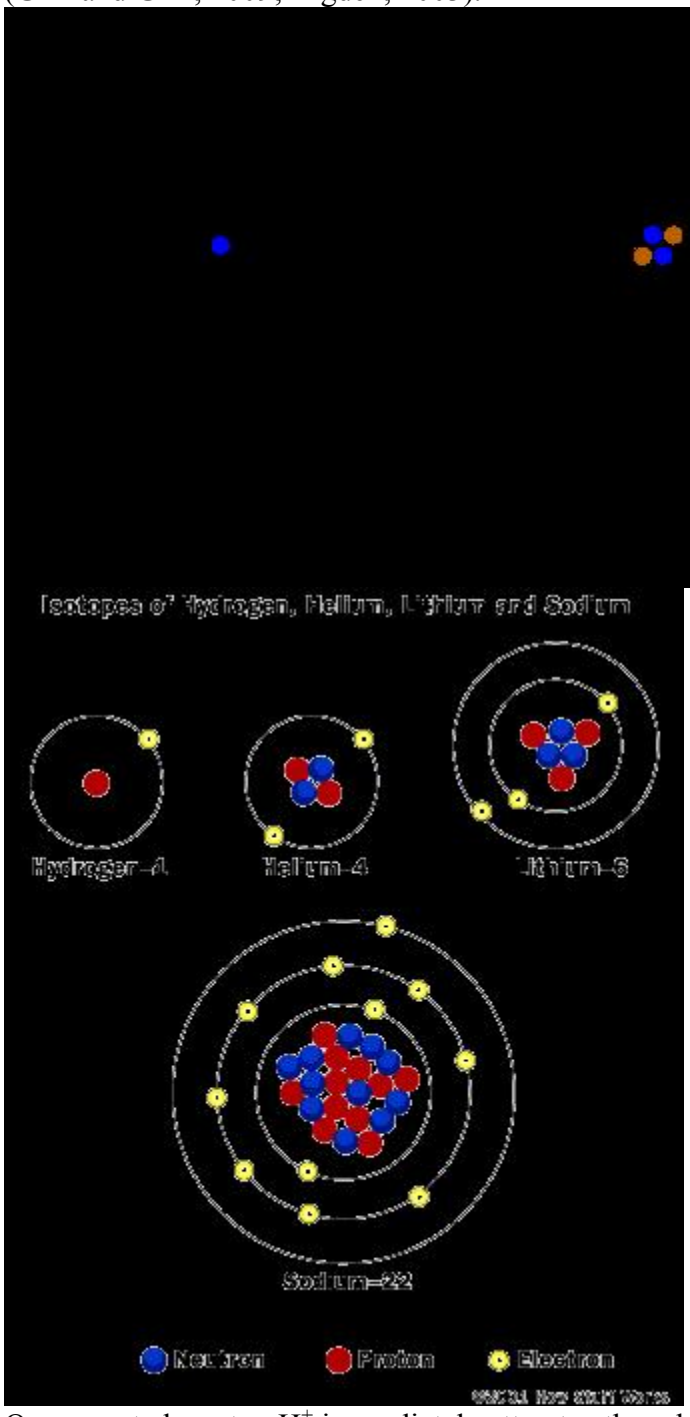
Flavor	Approx. Mass GeV/c^2	Electric charge
u up	0.002	2/3
d down	0.005	−1/3
c charm	1.3	2/3
s strange	0.1	−1/3
t top	173	2/3
b bottom	4.2	−1/3



Property	Gravitational Interaction	Weak Interaction (Electroweak)	Electromagnetic Interaction (Electroweak)	Strong Interaction
Acts on:	Mass – Energy	Flavor	Electric Charge	Color Charge
Particles experiencing:	All	Quarks, Leptons	Electrically Charged	Quarks, Gluons
Particles mediating:	Graviton (not yet observed)	W^+ W^- Z^0	γ	Gluons
Strength at 10^{-18} m	10^{-41}	0.8	1	25
Strength at 3×10^{-17} m	10^{-41}	10^{-4}	1	60

The deflected energy, coupled with the graviton, act to bind together liberated quarks and leptons to form protons and electrons, all of which leads to the simplest and lightest of all atoms, hydrogen (containing only a single proton and no neutrons or electrons), i.e. proton H+ (Joseph 2010). Hydrogen is the lightest

and most abundant element in the known universe. Approximately 90% of all atoms are hydrogen atoms (Gilli and Gilli, 2009; Rigden, 2003).

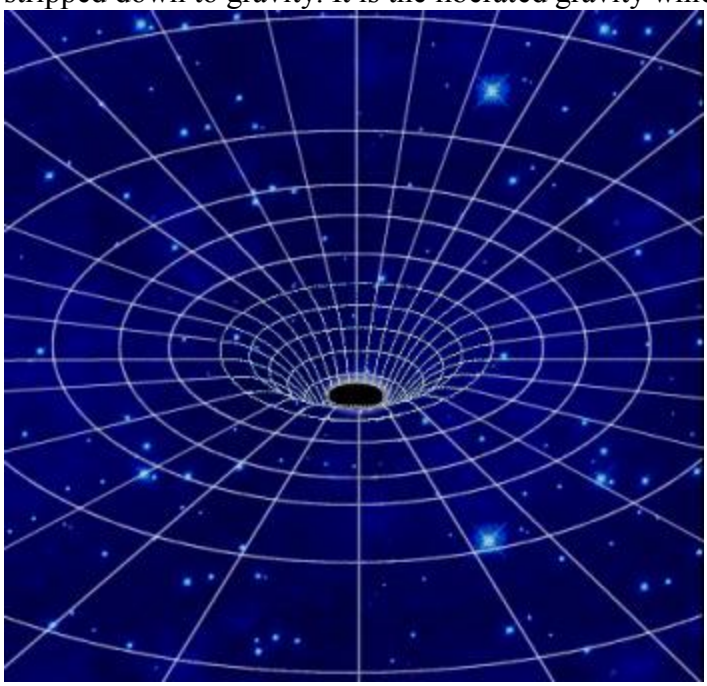


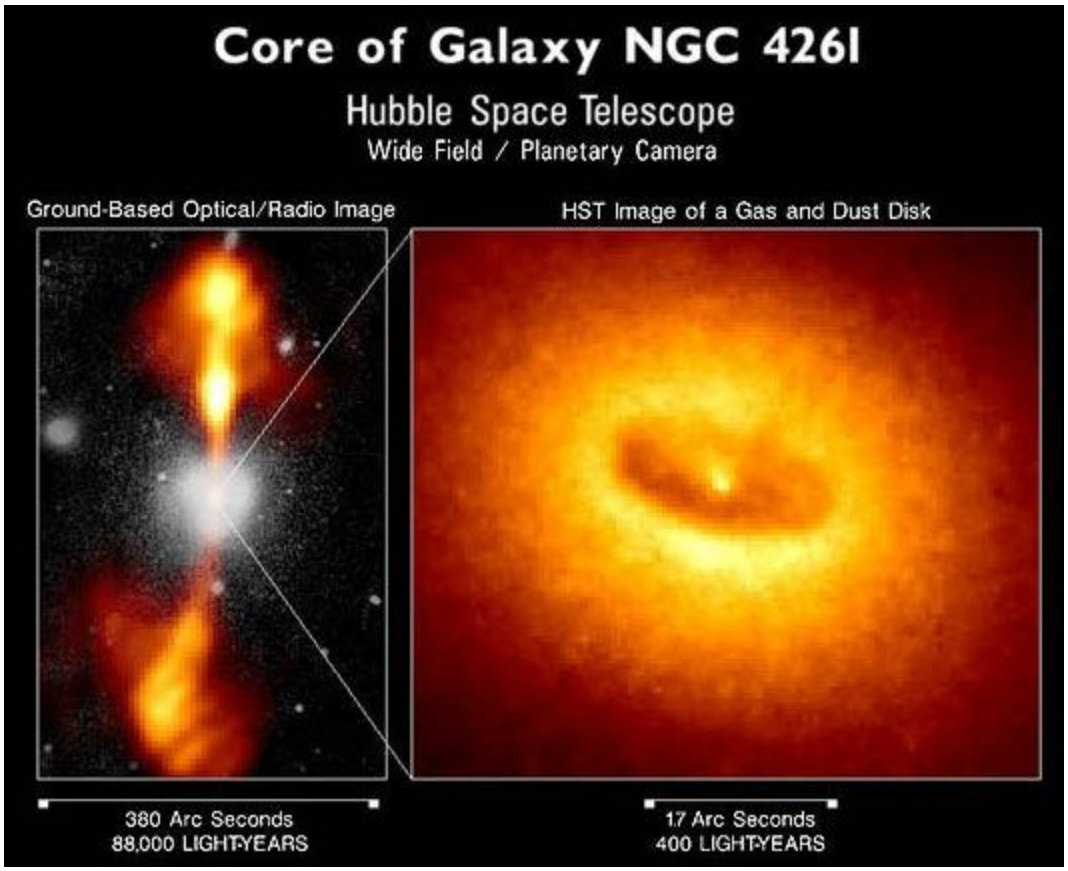
Once created, proton H^+ immediately attracts other electrons (as well as other atoms and molecules which contain electrons). Once the proton H^+ captures an electron, it becomes a hydrogen atom. From there greater structures and compounds can be assembled (Gilli and Gilli, 2009; Rigden, 2003), such as liquid water, cellulose, microfibrils, polypeptides, DNA, and the stars which shine in the darkness of night (Joseph 2010; Joseph and Schild 2010a).

Hydrogen is vital to life and is essential for the creation of stars which emit photons which are captured,

whittled down, compressed, collapsed and their energy expelled by gravity-holes. The energies these holes deflect, radiate and expell, then bind with elementary particles to create new matter, i.e. hydrogen atoms (Joseph 2010), and the cycle repeats itself again and again for all eternity.

Thus, the theory proposed by Joseph (2010; Joseph and Schild 2010a), differs from the steady state theories proposed and developed by Hoyle and colleagues (Hoyle, 1948; Hoyle et al., 2000; Bondi and Gold 1948). Hoyle et al believed that matter was continually created, whereas in the model developed by Joseph (2010), matter is recycled. Galaxies, stars, planets, moons, molecules, atoms, and so on, are continually reassembled and destroyed, and matter and energy, including hydrogen atoms, are continually recycled and recreated via activities associated with "black holes" also known as gravity holes, "Planck Particles" and "Gravitons" depending on their size and mass (Joseph 2010). Gravity-holes capture light, protons, and elementary particles, expelling the wave and collapsing the photon or particle which is stripped down to gravity. It is the liberated gravity which becomes the *hole*.



