The Big Bang Model Is Coming Apart at the Seams

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This thesis proposes the Big Bang model is inaccurate and based on faulty assumptions. It describes the exaggerated use of redshifted light as an erroneous supporting argument. Arguments using hard evidence are made against the Big Bang model. It is concluded the continuation of the Big Bang model is an effort to support popular reductionistic philosophies.

Please, Keep Supporting Our Model

The most prominent problems with the Big Bang model are 1) Terra seems to be the center of the Big Bang, in that everything is moving away from it (which is absurd); 2) the discovery of quasars (mature super massive black holes) at a distance 12.9 billion light years (the Big Bang model describes our universe as being 13.7 billion years old); 3) the recent discovery of the largest known structure in the universe, a clump of active galactic cores/quasars that stretches 4 billion light-years from end to end (called the Huge-LQG or U1.27); and 4) Hubble's law shows galaxies are moving away from us much faster than the speed of light.

Where Did the Big Bang Happen?

There is no evidence suggesting our galaxy, and nearby galaxies, are moving away from an earlier explosion. All observations show a uniform redhifting based on distance from Terra. Two feeble analogies have been used as an explanation for this. One is the expanding balloon analogy, which doesn't work very well because the galaxies are all stretching on the surface of the balloon, and moving outward from the center of the balloon. The other is the expanding raisen bread model, which at least doesn't have the galaxies expanding, but still has the raisens/galaxies moving away from a central location within the bread. The idea of Terra being the center of the the Big Bang seems highly improbable and has only the misinterprestation of redshifting light as a supporting argument.

Ancient Quasars

On June 29, 2011, the dicovery of a quasar named ULAS J1120+0641 was announced. It was determined, per redshift, to be 12.9 billion years light years away, suggesting it was at this stage of development 770 million years after the Big Bang. Does it seem at all possible a mature supermassive black hole could form in 770 million years? Our own sun, Sol, is considered to be 4.6 *billion* years old, with a projected lifespan of 10

billion, total. We are asked to believe that supermassive black holes were created during the Big Bang, or immediately thereafter. There is no supporting evidence for this assumption, other than it fits with the 'supposed' age of the universe. (It's right up there with the speed of light being the constant and time being the variable in Einstein's Special Theory of Relativity.)

Huge Large Quasar Group

On January 11, 2013, it was announced astronomers had discovered the largest known structure in the universe, a clump of active galactic cores stretching 4 billion light-years from end to end. The structure, called a huge large quasar group (H-LQG), is a group of 73 quasars. The structure is so large it should not exist and creates significant problems for the Big Bang model and the age of the universe. "While it is difficult to fathom the scale of this LQG, we can say quite definitely it is the largest structure ever seen in the entire universe," lead author Roger Clowes, of the University of Central Lancashire in England, stated. "This is hugely exciting, not least because it runs counter to our current understanding of the scale of the universe."

The Expansion Theory

(Moving Further and Further Away)

In 1929, Edwin Hubble discovered the more distant a galaxy is, the greater its redshift. Adapting the Doppler effect to include light, this implied the farther away a galaxy is, the faster it is receding. This became known as the Hubble Law and is expressed mathematically as V= H D, with V being a velocity equal to H (Hubble's constant or 50 km/sec/Mpc) times D (the distance in megaparsecs- Mpc). In the 1980s and 90s, the Big Bang model was dropped and replaced by the Expansion Theory, in which a force called dark energy, was forcing the universe to expand. Since then, the term Big Bang has regained popularity with groups using it as a platform to popularize some other theory by way of association.

Even Edwin Hubble had doubts about translating the redshift into a pure Doppler effect, concerned there might be other factors in the redshifting of light than only the movement of an object away from Terra. As it turns out, he was correct. There are other physical influences which produce the the redshifting of light, which are ignored because they don't fit the belief structure.

The Speed of Light[1]

(A Variable or a Constant?)

It is fairly well established within the physics community the speed of light is slower in air than in a vacuum, and slower in glass than in air. The speed of light varies with the density of the matter photons are passing through, or (my personal preference)

varies with the density of the medium electromagnetic waves are passing through.

Redshifting

Light from distant stars' displays evidence of redshifting (the Doppler effect). The spectra of this light shows the expected 'spectral absorption line patterns', but in the wrong location. They will have shifted down the spectrum. To eliminate confusion with sound waves, this aspect of the Doppler effect is called a redshift. (If all EM frequencies coming from a distant star have shifted downward, we have no way of knowing how much of a shift has occurred. What started out as low ultraviolet now looks blue, and blue now looks green, etc. etc. 'except for the absorption lines.')

The Doppler Effect

One mode of EM wave frequency shifting is called the Doppler Effect. The Doppler effect was initially discovered by Christian Doppler in 1842. It provided an explanation for changes in the pitch of sound waves as a noise emitting object approached or moved away from a listener.