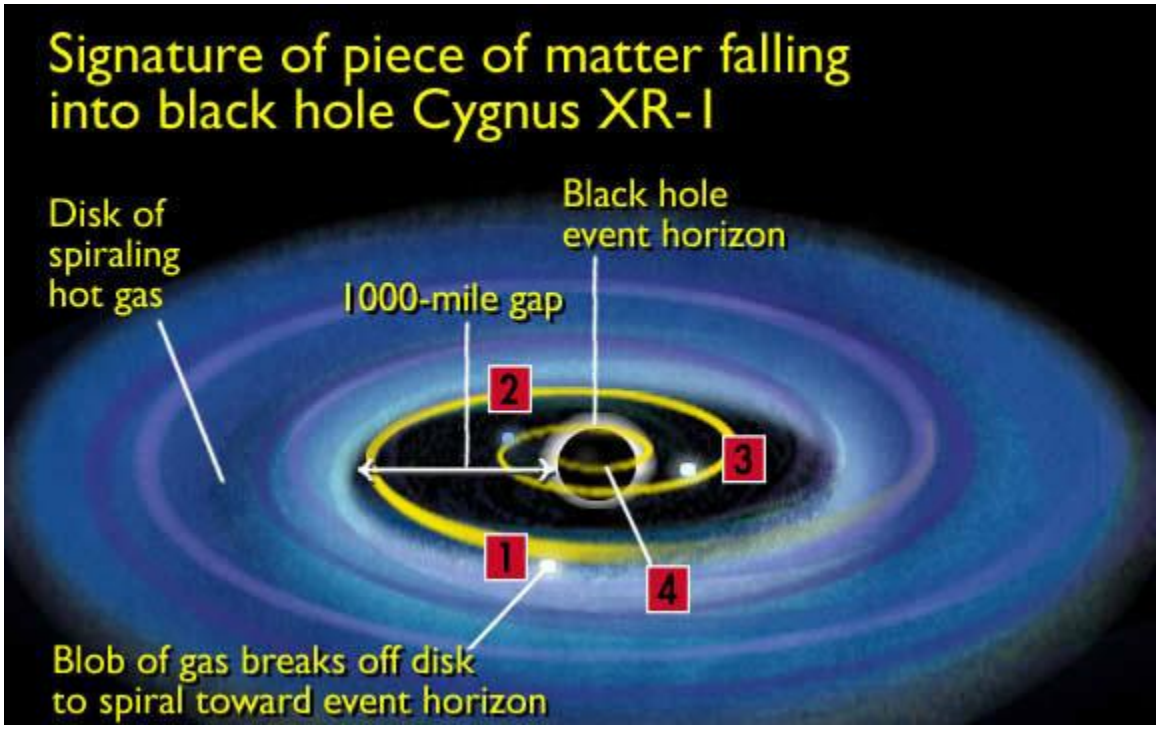


6. Super Massive Holes in Space-Time

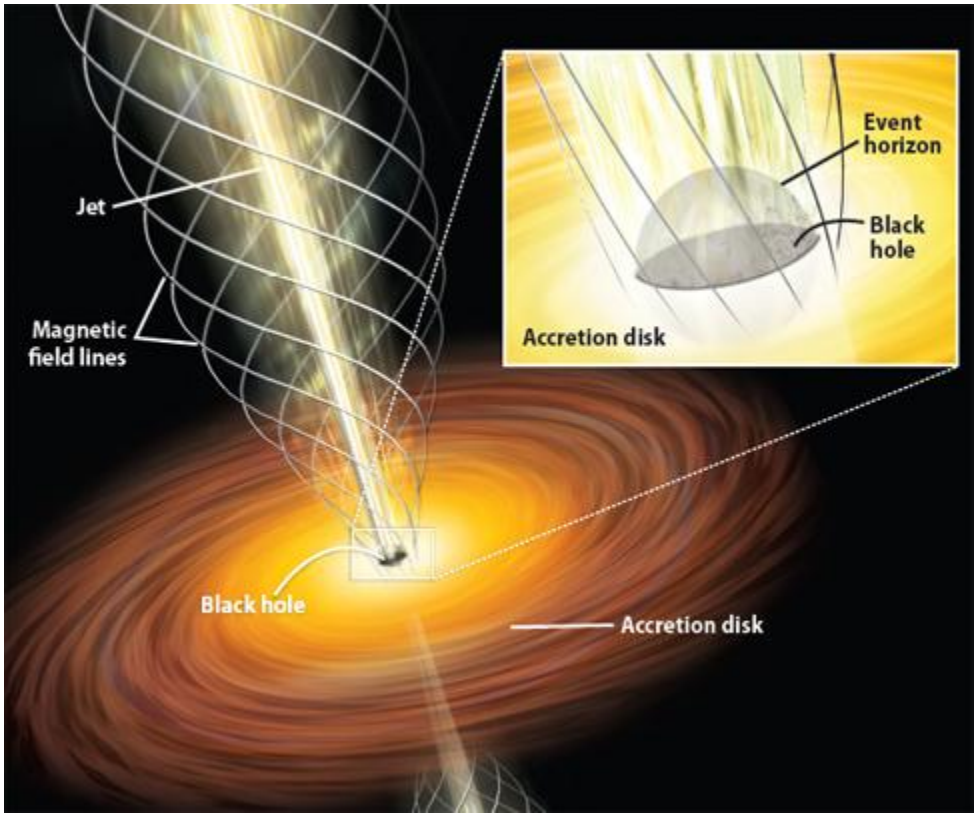
Conceptually, there are a variety of "black holes" most of which, at the macro-atomic level, are believed to be the initial remnants of collapsed stars following supernova. That is, as a star consumes it's hydrogen fuel, it begins burning helium and expands, becoming a red giant, and its mass is ejected into space via powerful solar winds (Joseph 2009b and references therein). Eventually, the star collapses, and if sufficiently large to begin with, e.g., 4 or more solar masses, it will collapse and implode (Melia 2003b; Thorn 1994; Wald, 1992), becoming a black hole consisting of gravity.

Red Giant losing mass via powerful solar winds

According to Einstein’s general theory of relativity, once a star has collapsed it will create an intense supermassive gravitational field. As additional gravity-mass falls into it, the collapse will continue such that the star implodes and forms a "black hole" in the universe.

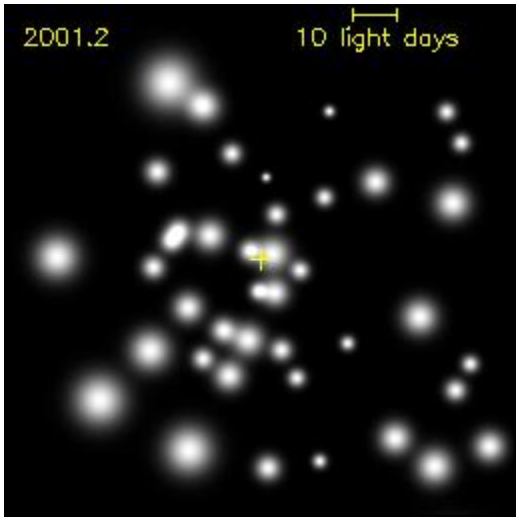


According to the general theory of relativity, because of its incredible concentrated mass, gravity, and density, a black hole creates a depression, or cavity in space-time. In consequence, anything which falls into this gravity-laden cavity, including light, can not escape back from whence it came (Hawking 1990; Thorn 1994). The point of no-return is the event horizon (Bo and Wen-Biao, 2010; Melia, 2003b; Hawking 1990; Thorn 1994; Thakur, 1998). As gas, debris, and entire stars collapse and disappear inside, the event horizon emits thermal and non-thermal radiation (Giddings, 1995; Hawking, 2005; Preskill 1994; Russell and Fender, 2010). However, because mass and energy are equivalent, once energy is expelled, all associated molecules and atoms dissociate, elementary particles are expelled, and all that is left is gravity, which becomes the hole. Thus, super massive black holes, are not holes but concentrated masses of gravity.



Phenomenon described as expansion are also due to super massive holes in the fabric of space-time. Some of these *holes* have the concentrated mass and gravity of entire galaxies and swallow up vast expanses of collapsed matter and gravity while simultaneously liberating vast quantities of energy which is radiated back into space and which becomes hydrogen gas. Like the Planck length gravitons, these super holes strip energy and gravity from matter, creating duality from singularity (Joseph 2010). The energy and particles liberated, then recombine, creating H^+. However, they create not just hydrogen atoms, but stars and galaxies.

There are gravity laden *holes* which are equal to galactic-clusters in mass. Yet other gravity-holes have the concentrated mass and gravity of an entire Hubble length universe. Our observable Hubble-length universe orbits one of these super-supermassive holes just as the stars of entire galaxies orbit and eventually are swallowed by the supermassive black holes at their center. Like the stars closest to the black hole at the center of the Milky Way galaxy which have a greater velocity than stars on the outer arms (where the Earth is located), stars at the edge of our known, Hubble-length universe, orbit one of these universe-in-mass holes at a greater velocity than those stars further away thus effecting the red shift and dimness of light and creating the illusion the universe is accelerating and exanding. The illusion of an "accelerating universe" is due to the gravitational effects of a universe-in-mass black hole at the edge of our Hubble length universe. Stars closest to the hole accelerate to their doom.



Stars orbiting a black hole. Those closest to the hole have a greater velocity than those further away.

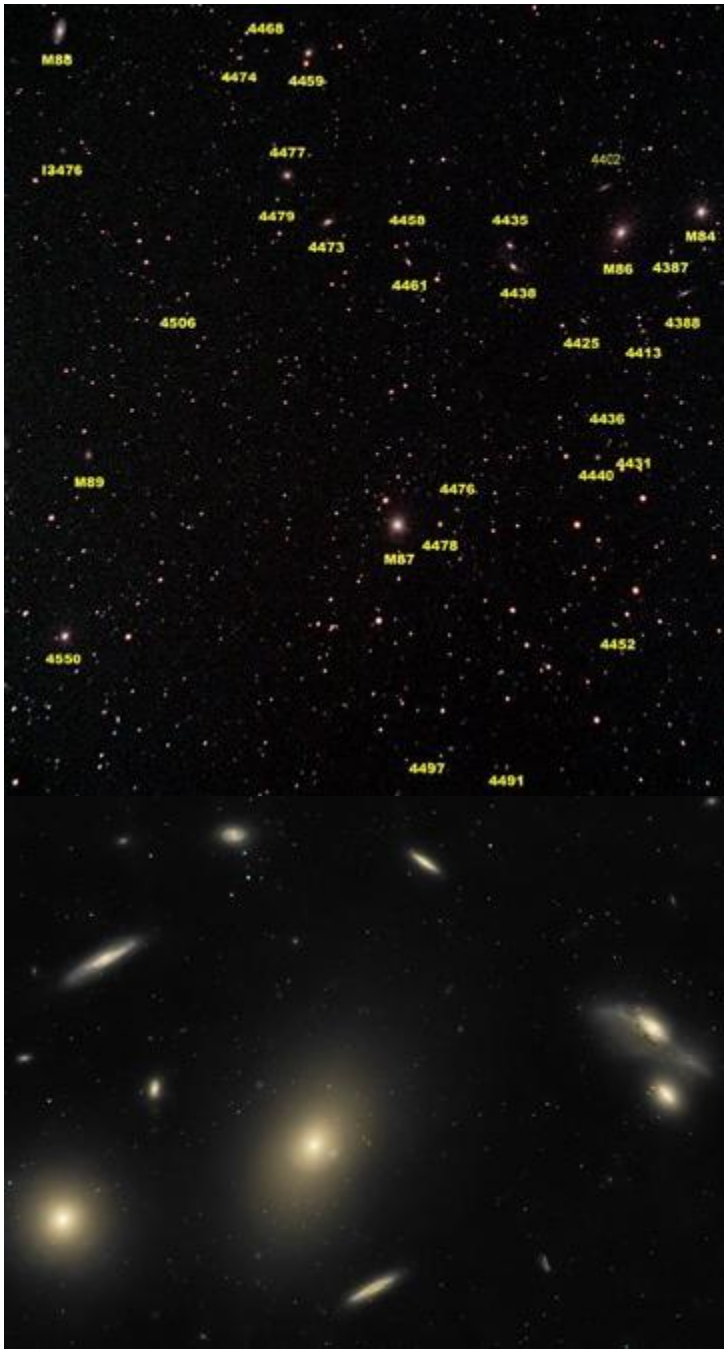
7. Galaxy-in-Mass Black Holes

Galaxies, stars, planets, moons, molecules, atoms, and so on, are continually recreated and destroyed, and matter and energy, including hydrogen atoms, are continually recycled and reassembled via activities associated with "black holes" also known as graviton-holes, gravity holes, super massive black holes, galaxy-in-mass gravity holes, and universe-in-mass gravity holes, depending on their size and gravity-mass (Joseph 2010).

The smallest holes, graviton-holes, are smaller than a Plank length which is defined as 10^{-33} cm. By contrast, a super massive black hole, with the concentrated gravity-mass of hundreds of millions of stars, is believed to sit in the center of every spiral galaxy (Blanford 1999; Melia, 2003a,b; Jones et al., 2004; Ruffini and Wheeler 1971). Supermassive black holes may consume millions of stars annually (Giess, et al., 2010; Melia, 2003a,b; Merloni and Heinz, 2008).

Stars and entire galaxies are recycled. Stars grow old and die, becoming white dwarfs, brown dwarfs and black holes (Hawking 1990), all of which eventually, in an infinite universe, are swallowed by the supermassive black hole at the galactic center which becomes even more massive in size until all stars, young and old, within its galaxy, disappear inside. However, once this happens, the gravitional mass of an entire galaxy comes to be bound up in the singularity of a single black hole which becomes a galactic orphan devoid of any stars but which would then begin to draw distant galaxies toward it. The VIRGOHI21 black hole is an illustrative example.

VIRGOHI21 (Minchin, et al., 2005) has swallowed all the stars of its galaxy and has the gravity of an entire galaxy, an estimated total mass of about 1/10th the Milky Way, ten times more dark matter than ordinary matter, and is surrounded by vast clouds of hydrogen. Because of its galaxy-in-mass gravity, VIRGOHI21 has pulled up to 2000 galaxies (Fouqué, et al., 2001) toward it, creating the Virgo Cluster. Thus, thousands of galaxies have been caught up in the vortex of this galaxy-in-mass gravity hole and now cluster about it.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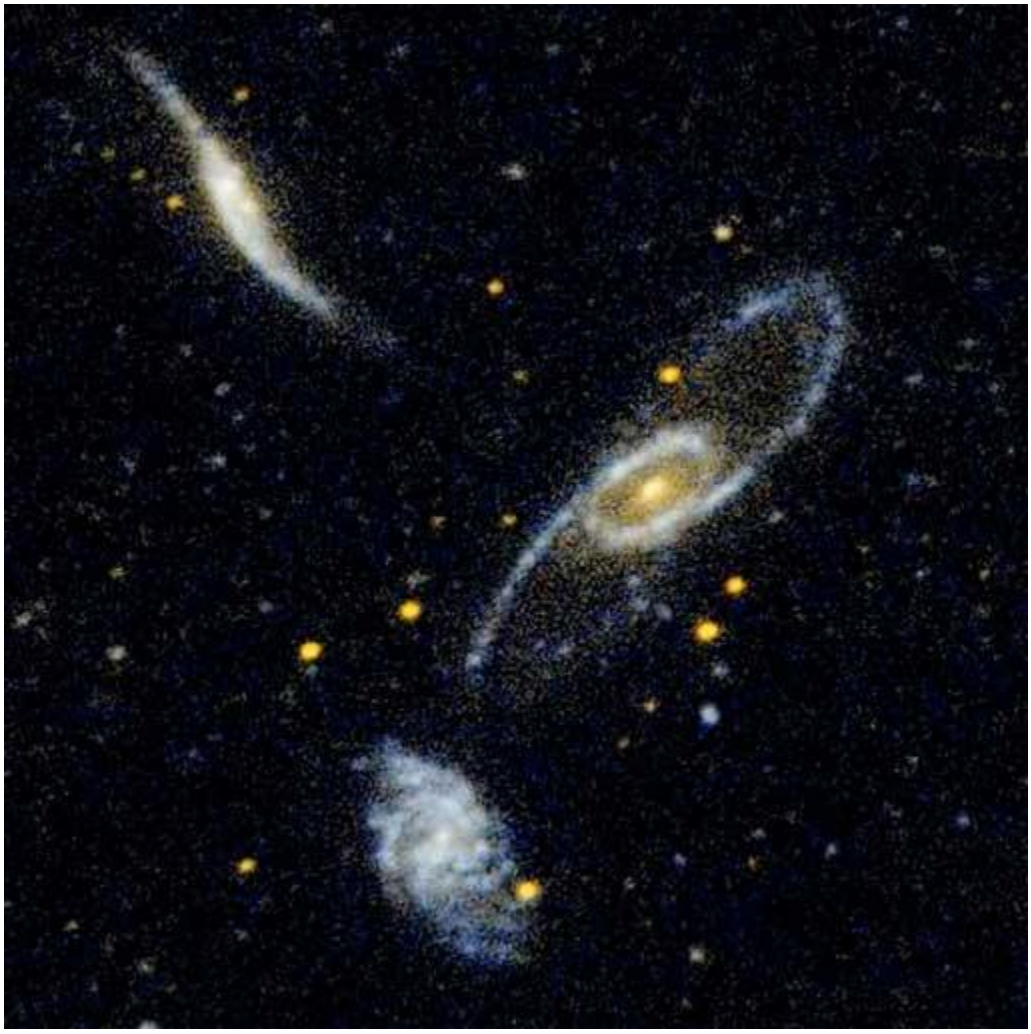
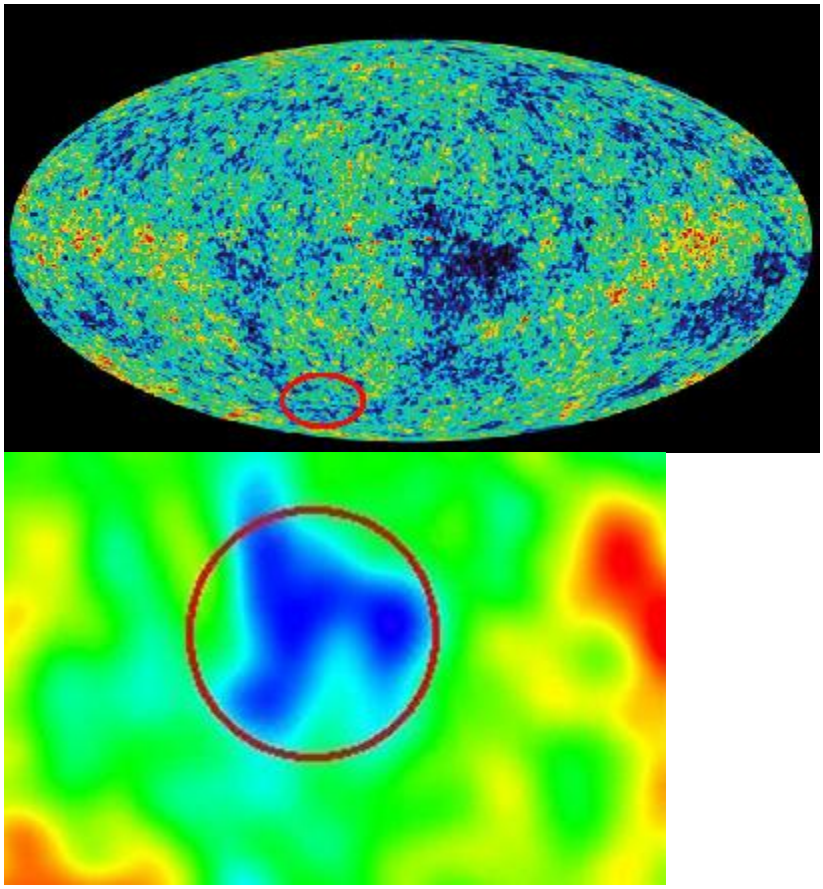


Galaxies of the Virgo Cluster

In an infinite universe, these galaxy-in-mass black holes become more massive yet and eventually consume all the galaxies which have been caught up by its increasing gravitational grip (Joseph 2010). Once all surrounding galaxies have been consumed, all that is left is a void, a galaxy-in-mass gravity-hole in the fabric of space-time surrounded by eternal night and empty space.

The billion-light-years across "Eridanus black hole" is typical of black holes which have the gravity-mass of millions of entire galaxies. The Eridanus black hole sits like a giant black spider in an ocean of nothingness, having swallowed up all surrounding galaxies, gas, and light, including radiation from the Cosmic Microwave Background. Based on an analysis of the NRAO VLA Sky Survey data, Rudnick et al. (2007) in fact discovered that there was a significant and rather remarkable absence of galaxies even in the distant space surrounding this hole, in the constellation of Eridnus. Thus, the billion-light-years across "Eridnus black hole" must have consumed the gravity-mass of millions of entire galaxies all of which have been collapsed and concentrated into the singularity of this super-galactic hole.



The "Hole" in the bottom of the Universe: The Eridanus "Void"

The billion-light-years across "Eridanus black hole" should not be considered unique or as something abnormally large. There appears to be a gravity-hole which may contain the collective mass of all the galaxies which populate a Hubble length universe and which sits just outside our known Hubble length universe; that is, just beyond that region of space which can be observed.

It is this universe-in-mass black hole which is responsible for the phenomenon described as *the expanding-accelerating universe*. Stars at the edge of the Hubble length universe are being consumed by a universe-in-mass black hole; and these stars are accelerating toward their doom.

Therefore, just as molecules, atoms, and photons, are whittled down and liberated of gravity, elementary particles, and electro-magnetic activity; and just as this same process occurs at the macro-molecular level such that entire stars and galaxies are broken down and disassembled by black holes; entire Hubble-Length universes suffer the same fate.

8. Acceleration and Universe-in-Mass-Black Holes

Assumptions about red shifts and the dimness or brightness of galaxies or supernova as pertaining to the concept of an expanding, accelerating universe, are based upon the pre-Copernican belief in an Earth centered universe. For example, it is assumed that all stars or type IA supernova (SN IA) are, on average, equally bright and only fade with distance as they move away from where the Earth is now (Kirshner 1999; Perlmutter et al., 1998; Schmidt, et al., 1998). Earth-centrism is the standard which is used to determine the age of the universe and if stars are receding and accelerating as they speed away; that is, as they speed away from Earth (Perlmutter et al., 1998; Schmidt, et al., 1998).

Thus for example, we are to believe that a star 8 billion light years away from Earth is 8 billion years old, and if it is dimmer and its red shift greater than expected as based on the illumination of a star 3 billion

light years from Earth, not just it, but the universe must be accelerating as it speeds away from Earth (Kirshner 1999; Perlmutter et al., 1998; Schmidt, et al., 1998). Therefore, we are to conclude stars are old because they are far away, and because they are fainter than predicted and given their extreme red shift, they are speeding up, and this is the basis for claims that the universe is accelerating.

As detailed by Robert Kirshner (1999), a member of the team which made the acceleration *discovery*: "The distant supernovae are not brighter than expected in a coasting universe, they are dimmer. For this to happen, the universe must be accelerating while the **light from the supernova is in transit to our observatories**.... Could there be some other reason... that makes the objects found at a redshift z = 0.5 approximately 25% fainter than the SN Ia we see nearby? While both teams have tried hard to identify and rule out systematic problems, both are using a slender (and common) database of local supernovae to correct the observed fluxes for the effects of the supernova redshift and spectral details as observed through fixed filters. **These "k-corrections" conceivably could produce some problems for particular supernova ages and redshifts**... the supernovae are sampled over a significant range of redshifts and through a variety of filters....the distant supernovae are explosions that took place 8 billion years ago. There are younger objects than nearby SN Ia. This could affect the properties of the stars that led to SN Ia long ago compared with the present and also could affect the chemical composition of the white dwarfs that explode, both near and far. Because the present-day understanding of SN Ia is incomplete, we don't know exactly how changes in the stellar population or the composition would affect the luminosity....Even more sinister could be the effects of cosmic dust, which could absorb light from distant supernovae, and lead to their apparent faintness."

We must recognize that whereas some stars display a variable red shift which may change significantly and throw off estimates by over 3 billion years, yet other stars demonstrate a blue shift and are moving toward the Earth. Moons, planets, stars, and galaxies are in motion, with entire rivers of galaxies streaming through space and galaxies crashing into each other from every direction. Instead of claiming the universe is expanding or accelerating, a better description is that galaxies of the known universe are in motion and that some distant stars appear to be accelerating.

To scientifically explain the phenomenon which gives rise to the illusion of an expanding, accelerating universe, we need to abandon pre-Copernican thinking which places the Earth at the center of the universe. We must extrapolate and make deductions based on what can be observed:

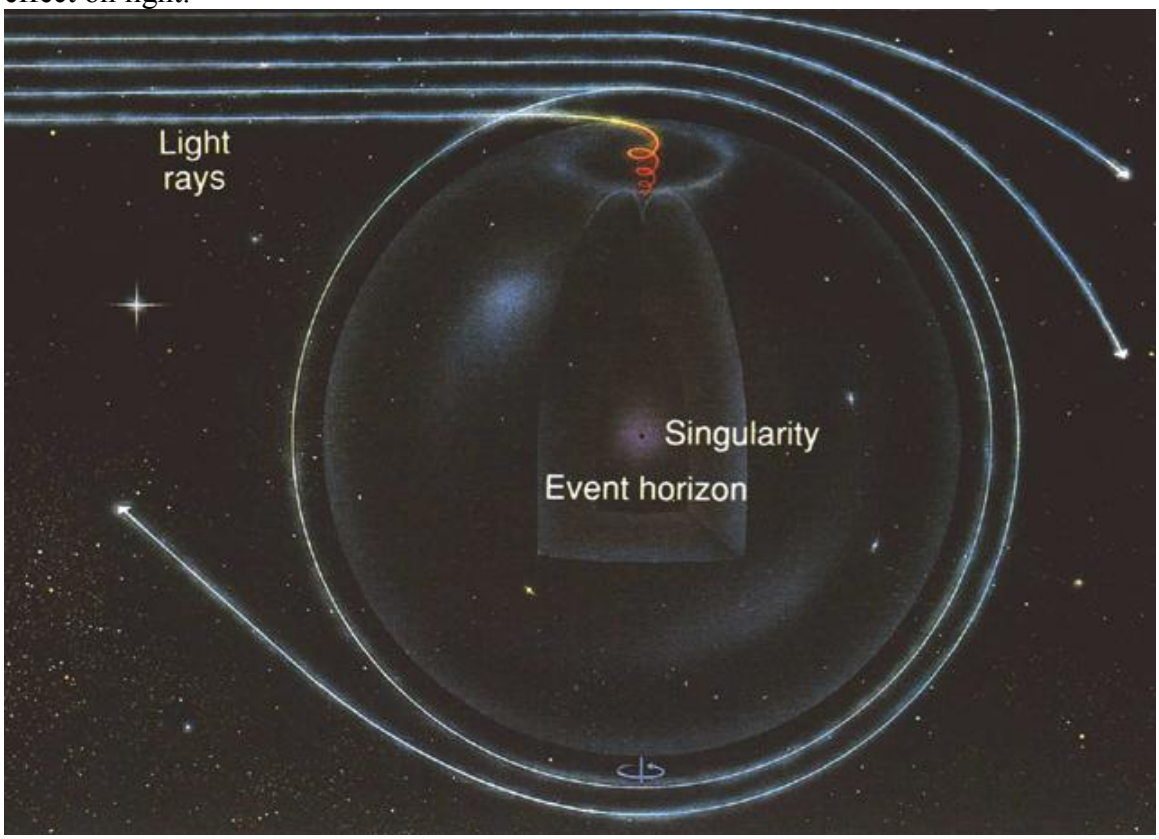
It is believed that distant supernovae are unexpectedly dim as based on their red shift. This is interpreted to means they are farther away from Earth than expected based on the linear increase of red shift with distance. From this assumption it can be argued that from the perspective of Earth the velocity of the more distant stars is faster as compared to differences in the red shifts and illumination of stars which are closer to the Earth which indicates this region of space (closer to Earth) is moving more slowly. Therefore, the rate of velocity is increasing for certain groups of distant stars in the known Hubble length universe, but only from the perspective of and thus relative to Earth.

If we restrict our interpretations only to the measure of light, then it is equally valid to say that the speed of light of distant stars may be slowing down even as the velocity of these stars appears to be increasing. A slowdown would make distant stellar objects appear fainter than what would be expected.

It is also valid to ask, what could cause the light of a star to grow dim, and effect its red shift to make it*appear* the star is rapidly moving further away? What could affect the speed of light and alter the redshift and illumination of stellar objects so as to make it appear their velocity is increasing relative to where the Earth is now? What could cause these stars to increase their velocity? The answers lie in the center of our own Milky Way Galaxy. A black hole.

The existence of black holes and their formation was predicted in 1939, by Robert Oppenheimer who

argued that stars above approximately three solar masses would collapse into black holes and create singularities in the fabric of space-time (Oppenheimer, et al., 1939). Further it was predicted that because of the incredible gravity, time stopped within a black hole --at least from the point of view of external observers, but not for infalling observers (Hawking 1990; Ruffini and Wheeler 1971; Thakur 1998; Thorne 1994; Wald 1992). Thus, black holes may be timeless; and this presumption is based on the hole's effect on light.



Black holes exert an organizational and gravitational effect on matter. Holes smaller than a Planck length, attract objects in local space, and counter the gravitational pull of entire planets, on those objects (Joseph 2010). Supermassive black holes attract and organize stars which then circle and orbit around them, much in the same manner that water is drawn toward and then circles 'round a drain before disappearing inside. Black holes have spin (Nemiroff, 1993). They are in motion (Zhang 2010). General relativity predicts that any rotating mass will "drag" and pull space-time which also begins to circle around it. Hence, the stars of a galaxy also begin to spiral toward the supermassive black hole at the galaxy's center. A spinning black hole will drag surrounding space time with it (Nemiroff, 1993) such that stars closest to the black hole have a greater orbital velocity compared to those further away (Ghez et al., 2005; Petrovskaya, 1994; Teerikorpi, 1989). Their velocity will increase and they will appear to be accelerating as they come even closer to the hole.