The Doppler effect was adapted to include light by Edwin P. Hubble in 1929, and is the 'standard and preferred' explanation for the redshifting of light. The theory suggests stars are moving away from the Earth at ever increasing speeds, causing EM waves to shift downward or 'spread'. Observations of stars orbiting each other have confirmed the Doppler effect by measuring the changes in their spectral absorption lines. During orbit, one star first moves away from the Earth, shifting the absorption lines toward the red, lower frequency waves. The star will then move toward the Earth, causing a blueshift, with the absorption lines moving up the spectrum to the higher frequencies.

The classic examples of redshifting describe the observer as stationary, with the stars or galaxies moving away in reference to the observer. A change in EM frequency occurs when the source and observer are in motion relative to each other, with the frequency increasing when the source approaches the observer and decreasing when it moves away. The Doppler effect, as the only means of redshifting light waves, has led to the belief of an expanding universe.

The Wolf Effect

The second proven source of redshifting light is the Wolf effect. Emil Wolf, an optical physicist at the University of Rochester, discovered this redshifting process in the mid-1980s. Experiments performed in 1988 by Wayne Knox, of AT&T Bell Laboratories, confirmed Wolf's discovery. The Wolf effect describes how interference patterns within EM waves cause the redshifting (or a blueshifting) of light. Research has shown

plasma-induced interference can closely mimic the Doppler effect, providing strong support for the theory hydrogen gas and plasma between stars and galaxies is responsible for the redshifting.

An analogy of Wolf's discovery uses a pair of tuning forks with nearly identical resonant frequencies. If the forks make contact with one another, the higher frequencies get dragged down to match the lower ones. The 'altered' frequencies, now with longer wavelengths, have been redshifted. The tuning forks in this case are the thermal fields of protons/atoms receiving and transmitting two frequencies simultaneously. This process has been verified with experiments using both light and sound waves. (There is a good, much more detailed explanation of the Wolf effect at http://public.lanl.gov/ alp/plasma/redshifts.html)

Sound Waves & EM Waves

The Doppler effect and the Wolf effect can be shown as a phenomenon applicable to sound waves. Both treat light as EM compression waves. The existence of this characteristic as an expression of light provides further support for the concept of electromagnetic waves as compression waves. Not everyone agrees with the assumption light waves are transverse.

Gravitational Redshifting

The first direct observation of gravitational redshifting by a supermassive black hole was announced by NASA, June 26, 2002. T. Jane Turner of NASA Goddard Space Flight Center and the University of Maryland led the research. The data may also offer a new way to measure black hole spin, a goal for some astronomers. The survey looked at NGC 3516, a galaxy with a supermassive black hole as its core. Gas surrounding the core glows in X-ray radiation as it is heated to temperatures in the millions of degrees by the black hole's extreme gravitational compression. A spectral phenomenon called a 'broad iron K line' is a part of this radiation.

Black holes typically emit the broad iron K line. Turner and her colleagues determined this spectral feature is a result of strong gravitational redshifting. 'The observation rules out several competing theories attempting to explain the broad iron line,' Turner has stated. 'We find that Einstein's predictions ring true.' Previous investigations of black holes have also provided indirect supporting evidence, but this was the first direct observation of gravitational redshifting.

This discovery contradicts earlier assumptions about gravitational redshifting. In 1964, mathematical predictions argued against the possibility of redshifts from the surface of quasars (quasars are currently considered to be black holes). It is worth

noting the observed redshift did not take place on the surface of the black hole, but from distances of 35 and 175 times the distance of the black hole's radius.

Einstein's Theory of General Relativity predicts gravitational redshifting, describing it as the warping of space and time by intense gravity. The USF theory paradigm agrees with this prediction (using the thermal fields of protons and atoms as a model) with the surrounding EM field becoming denser due to increasing gravmagnetic influences. As the black hole's EM field becomes denser, EM waves condense and slow down. Light escaping from this area has a spread out, or broadened, spectrum, including spectral line emissions. The end result is a form of redshifting, but this takes place only at the event horizon, where the USF Theory predicts thermons (units of the medium responsible for transporting light) are being drawn in at faster than light speeds.

Quantum Inertia / Dispersion

In a vacuum, light of all frequencies is traditionally considered to travel at 299,792 km/sec. The frequencies are rhythmic pulses exhibiting a consistent mathematical relationship with wavelength, which equals the speed of light.

This relationship can be easily expressed with the equation: fd= c. This means the number of waves per second, or its frequency (f) times the distance (d) it has traveled from one wave cycle to the next, equals (c) the speed of light, in a vacuum. This speed is just slightly slower when light is traveling through the air, and slower still as light passes through water or glass. The equation fd=c still applies as light travels through the thermal fields supported in these forms of matter, but the compressed wavelengths correlate to the slower speed of light while in these mediums. The USF theory describes this process as 'Quantum Inertia.'

While traveling through a thermal field, speed variations between different frequencies become noticeable. Prisms display this effect by dispersing visible light into spectral colors. The slower the frequency (the fewer waves per second), the less resistance, and the faster the quanta/kinetic energy travel through the prism. Red light travels faster through a transparent medium than blue, because blue light waves more often. A single high frequency quantum wave meets more resistance than its low frequency counterpart. In the rarefied EM field of a vacuum, neither low nor high frequencies meet 'significant' resistance.