Earth and our solar system, located on an outer arm of the Milky Way galaxy, orbits the supermassive black hole at the center of the galaxy, at a speed of approximately 155 miles/sec (250 km/sec) (or from 965,600 km/h, to 804,672 km/h), taking approximately 240 million years to complete an orbit. However, those stars closest to the black hole at the galactic center, rather than moving more slowly (relative to the stars on the outer rims), are moving more rapidly (Ghez et al., 2005; Petrovskaya, 1994; Teerikorpi, 1989). This is due to the fact that super massive black holes have spin and momentum (Nemiroff, 1993;

Zhang 2010) and will drag surrounding space-time along with it (Nemiroff, 1993). At the event horizon, the spin is so fast that it equals the speed of light (Nemiroff, 1993).

If a star equipped with infinite power and thrust were to approach the event horizon of a black hole it would have to steadily increase its thrust and power to prevent itself from being dragged into the vortex of time-space and disappearing into the hole. Upon reaching the event horizon it would require infinite power and thrust and infinite acceleration to counter the infinitely powerful gravitational forces of the hole; as such it would be locked in place, spinning helplessly around the hole but unable to escape. If the star was just a fraction shy of infinite acceleration it would immediately disappear into the hole.

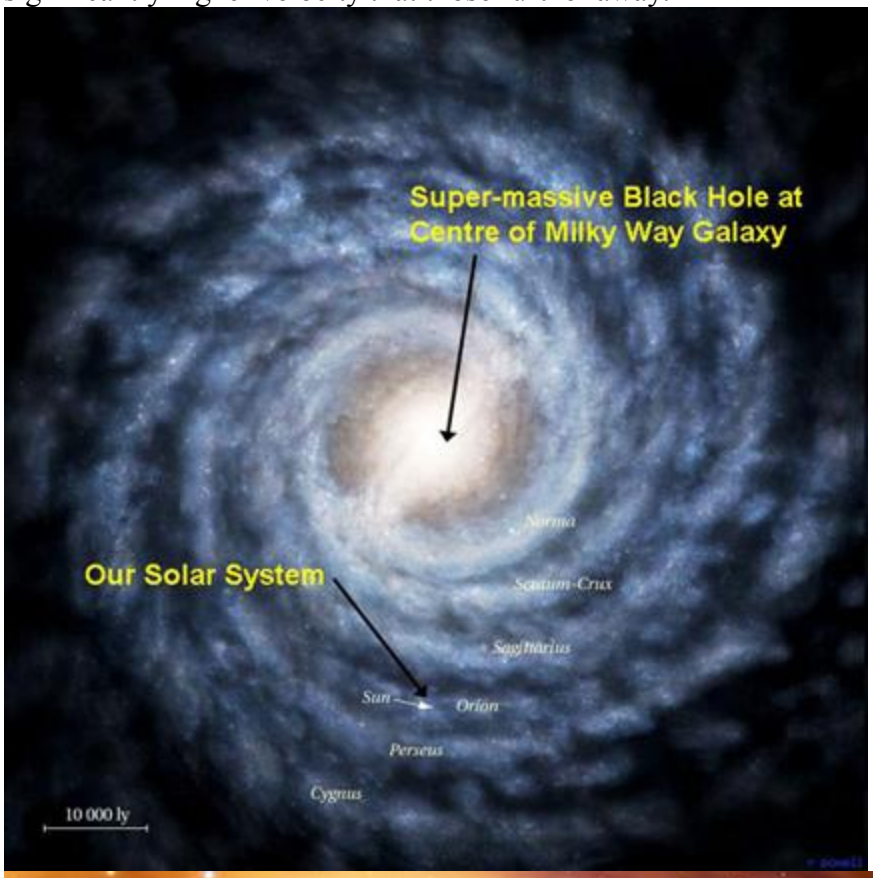
A normal star accelerates as it falls toward the black hole and reaches infinite acceleration as it falls inside the hole. Yet, from the perspective of an outside observer, the light associated with that star would become dimmer and red shifted as it approached the event horizon until reaching an infinite red shift at the horizon. If the observer did not know there was a black hole, it would appear as if that distant star (based on the dimness of light) was accelerating (based on its red shift) and given its dimness (due to the black hole's capture of light) there would be an illusion that it is rapidly increasing its distance, becoming further and further away as it speeded up. However, although it is speeding up, it is not speeding further away. This is an illusion produced by the hole's effect on light.

Energy, quanta, are being stripped from the star as it approaches the black hole (Hawking 1990). The light associated with the star simultaneously become redder and dimmer until the object can no longer be seen--and this is known as "gravitational red shift." This exact same red shift / faint light phenomenon has been used to claim that distant stars, and thus, the known universe, is accelerating (Kirshner 1999; Perlmutter et al., 1998; Schmidt, et al., 1998).

Gravitational red shift due to a universe-in-mass black hole, is responsible for the illusion of an accelerating universe. This universe-in-mass black hole model not only explains why distant galaxies have a greater velocity than those closer to Earth, but the dim illumination and red shifts of those distant stars.

In the inner galaxy, the rotation speed rises with the radius. By contrast, in the outer galaxy the rotation speed remains constant (Petrovskaya, 1994; Teerikorpi, 1989). Therefore, Earth and our solar system orbit the Milky Way at a constant speed and those stars closest to the black hole increase their speed as

they come closer to the Black Hole. General relativity predicts that any rotating mass will "drag" and pull space-time which also begins to circle around it. Therefore, the stars closest to the black hole have a significantly higher velocity that those further away.



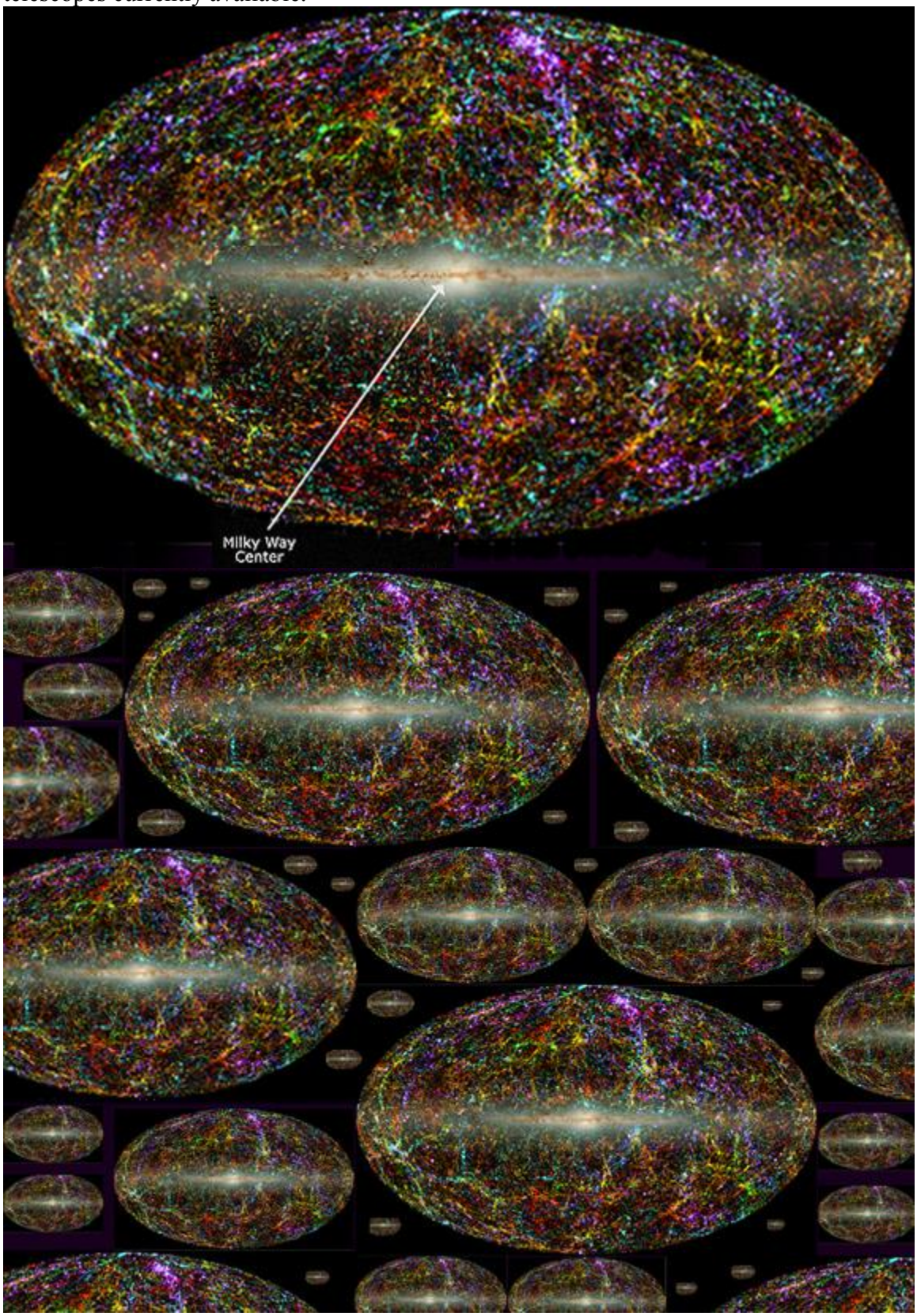
These observation can also be used to easily explain the presumed increases in the velocity of distant stars and galaxies: they too are orbiting a black hole; a universe-in mass-sized black hole. These distant stars

identified by the teams led by Schmidt, et al., (1998) and Perlmutter et al., (1998) are nearer to the universe-in-mass hole than those galaxies closer to Earth.
The universe is not accelerating. There is a universe-in-mass black hole drawing these galaxies toward them. These distant galaxies increase their velocity as they approach this universe-in-mass black hole. As distant galaxies come closer to this universe-in-mass black hole, the light associated with those galaxies develops a red shift pattern indicative of that acceleration, even as they appear to dim thereby creating the illusions that they are speeding off faster and further away into the distance, when in fact they are falling into the infinity of a universe-in-mass black hole.
Robert Kirshner (1999) asks: "Could there be some other reason... that makes the objects found at a redshift z = 0.5 approximately 25% fainter than the SN Ia we see nearby?" And the answer is: yes, this red shift / faint light phenomenon is caused by a Hubble length *universe-in-mass black hole* on the outskirts of the observed universe, giving rise to the illusion that the distant universe is accelerating when in fact these distant galaxies are in the grip of a universe-in-mass black hole (Joseph 2010).
The universe is not expanding. Distant stars are not rapidly increasing their *distance*. They are falling into the infinity of a black hole.

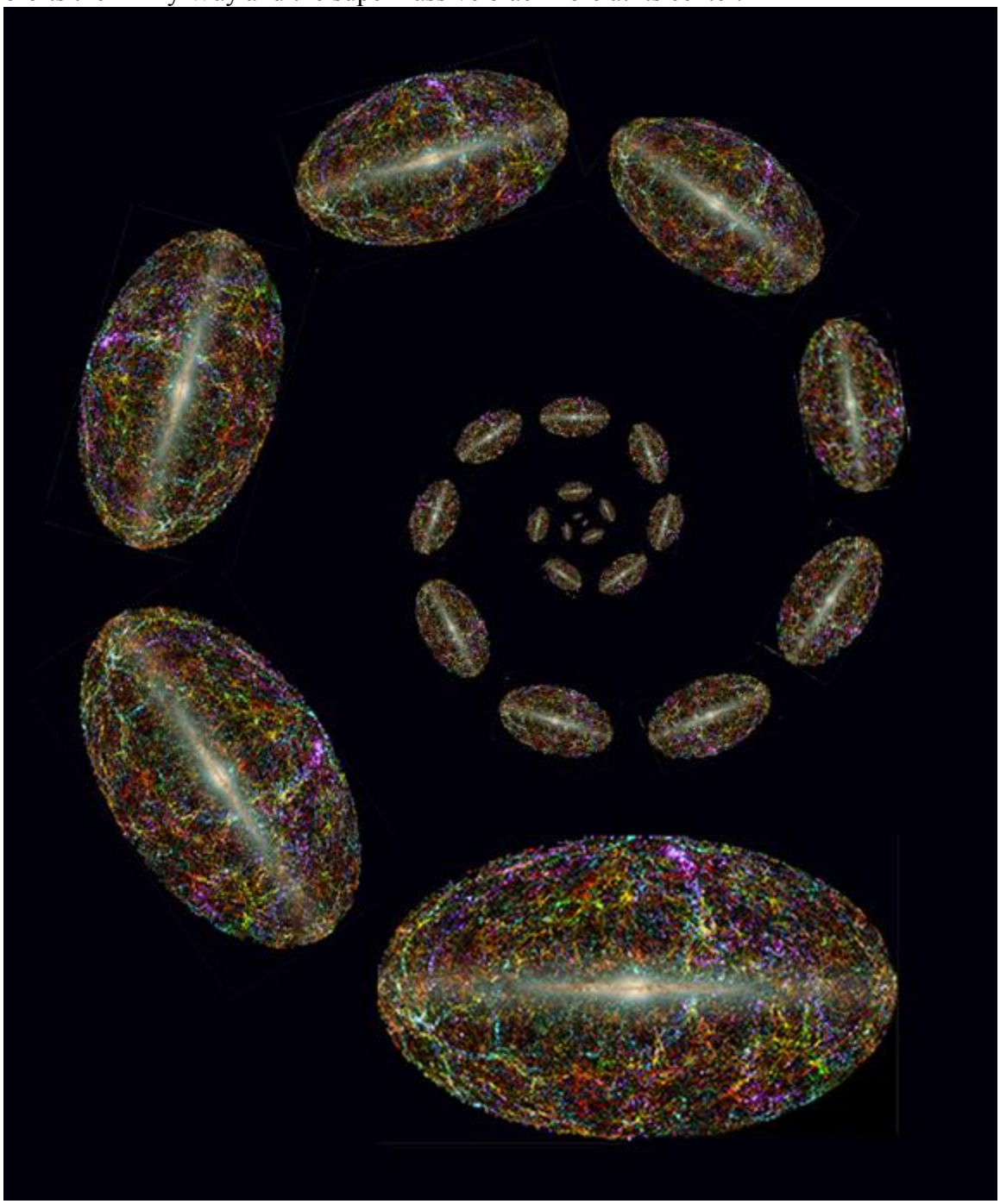
9. Infinity, Universe-in-Mass Black Holes and Bubble Microverses.

Stars are born and they die and those over 4 solar masses blow off their mass, leaving only gravity which becomes a black hole. In this Milky Way alone, there may be tens of millions of super-massive black holes lurking in the inner and outer galactic arms and on the outskirts of the galaxy; the gravitational remnants of dead stars. The Hubble length universe may contain a trillion sextillion galaxies each of which are orbited by a hundred million super massive black holes. There there are the galaxies which have been consumed by black holes, and black holes which consume one another and whose gravity is so powerful that even distant galaxies are caught in their gravitational grip.
An infinite universe peppered with incredibly massive black holes, explains why galaxies clump together, why galaxies are moving in every conceivable direction and at variable speeds, with some galaxies crashing into each other, and entire rivers of galaxies flowing in the same direction. The "Great Attractors" are black holes. Great voids are due to black holes. Walls of galaxies align together because of black holes. The known, observable universe is in motion because of black holes.
However, the universe is not accelerating its expansion. The stars on the outskirts of the Hubble lengthy universe are accelerating toward their destruction. A *universe-in-mass black hole* beyond the vantage point of Earth, and outside of the observed/known Hubble length universe, accounts for the increasing speed of those galaxies furtherest from the Earth and the Milky Way and why they appear to be accelerating.
Relying on the concept of "Occam's razo" ("entities must not be multiplied beyond necessity"), then the simplest explanation is not that the universe was created by some unknown power, and then the outer regions of the universe began to mysteriously speed up because of an invisible phantom force. These distant galaxies are in the grip of a supermassive black hole. The simplest explanation is usually the best one.
Infinite Bubble Universes: Our known observable universe (coupled with galaxies so distant they have not yet been detected) orbits a *universe-in-mass* gravity hole which is just one of an infinite number of similar black holes located at vast distances from each other.
Consider, by way of an illustrative example, a bubbling quantum foam in an infinite cosmos, which produces an infinite multitude of "bubble universes" similar in composition to our known universe. Let us imagine that the Milky Way galaxy is located within one of these "bubble universes" i.e. the Hubble length *universe* which is the length and extent of the universe which has so far been observed with the

telescopes currently available.



An infinite number of these "bubble universes" including our own "bubble universe" is orbiting this same *universe-in-mass* gravity hole. An infinite number of yet other "bubble universes" may be orbiting a *universe-in-mass* gravity holes. And this pattern is repeated infinitely.
Thus our Hubble length "bubble" universe is one of X number of "bubble" universes orbiting one of an infinity of black holes each of which is *universe-in-mass*. Each of these bubble universes spins as it orbits, just like the Earth and the other planets spin as they orbit the sun, and just as our solar system orbits the Milky Way and the supermassive black hole at its center.



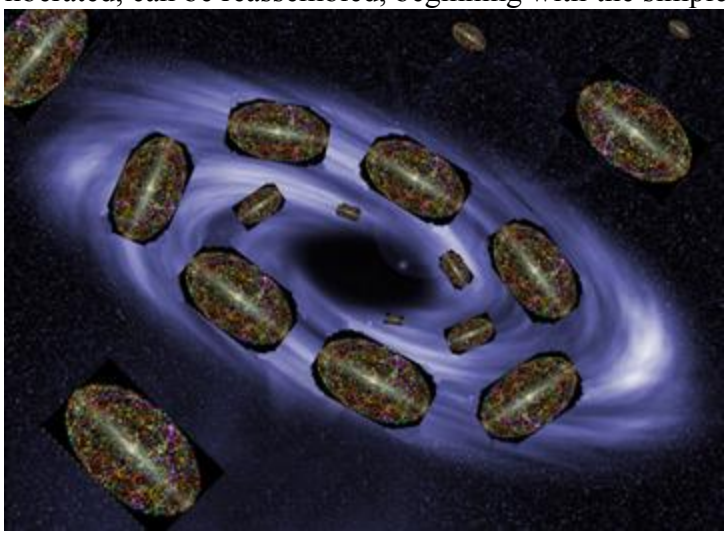
The outer rims of our "bubble universe" face the black hole as it orbits, just as the outer surface of the Earth faces the sun. Thus the outer surface of the spinning Earth is closer to the sun than the inner Earth. Likewise, the outer rim of the Bubble universe is closer to the black hole than the inner regions of this "bubble" universe. This model, therefore, is also like a circle within a circle, i.e. the outer surface of a tire has greater velocity and rotates closest to the road versus its hub which is always relatively further away when facing the road and has a slower velocity. Our Milky Way galaxy is located within the inner circle of the Bubble Universe, whereas the outer circle of the "Bubble" (those stars over 8 to 13 billion light years distant from Earth) faces and is closer to the universe-in-mass black hole. In consequence, those regions closest to the black hole accelerate faster than those regions more distant (where the Earth is now). This is exactly what happens when the tires of car make a 360 turn. Thus, the outer rims appear to be accelerating compared to the inner rims where Earth is located--just as the outer rim of a tire spins faster than the inner rims as the car orbits and turns.

The concept of Hubble length "bubble universes" is for illustrative purposes only, as the universe continues forever beyond the current boundaries of the observed universe. Nevertheless, the "bubble universe" description may be a reasonable approximation of what is taking place within the fragment of the cosmos we can currently observe with our limited technology. There is a universe-in-mass black hole on the outskirts of the known, Hubble length universe, and those stars closest to this hole are accelerating as they are swept inside.

This same pattern probably repeats itself throughout the infinite universe; i.e. an infinite number of Hubble length universes which are orbiting universe-in-mass gravity holes.

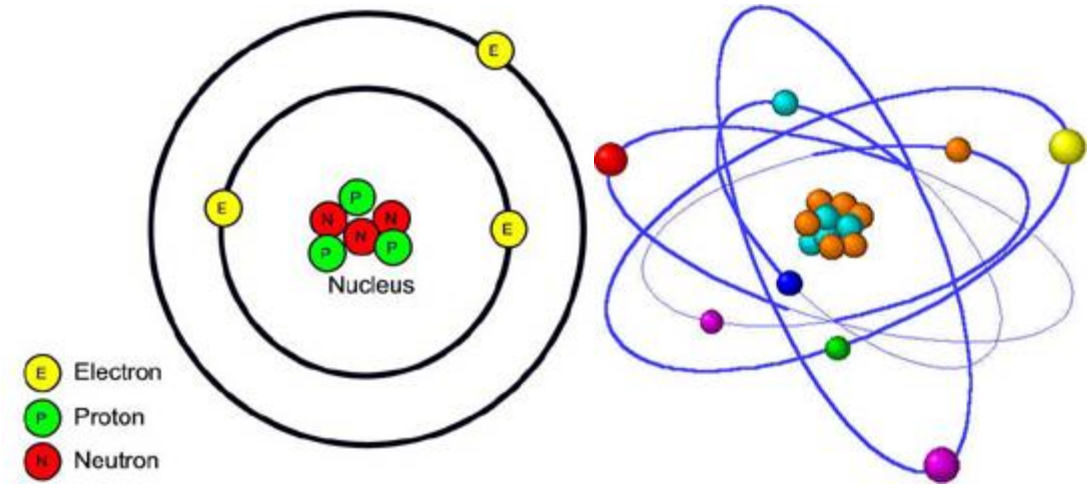
Thus the evidence indicates that the universe is not expanding. The universe is in motion due to an infinite number of black holes of varying size. Galaxies which are nearest a universe-in-mass black hole, accelerate toward the hole relative to galaxies further away. This pattern is infinitely repeated, such that our Earth, solar system, and galaxy are like elementary particles and atoms creating ever larger superstructures in an infinite universe: An infinite number of "bubble universes" orbiting an infinite number of universe-in-mass black holes thereby creates a "bubble multi-universe."

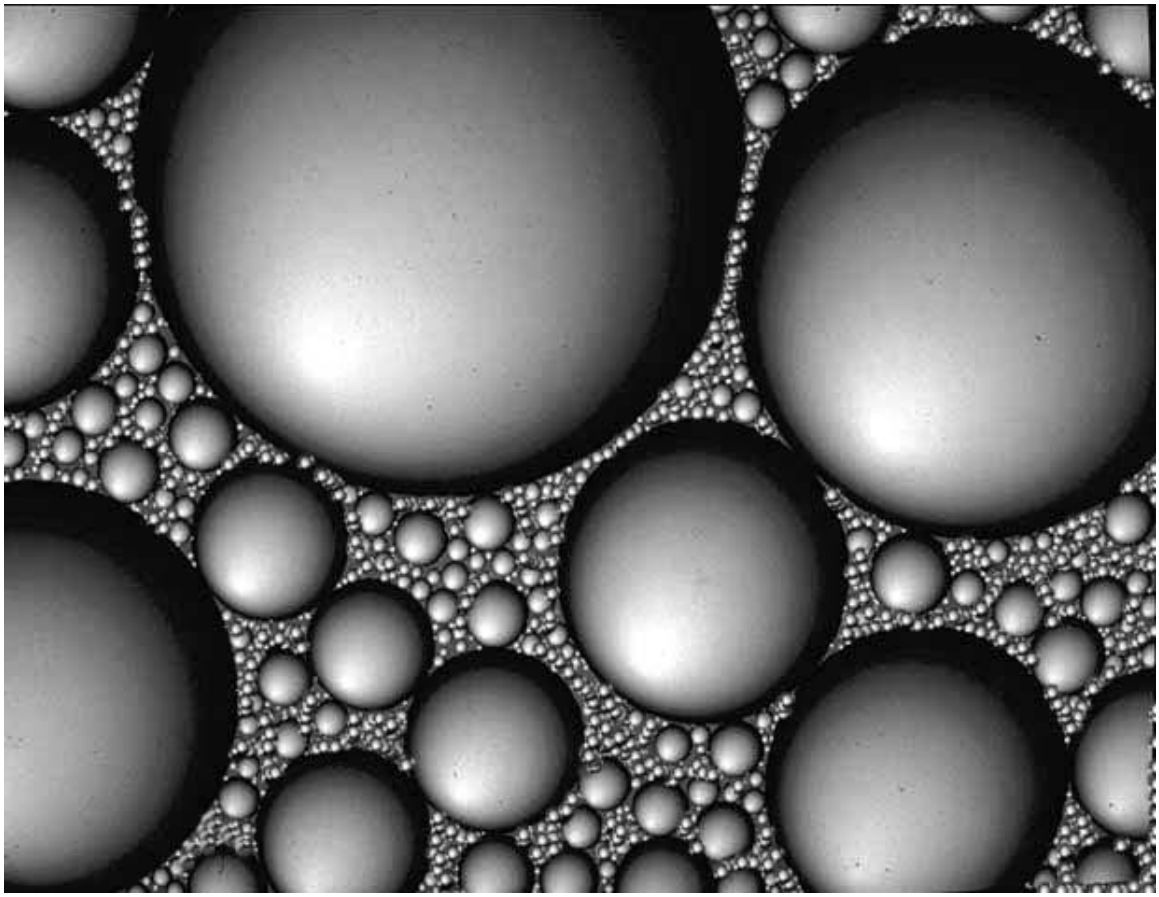
Eventually, each of these "Universes" will be stripped of their constituent elements, which, once liberated, can be reassembled, beginning with the simplest of atoms.



In the early 1900s Ernest Rutherford and Niels Bohr proposed and developed a planetary model of the atom (Bohr, 1913, 1958; Rutherford, 1914, 1920). Just as the Sun sits at the center of the solar system and

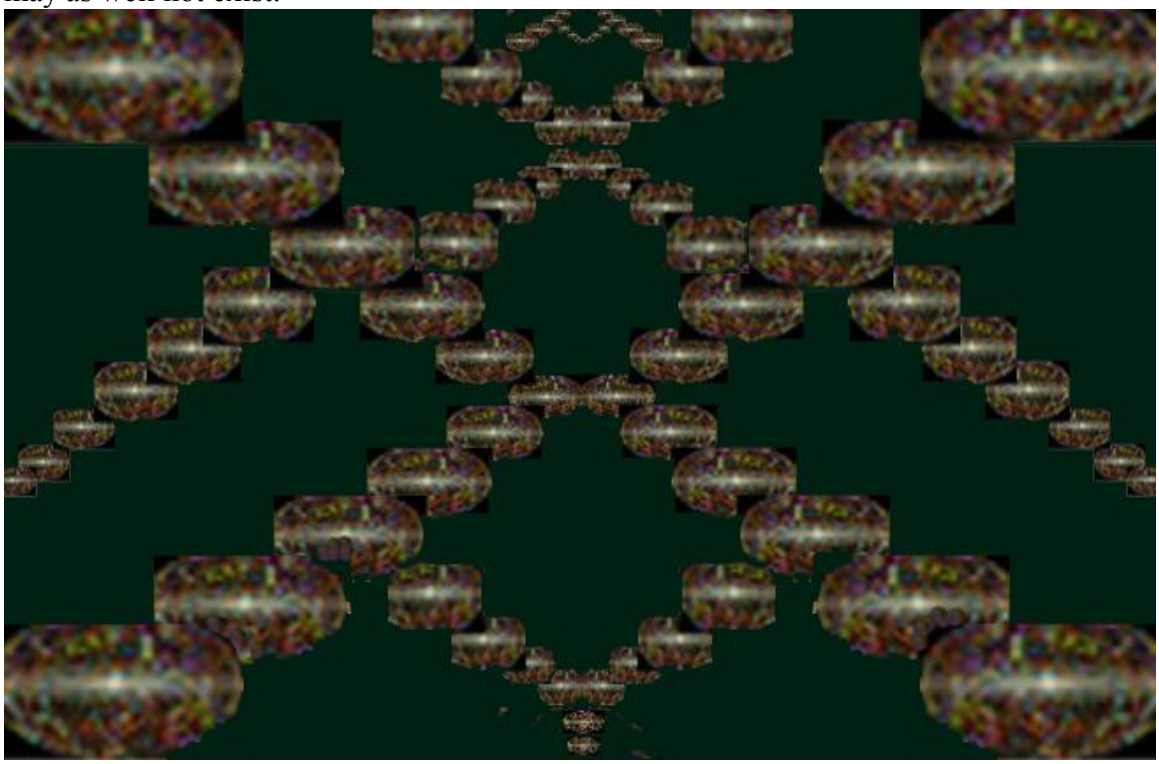
is orbited by planets, it was proposed that the atom consisted of a central core (the nucleus) and is orbited by a swirling ring of electrons. However, the cosmos is also organized according to the model of the atom.