Quantum Inertia is the result of the pulsing process. In a thermal field the compression and expansion process itself is restricted. Thermons located in matter are much more concentrated energy fields than thermons in the depths of space. An EM wave slows while passing through a condensed thermon.

Expanding on this phenomenon, light travels faster in more rarefied EM/thermal fields. Light would travel more quickly outside of our solar system, and even faster in the space between galaxies? Resistance to an electron's or a proton's (or a spacecraft's) movement would be minimal between galaxies. The speed of light can be interpreted as a variable, with the stretches of space between galaxies allowing minimal compression and maximum velocity.

Quantum Inertia & the Interstellar Medium

Until approximately the 1950s, outer space was considered to be completely empty and the ultimate vacuum. This is no longer considered true. It has become known space contains protons, electrons, hydrogen gas, helium, dust particles, and in smaller amounts, atoms of most, if not all, the elements. The matter existing between the stars is known as the interstellar medium, and consists primarily of protons, electrons, and hydrogen gas. The USF theory carries this one step further and adds thermons.

The concept of dispersion was ruled out as a form of redshifting for light traveling from other galaxies in the 1920s. This happened because, at the time, outer space was still considered a vacuum, (the concept of aether had been dropped) and was thought to provide no slowing to the higher frequencies of light. This has remained the general consensus of the scientific community, though researchers investigating quasars might disagree with the earlier assumption.

The Ultra-Space Field Theory predicts, based on Quantum Inertia, light will travel more quickly in the space between galaxies, and there will be a weak dispersion process over vast distances. In the depths of space, with minimal resistance, spacecraft could achieve speeds far exceeding the standard speed limit of 299,792 km/sec.

Unruly Quasars

Quasars are the most obvious example of possible flaws in using the Doppler effect as the sole explanation for the redshifting of light from other galaxies. The Doppler effect predicts both the distance and the speed of quasars moving away from the Earth. Some are estimated to be traveling away from the Earth at 93% the speed of light, or higher. Assuming Terra is not the center of the universe, and splitting the speed between our own solar system and the quasar, both would be traveling at 46.5% the speed of light away from each other, or each are traveling at 139,403 km/sec. (The gas cloud, or 'local bubble,' our solar system is interacting with, would also have to be moving at this speed, as would our galaxy. Additionally, we would be moving, somehow, away from all other galaxies in all other directions, at an ever increasing speed).

The issue of brightness and distance has created controversy as well. Many highly

redshifted quasars seem to be associated with low redshift galaxies. The most prominent example is a quasar called Markarian 205, which seems to be interacting with a galaxy named NGC 4319. (Gravitational redshifting has recently been applied to Quasars as an explanation for their unusual issues.)

The Hubble Heritage, an organization created to disseminate information collected by the Hubble Telescope, publicly supported the conservative view of many scientists, and stated NGC 4319 is 80 million light-years from Earth and Markarian 205 is more than 14 times farther away, at one billion light-years from Earth. They assert the apparent close alignment of Markarian 205 and NGC 4319 is simply a matter of chance. In making the assessment, they used the Doppler effect as their primary argument.

A small number of scientists disagree with this conclusion. The first was H. C. Arp, of the Max Planck Institute fur Astrophysik. In 1972, he presented pictorial evidence showing Markarian 205 and NGC 4319 were connected. Arp took deep exposure photographs at Mount Palomar and Kitt Peak showing a luminous bridge of gas between the two objects. This caused some turmoil amongst professional astronomers. The connection was denied at first, but was later confirmed by CCD imaging. X-ray maps of the area also show apparent connections with three other nearby quasars of a much higher redshift.

More recently, Jack Sulentic, of the University of Alabama, has defended Arp's conclusions. Through image enhancement and analysis of Arp's telescopic images, Sulentic has confirmed Arp's findings.

Edwin Hubble, the discoverer of the redshift phenomenon stated 'The possibility that the redshift may be due to some other cause, connected with the long time or distance involved in the passage of light from the nebula to observer, should not be prematurely neglected.'

Politics

Recently, a political effort within the physics community was made to tie the Higgs Boson to the Big Bang. A National Enquirer style effort to sensationalize the Higgs Boson is necessary to maintain funding, because the theoretical particle's existence is supported only by the observation of gamma rays and a significant amount of wishful thinking.[2] Neither the Higgs Boson, nor the Big Bang theory have much in the way of hard supporting evidence and neither should be taken too seriously, as both are based more on politics, a desire to maintain the status quo, and wishful thinking, than on hard reality.

[1] ‘Ultra-Space Field Theory’, K. Foote, Cosmos Books, Ann Arbor, 2005. (Available at Google Books.)

[2] "The Higgs Boson: Reality or Mass Illusion', Keith D. Foote vixra.org/pdf/1210.0044v1.pdf