From the perspective of an infinite cosmos: just as elementary particles make up atoms, atoms make up molecules, molecules making up rocks and trees and planets and stars, and stars making up galaxies, galaxies making up a hubble length "bubble universe"--these bubble universes (from a "god's eye view) are subatomic in size and create even greater superstructures: "bubble multi-universes" each consisting of innumerable Hubble length universes. This pattern is then replicated yet again on an even larger scale, an

infinite number of "bubble multi-universes," becoming "bubble multi-multi-universes" and so on.
Just as all matter consists of elementary particles which make up atoms and then molecules, stars and galaxies are like atoms and molecules in the infinite universe creating even greater superstructures which in turn are like atoms and molecules creating yet even more god-like superstructures. Patterns repeat themselves in nature and in the cosmos, creating such titanic, gargantuan, infinitely-large superstructures, they are impossible for the human mind to perceive much less comprehend from its infinitely small perspective. From a "god's eye view" of an infinite universe, humans are so infinitely insignificant, they may as well not exist.

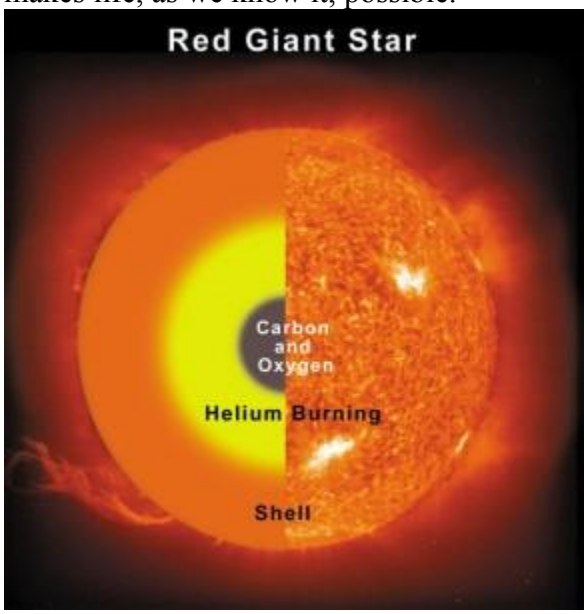


10. Black Holes and Hydrogen

Holes smaller than a Planck length are created when gravity and energy are stripped from photons and elementary particles. The compressed remnant contributes to the mass and gravity of the *hole*, with the deflected energy acting to bind together and create new matter. These infinitesimally small *holes* which are infinite in number, are not holes at all but graviton particles and are a source of gravity waves, and in local space they counterbalance the gravitational pull of entire planets, thus giving rise to the false impression that gravity is weak (Joseph 2010).

Holes in space time are associated with gravity, the breakdown and compression of photons and mass, the liberation of electromagnetic energy (Giddings, 1995; Hawking, 1990, 2005; Preskill 1994; Russell and Fender, 2010; Thorn 1994) and elementary particles, and thus the creation of duality from a singularity, e.g. particle-waves become particles *and* waves (Joseph 2010). These holes are also responsible for the creation of matter and those chemicals and other agents which would give life to matter. That is, via the destruction of matter and the liberation of elementary particles and energy, matter is recycled and recreated when liberated quarks and leptons are bound together with energy and gravity to form protons and electrons, all of which leads to the simplest and lightest of all atoms, hydrogen (containing only a single proton and no neutrons or electrons), i.e. proton H^+ (Joseph 2010). Hydrogen is the lightest and most abundant element in the known universe. Approximately 90% of all atoms are hydrogen atoms

(Gilli and Gilli, 2009; Rigden, 2003).
Upon being joined together, proton H^+ immediately attracts other electrons (as well as other atoms and molecules which contain electrons). Once the proton H^+ captures an electron, it becomes a hydrogen atom. From there greater structures and compounds can be assembled (Gilli and Gilli, 2009; Rigden, 2003), such as liquid water, cellulose, microfibrils, polypeptides, DNA, and the stars which shine in the darkness of night.
Hydrogen is vital to life and is essential for the creation of stars and galaxies. Hydrogen functions as an energy carrier (Gilli and Gilli, 2009; Rigden, 2003). Hydrogen (with a single proton and electron) is believed to constitute approximately 75% of the observable mass of the universe, and along with helium (the second lightest and simplest element) is the major component of main sequence stars (Clayton, 1984; Hansen et al., 2004). Stars emit photons which are stripped and then captured by black holes in the fabric of space time.
As photons (particle-waves) journey across space, they are whittled down by gravity-holes smaller than a Planck length (Joseph 2010). As their energy is expelled, photons become smaller in size until they collapse and their remaining gravity/mass becomes one with the singularity of the black hole (Joseph 2010). However, as photons, electrons, protons, etc., collapse, not just their energy is liberated but the elementary particles they were comprised of.
Light and matter is not just broken down but is recycled. The liberated energy binds together elementary particles thereby creating hydrogen atoms and the entire cycles repeats itself, with hydrogen forming stars, stars releasing photons, and so on (Joseph 2010).
The creation of hydrogen, in turns leads to the creation of carbon. It is the production of carbon which makes life, as we know it, possible.

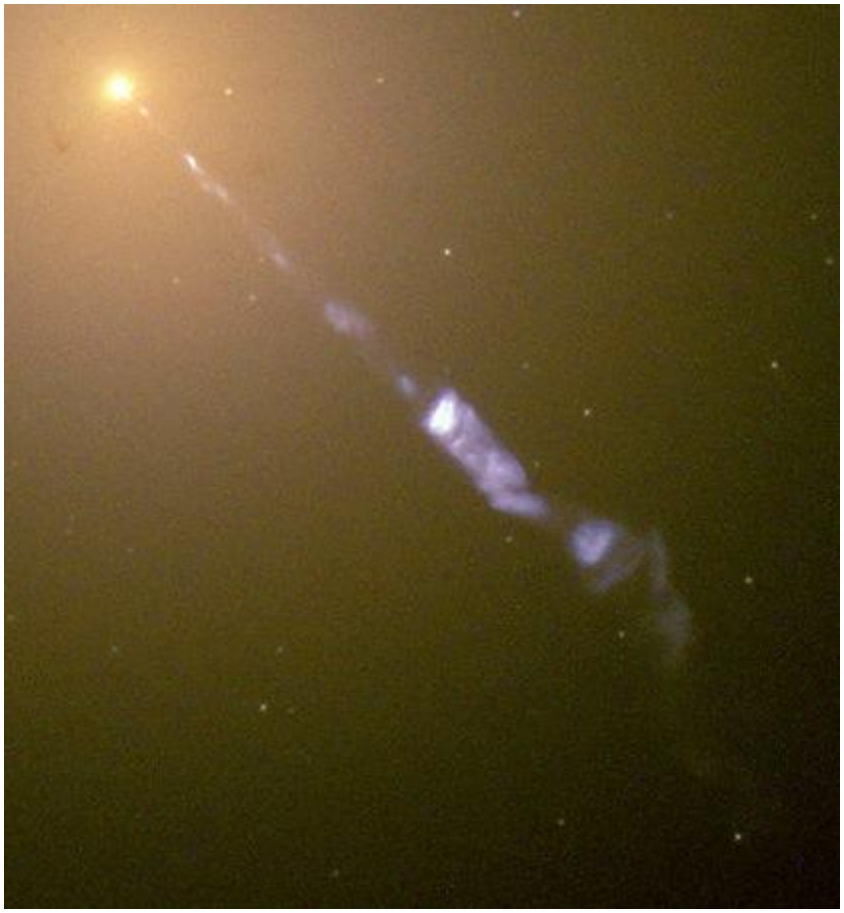


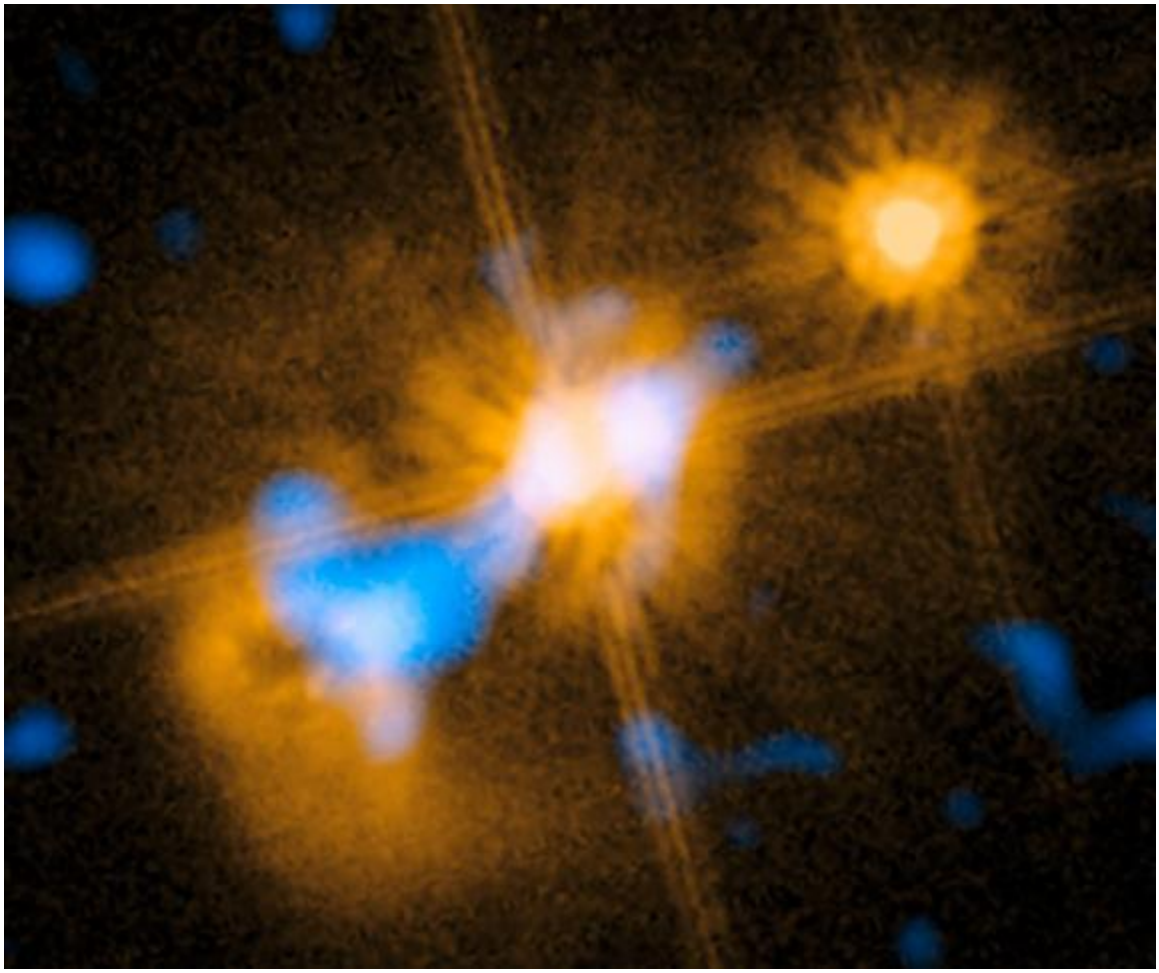
Hydrogen would not have been produced by a Big Bang as the resulting heat and subsequent nucleosynthesis would have instead turned all elements into iron, thereby creating a universe made of metal, and life would not be possible.
In the local universe, hydrogen is produced through the activities of black holes in space-time, be they super-massive holes in the center or spiral galaxies, or those smaller than a Plank length (Joseph 2010). Initially these newly generated hydrogen atoms do not contain an electron and are referred to as proton H^+. However, it can become hydrogen plasma once it attracts an electron. In its plasma state its electrons

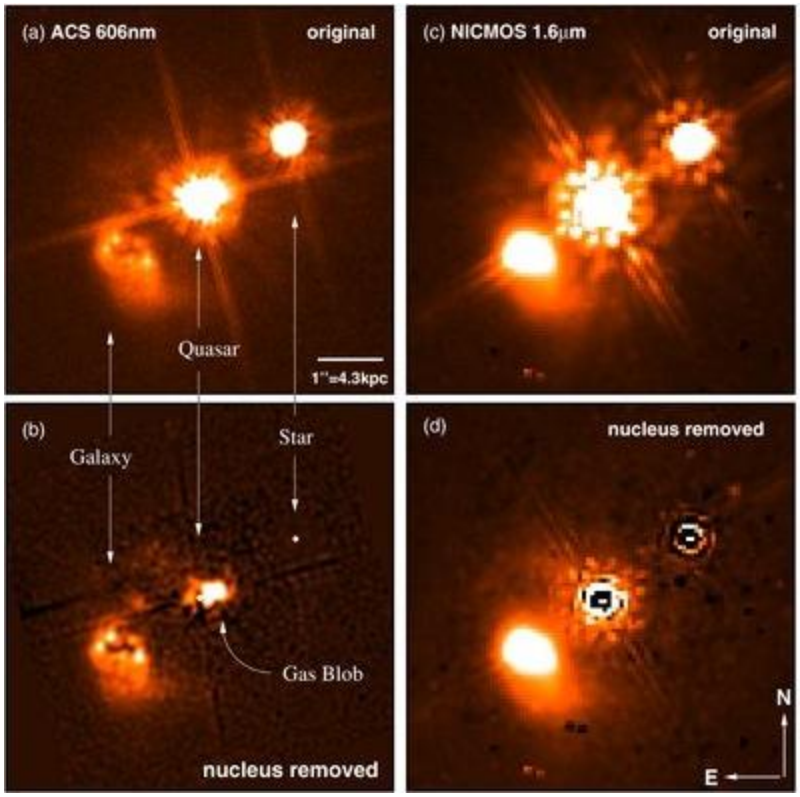
and protons are not bound together (Gilli and Gilli, 2009). This results in extremely high electrical conductivity and the emission of light.
Stars are comprised, initially, almost entirely of hydrogen (Clayton, 1984), which is then gravitationally gripped by the massive central core, thereby preventing these gasses from leaking into space. Stars are formed in nebular clouds which are produced during the red giant phase of a star's death and following the supernova of supermassive stars (which then collapse into black holes consisting of gravity).
Star construction is also made possible via the actions of black holes, particularly those located in the core of a Quasar.

11. Quasars, Black Holes, Hydrogen & Star Formation

Every spiral galaxy is believed to have a supermassive black hole at its center (Blandford, 1999; Jones et al., 2004; Melia, 2003a,b). However, in newly forming galaxies the central black hole is believed to be enclosed within a Quasar, forming its central core. Whereas infinitely small holes capture photos, protons and strip them of their gravity and energy (Joseph 2010), supermassive black holes consume entire stars and also liberate their energy (Giess, et al., 2010; Melia, 2003; Merloni and Heinz, 2008; Thorne, 1994), which is then radiated into space (Hawking, 1990, 2005; Preskill, 1994; Russell and Fender 2010). In newly forming galaxies, black holes direct this energy to those quasars which surround the hole (Dietrich, et al., 2009; Mateo et al., 2005; Vestergaard, 2010). The energy and elementary particles liberated and expelled from mass falling into a black hole is then recombined to produce hydrogen atoms which are radiated from the Quasar as hydrogen gas. These gases and streams of energy, however, are directed toward specific regions of space (Elbaz et al., Feain et al., 2007; 2009; Klamer et al. 2004; Silk et al., 2009), i.e. nebular clouds and super-jupiters enveloped in hydrogen gas.
The intergalactic medium, including hydrogen gases surrounding Quasars are ionized (Willott et al., 2007), such that presumably, these hydrogen atoms are either stripped of their electrons and become plasma hydrogen, or conversely, an electron is captured and proton H+ is transformed into a hydrogen atom. In fact, both processes may be at work, such that this liberated energy combines with elementary particles to create proton H+, and the ionization attracting an electron, thereby producing a hydrogen atom, and then, with continued ionization, the electron is dissociated from the proton and plasma hydrogen is created, becoming the fuel for the creation of a new star.







Quasar Triggering Star Formation. Left: optical wavelengths (HST/ACS, I-band), Right: near-infrared (HST/NICMOS, H-band). Top row panels (a)+(c) show the full HST images, while in panels (b)+(d) the quasar emission is removed. The VISIR image only shows a single point source, the quasar, plus a very faint signature of the companion galaxy. From Jahnke, Elbaz et al. 2009.

Thus the gasses created by the black hole Quasar interactions appear to include plasma hydrogen which is highly luminous, and which is a major constituent of new stars. Quasars may consist of vast amounts of plasma hydrogen as they are highly luminous and emit oppositely oriented streams of gas deep into space at distances of over 1 million light years (Elbaz et al., 2009; Elvis, et al., 1994; McCarthy et al., 1987). These streams of hydrogen and other gases do not rotate but are stable and appear to target nebular and interstellar clouds where they stimulate star production (Elbaz et al., 2009; Natarajan et al., 1998; Oosterlooet et. al., 2005; Rejkuba et al., 2002). Black holes and quasars are directly implicated in the creation of stars which become clusters of stars, then galaxies. Black holes, therefore, create galaxies, regulate their growth, and then maintain their stability through gravity.

Nebular clouds, like the the cosmos itself, are comprised of hydrogen (and other elements and gasses). Because quasars funnel and increase the amount of hydrogen gas within specific targeted areas, stellar objects of sufficient mass and gravity within these targeted zones attract this additional hydrogen which forms an increasingly dense hydrogen atmosphere, thereby becoming a super-massive gas giant. Once the pressures and density of this accumulating hydrogen reaches a crucial threshold, a nuclear reaction ensues and that stellar object ignites, becoming a star.

Hence, quasars are fueled by black holes (Elbaz et al., 2009; Neilsen and Lee 2009), and these black holes are simultaneously destroying stars thereby liberating energy and creating the hydrogen gasses necessary for star production. Quasar HE0450-2958, for example, generates approximately 350 Suns per year (Elbaz et al., 2009), and is provided the energy by a black hole at its center which is simultaneously destroying older stars to create new ones. Therefore, stars are recycled to create new stars via black holes

which liberate elementary particles and energy from gravity, and which results in the production of hydrogen.

Sar and galaxy creation have been ongoing for all eternity. Just as matter is recycled by infinitely small holes smaller than a Plank length, entire stars are recycled to create new stars and new galaxies. Near the center of the galaxy millions of stars closely orbit the supermassive black hole (Geiss et al., 2010). Those closest to the hole are the older stars many of which become embraced by the gravitational grip of the hole and are destroyed and their energy liberated (Giess, et al., 2010; Melia, 2003; Merloni and Heinz, 2008; Thorne, 1994). Thus matter is recycled at the subatomic level and at the macro-atomic level with old stars giving rise to new stars, which, when they grow older, are recycled by a black hole, or which collapse and form a black hole, and in so doing, dispersing the necessary elements and gasses for the creation of life.

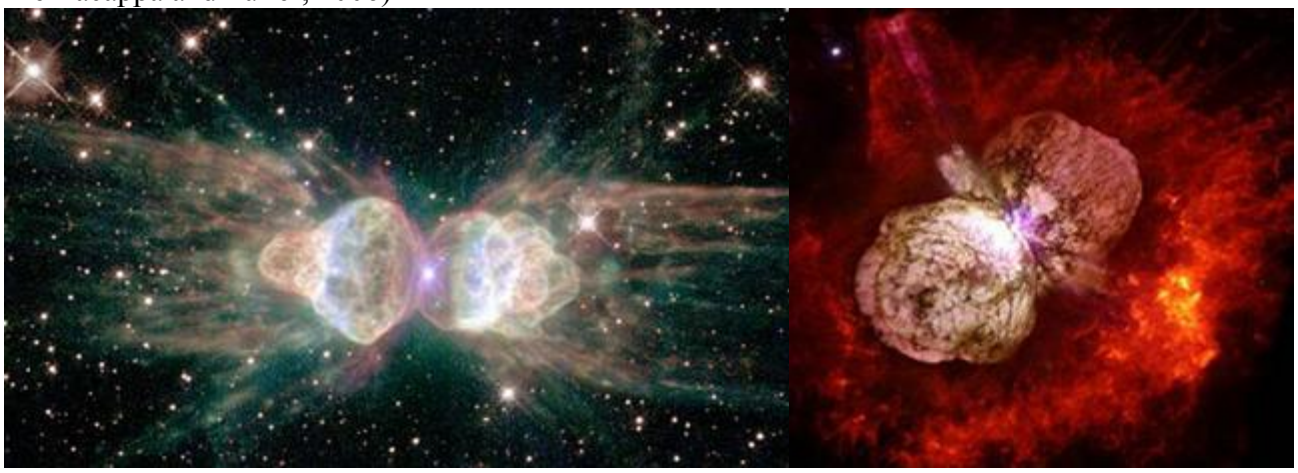
12. Stars, Supernova, Hydrogen, Carbon, Nebula and Cradles of Life

Once a star ignites, hydrogen burns at greater temperatures at the core than at the surface due to the greater pressures and densities (Clayton, 1984). As the hydrogen is burned it is slowly converted to helium through nuclear fusion. Over billions of years of time, once the helium begins to be burned, it is turned to carbon (Clayton, 1984; Hansen et al., 2004; Mezzacappa and Fuller, 2006).

Carbon is the fourth most abundant element in the universe (preceded by oxygen, helium, and hydrogen). Carbon is found in comets, asteroids, meteors, planets, stars and nebular clouds, and is essential for life. Because of its complex outer electron structure, carbon has an unusual polymer-forming ability, is the major chemical constituent of most organic matter, creates millions of organic compounds, and is found in complex molecules and macro-molecules such as DNA and RNA. Carbon provides the chemical basis for all known forms of life.

When main sequence stars have consumed most of their hydrogen and begin to die and become a red giant, the helium core of the star begins to burn and collapse (Arnett, 1996; Clayton, 1984; Hansen et al., 2004; Mezzacappa and Fuller, 2006). The density and pressures cause helium alpha particles to be released. When these alpha particle collide they create carbon and the carbon atomic nucleus (Mezzacappa and Fuller, 2006). Specifically, the creation of the carbon atomic nucleus requires a triple collision of alpha particles (helium nuclei) and this occurs in the core of a red giant. Thus hydrogen is converted to helium and it takes three helium nuclei to create one carbon nuclei.

When the all the helium has been burned or turned into carbon, the remaining carbon core contracts and reaches temperatures high enough to begin burning carbon into oxygen, neon, silicon, sulfur, phosphorus and a variety of other substances, including, last of all, iron (Clayton, 1984; Hansen et al., 2004; Mezzacappa and Fuller, 2006)



Left: The "Ant Nebula." Right: Etacarinae Super Nova

As the star implodes and undergoes supernova, carbon and a variety of other substances including molten iron are released during the explosion and ejected into surrounding space (Mezzacappa and Fuller, 2006). Nebular clouds, which are formed initially by the dying star's solar winds (Osterbrock and Ferland 2005), are seeded with carbon, oxygen, phosphorus and so on when the red giant supernovas (Marcaide and Weiler 2005; Mezzacappa and Fuller, 2006; Osterbrock and Ferland 2005). The nebular cloud may be seeded by yet other supernova, and may be targeted by quasars.

It is from these nebular clouds that new stars and planets are born. Given that carbon and all the constituent elements necessary for life are generated in stars and then deposited in nebular clouds, it can be assume that life was born in a nebular cloud (Joseph and Schild 2010a,b). Nebular clouds may be cradles of life.

13. The Biological Cosmological Principle: Life and The Eternal Infinite Universe

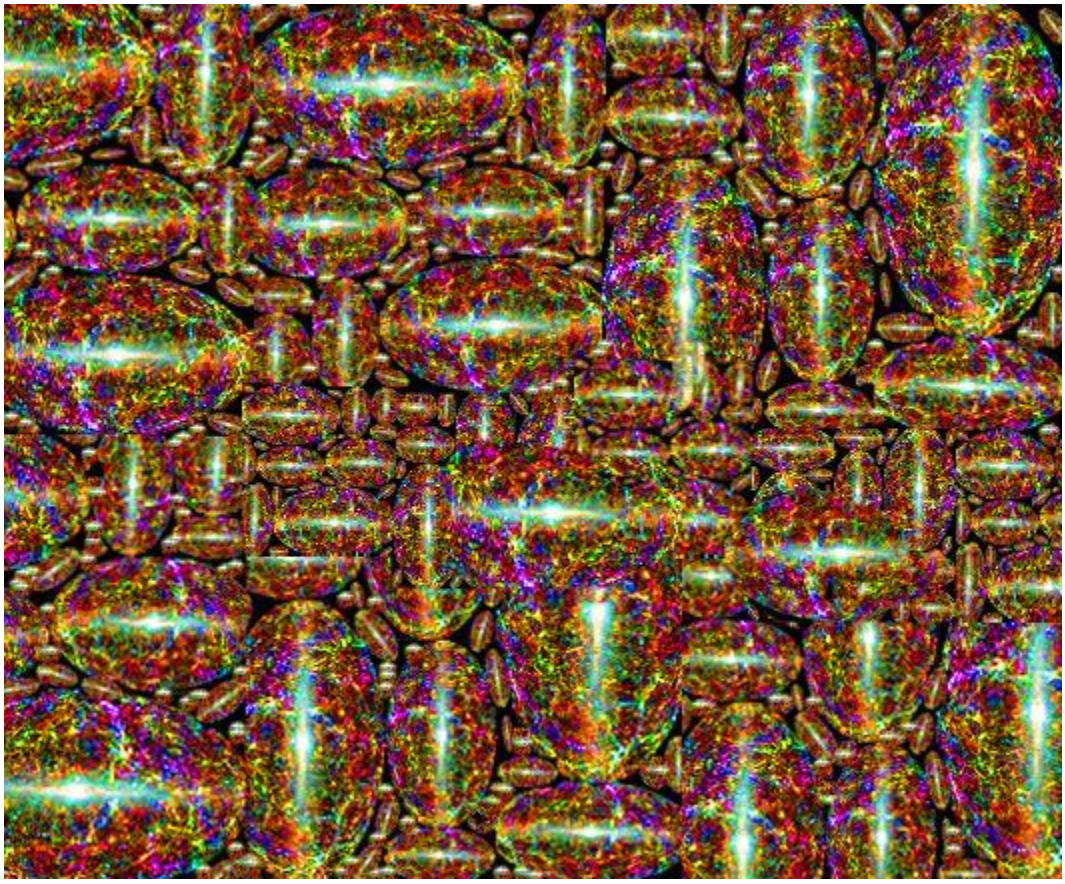
The extent and size of the known, observable universe is defined as the Hubble length. The Hubble length universe is currently believed to be approximately 13.8 billion light years in size, and has an unknown number of galaxies. However, these stars and galaxies were not produced by a Big Bang.

Stars supernova, creating nebular clouds, and then collapse into black holes consisting of gravity. Black holes, quasars, and nebular clouds give birth to stars which eventually supernova and then collapse, forming black holes which trigger star formation and then organize stars into spiral galaxies. A Big Bang creation event is not necessary to explain the existence of stars and galaxies.

Our Milky Way galaxy was born 13.6 billion years ago (Pasquini 2005). Other nearby galaxies are similar in age (Pace and Pasquini 2004). Yet other nearby galaxies and globular clusters may be 16 billion years in age. Then there are full formed galaxies over 13.1 billion years from Earth, and which were already billions of years in age 13 billion years ago. These galaxies form "walls" and "rivers" and they clump together in super clusters, and merge and crash into each other from every possible direction. The galactic walls and superstructures so far observed could have taken 80 billion to 150 billion years to form. None of these observations can be explained by a Big Bang, though they can be accounted for by gravity-holes of varying size which exert attractive, organizing influences, and constantly recycle matter and create hydrogen atoms which then become stars. Likewise, the huge voids and vast swaths of space completely emptied of stars and galaxies are likely due to galaxy-in-mass gravity-holes which have devoured all neighboring galaxies leaving great voids in their place.

Not only do the galactic walls, super clusters, great voids, and the age of the Milky Way and other galaxies falsify the possibility of a creation event at the date currently fashionable, 13.75 billion years ago, but stars and galaxies continue to be detected at distances from Earth, where, according to Big Bang theology, no stars should exist. Indeed, stars and more stars continue to be discovered as far as the Hubble eye can see. As there is no end in sight, there is every reason to believe there are more and more galaxies beyond the Hubble's current detection threshold.

Given the galactic walls, voids, rivers, collisions, and black holes which characterize this Hubble length universe, it is safe to assume this pattern continues beyond the point of detection from Earth. Thus, be it 100 billion light years away, 100 trillion, a million trillion light years away, and so on, the universe will continue to teem with planets, stars, galaxies, black holes, galaxy-in-mass black holes, universe-in-mass black holes, and great walls and superstructures and onward to infinity. There is no reason to suspect otherwise.



According to the "Copernican principle" our solar system, our galaxy, and the universe we can observe, are neither special nor unique, but comprise a fragmentary representative of the whole. Based on what we observe, we can therefore deduce there is more of the same, that it continues just like this: the same patterns of planets, stars, galaxies, black holes, great walls, and so on for all eternity. And this should be known as "The Cosmological Principle."

By applying the Cosmological Principle to our planet and to life on Earth, it can be predicted that Earth and its life forms are not unique; and we can call this "Biological Cosmology."

The evidence indicates life on Earth came from other planets (Joseph 2000a, 2009b,c,d; Joseph and Schild 2010a,b) and has a genetic pedigree which extends over 10 billion years backward in time, and possibly to all eternity. The genetic seeds of life swarm throughout the cosmos and have likely seeded infinite Earth-like planets with life.

There is no evidence life can be produced from non-life, at least on Earth. In fact, given the incredible complexity of even the simplest of single celled creatures, unless given an eternity of infinite time, it is difficult to conceive of how life could have been generated anywhere. Dr. Harold Klein, the chairman of a National Academy of Sciences committee which reviewed all the evidence, concluded that it is impossible to imagine how life could have been created (Horgan 1991, p. 120). Many other scientists have come to the same conclusion (Hoyle 1974; Kuppers 1990; Yockey 1977). Even the random creation of DNA seems a near impossibility. Kuppers (1990) sums it up this way: "The expectation probability for the nucleotide sequence of a bacterium is thus so slight that not even the entire space of the universe would be enough to make the random synthesis of a bacterial genome probable."

Hoyle (1974) calculated the probability of forming just a single protein consisting of a chain of 300

amino acids is $(1/20)^{300}$ or 1 chance in 2.04×10^{390}. Yockey (1977) determined that the probability of achieving the linear structure of one protein, 104 amino acids long, by chance is 2×10^{-65}. The odds of this happening on Earth within three hundred millions years, or even within 10 billion years is completely improbable. Hoyle (1974) estimates it would take a trillion years for life to form. This raises the possibility that life, like the universe, has no beginning, that life was never created, but has always existed.

Yet, in an infinite universe, over infinite time, and given infinite chance combinations, it can be predicted that the constituent elements necessary for fashioning an energy-extracting, self-replicating molecule may have been jumbled together infinite times. In an infinite, eternal universe with no beginning and no end, the odds are that life would arise not just once, but infinite times, and in infinite locations. Given infinite chance combinations over infinite time, it can also be deduced that an infinite variety of life may have been created, and that not all life forms in the universe are like those of Earth. Life on this planet may be just a sample of life's possibilities.

On the other hand, it may be that DNA-based carbon life forms are a "cosmic imperative." That is, *life*only achieves *life* when it acquires DNA and a carbon-based molecular structure (Joseph and Schild 2010b). This might explain why life on Earth functions according to a nearly universal genetic code. Or it may be that as life is generated in the infinite cosmos, numerous codes are fashioned, and that through natural selection, one code always prevails, i.e. the universal genetic code. In an infinite universe, there has been infinite time for all manner of life to compete, prevail, or become extinct.

Where did life most likely begin? Certainly not on Earth as there was not enough time and all the essential ingredients were missing (Joseph and Schild 2010a). The most likely candidates include nebular clouds where all the essential ingredients and necessary conditions are likely to be found (Joseph and Schild 2010a,b). The formula is rather straight forward. In an infinite universe with infinite holes in space time, an abundance of hydrogen is generated which leads to the creation of stars, which upon burning their hydrogen fuel, results in the creation of carbon, oxygen, and numerous other elements, gasses, and metals. It is the production of carbon which makes life, as we know it, possible. Carbon, phosphorus, oxygen, and all the material necessary for life are ejected into nebular clouds. Stars, and life, are born in nebular clouds (Joseph and Schild 2010a,b).

Within the Hubble length universe alone, and within the last 13 billion years, billions of trillions of nebular clouds would have been generated. In a universe which is eternal and infinite, multiply that number by infinity, and it can be deduced that Life may have achieved life infinite times in infinite locations infinitely long ago.

Through mechanisms of panspermia, these life forms were cast from planet to planet, solar system to solar system and from galaxy to galaxy, exchanging genes and DNA (Joseph 2000a, 2009b,c,d; Joseph and Schild 2010b). In an infinite universe, and as based on the "Copernican principle", the "Cosmological Principle" and what we know of biological cosmology (Joseph and Schild 2010a), it can be predicted that there have been infinite Earth-like worlds where the genetic seeds of life took root and began to evolve. Using Earth as an example, it can be deduced that Life *evolved* over infinite time and continues to *evolve* on infinite worlds, many just like our own. Thus, in an infinite universe, over infinite time, this would also mean that on an infinite worlds, sentient, intelligent beings evolved to our own intellectual and neurological level, infinitely long ago, and thus well before Earth, or the Milk Way galaxy was formed. Humans have evolved on an infinite number of planets; humans just like us, and every variation thereof.

There is no reason to believe that evolution stops with modern humans. Just as there has been a branching "tree-like" progression over the last 5 million years sprouting a variety of increasingly intelligent species

ranging from Australopithecus, to Homo habilis, to Homo erectus, to archaic humans, Neanderthal, and modern humans (Joseph 1993, 2000b), this progression could well continue into the future--particularly if humans learn to genetically enhance their own evolution, beginning with "designer babies." As a thought experiment, we can ask: assuming the humans of Earth do not destroy themselves and become extinct, and given the pace of scientific advancement in the last hundred years, and if this pace were to continue, then what might humans achieve, technically and scientifically, in the next 1000 years? If science marches on, and if humans continue to evolve, what might humans accomplish and be capable of a million years from now? A billion years from now? What about 10 billion years from now? If humans continue to evolve scientifically, technically, intellectually, physically... then from our 21st century perspective, these hypothetical humans of the future might seem as gods, even if they were still humans. And intellectually, we might seem like reptiles in comparison.

The cosmos is infinite and eternal. There are observed galaxies in the darkness of night which have been fashioned over 13 billion years ago. The Milky Way galaxy with its hundreds of millions of stars, each likely ringed with planets, was formed 13.6 billion years ago. This means that life may have taken root on billions of planets, in this galaxy alone, almost 9 billion years before Earth became a twinkle in god's eye. It took nearly 4.5 billion years for humans to evolve on Earth. If this same patter of evolution and metamorphosis took place on other Earth-like planets orbiting in the habitable zone of a sun-like star, this would mean that beings similar to "modern-humans" may have evolved 5 billion years before the Earth was formed. In an infinite universe "modern humans" may have evolved on innumerable worlds over 100 billion years ago, over 100 trillion years ago, over a billion trillions years ago, and so on. And they too may have continued to evolve and to have genetically engineered their own evolution. And they too may appear as "gods"... and they may no longer be human.

In an infinite universe there is no God. In an infinite universe the "gods" have "gods" who have "gods" who have "gods".... and in a universe of "gods" there is no God. There is only life.

14. Conclusion: The Big Bang Cyclic Universe

Life, Earth, our solar system, the Milky Way galaxy, the observed universe, are just fragmentary samples of the infinite. Once we free ourselves of the shackles of religion, and Bible based Big Bang theology, the living universe is revealed for what it is: infinite and eternal: A universe which consists of infinite space that has no beginning, and, no end.

Just as all matter consists of elementary particles which make up atoms and molecules, stars and galaxies are like atoms and molecules in the infinite universe creating even greater superstructures which in turn are like atoms and molecules. Patterns repeat themselves in nature and in the cosmos.

And just as matter at the subatomic level consists of infinitely divisible space, the same is true when describing macro-atomic objects such as planets, stars, galaxies and the cosmos. And within these spaces lurk black holes which range in size from those smaller than a Plank length to those which are universe-

in-mass, having consumed the galactic equivalent of a Hubble length universe.
The infinite universe continually recycles energy and mass at both the subatomic and macro-atomic level, thereby destroying and then reassembling atoms, molecules, stars, planets, galaxies, and Hubble-Length Universes (Joseph 2010). And just as matter is recycled around infinitely small gravity-hole singularities, entire universes are recycled by universe-in-mass singularities. Therefore, if there was a "big bang" it was not a beginning, but a continuation. Our Hubble-Length universe would be just one of an infinite number of "big bang cyclic universes." The recycling of matter has been ongoing for all eternity and is accomplished by mechanisms and activities associated with *gravity-holes* of varying size, in the fabric of space-time.
An infinite cosmos, peppered with super massive and galaxy-in-mass black holes, explains why galaxies clump together, why galaxies are moving in every conceivable direction and at variable speeds with some galaxies crashing into each other, and rivers of galaxies flowing in the "wrong" direction. The "Great Attractors" are black holes. Great voids are due to black holes. Walls of galaxies align together because of black holes. The known, observable universe is not expanding. The universe is in motion due to black holes which continually destroy and reassemble matter and entire universes (Joseph 2010).
The universe is not accelerating toward expansion. Rather, it is accelerating toward destruction. A*universe-in-mass black hole* beyond the vantage point of Earth, and just beyond the observed/known Hubble length universe, accounts for the increasing speed of those galaxies furtherest from the Earth and the Milky Way. Galaxies which are nearest this universe-in-mass black hole, accelerate toward the hole relative to galaxies which are further away and closer to Earth. It is this universe-in-mass black hole singularity which gave rise to this universe, and which will destroy and recycle it.
Relying on the concept of "Occam's razo" ("entities must not be multiplied beyond necessity"), the simplest explanation is not that the universe was created by unknown forces and for unknown reasons that can't be explained with physics but only with supernatural constructs. Nor it is necessary to invent convoluted theoretical appendages to paper over the glaring holes in Big Bang theology, or to invent phantom forces to explain why distant galaxies are accelerating. The universe is infinite, eternal, peppered with holes which continually destroy, recreate, and recycle matter, liberating then assembling elementary particles, and creating hydrogen atoms, which leads to stars, which collapse, forming black holes which consume and destroy and then recreate matter, and in so doing creates all the necessary chemicals, elements, metals, and gasses necessary for the creation and evolution of life. It is an infinite cycle which has been ongoing for all eternity.
The Big Bang is a myth. The Big Bang is religion masquerading as science. The universe was not created. There is no creator god. **(well that's your opinion, what if God were a collective of all the Gods, e.g. Yeshua in all the planets He refurbishes, He would be simply a POWER a collective of eternal power with NO beginning and No end, amazing how God uses people like you to foil religion, "a man made counterfeit of the truth" and bring about certain truths unbeknown by you)**
The living universe is infinite and eternal, continually recycles itself, and has no beginning, and, no end

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