

## **Alternate Theory of The Universe**

### **The history of this paper**

The following submittal has the original theory submitted to AAS , in 2017 as AAS05712 that was refused for publication. This alternate Shell Sphere Of Black Holes, SSOBH model, that works on Gravity alone, places the missing mass causing the 4 expansion modes, OUTSIDE the Observed Universe, eliminating the need for Dark Energy. My paper was improved and resubmitted under AAS16162, again refused. The reviewer, Dr. Ethan Vishniac, is associated with John Hopkins Universe which is also the major proponent of Dark Energy where the lion's share of grants resides to find dark energy. No Dark Energy has been found in over 25 years of intense searching. This is the most egregious conflict of interest I have ever seen in my 40 years of engineering experience and when brought to AAS management's attention they concluded there was no conflict. I only wanted this new compelling model, which many are calling for, to be placed alongside the existing model for review by the academic community.

Since the 2019 submittal many new observations due to the Webb Telescope, have shown early galaxy formation with all the constituents available. The SSOBH model provides an explanation of how this happens, so a supplement to this original paper has been added that shows how the total universe works by just gravity alone, explaining every observation that exists today.

I have written a book entitles, "This Changes Everything, our view of the Universe, Physics, Religion, Philosophy and My Art, the Universe Explained by Gravity Alone." This book is available upon request.

So, please review and judge for yourself.

# Alternate Theory of the Universe

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February 2019

## Abstract

The presently accepted Theory of the Universe in modern cosmology has many unanswered questions. Dark Energy (an opposite force of gravity) is used to provide a possible explanation. This mysterious form of matter/energy turns on and off as needed to explain the various expansions that observational data provided during the 13.8 billion years this model predicts as the age of the universe. An examination of how dark energy was invented needs to be considered, so that an alternative model can be proposed. Dark energy comes forth to explain why the Universe We Know (UWK) is expanding/accelerating and is based on the key assumption of a homogeneous/isotropic universe. The alternate model proposes that the missing matter/energy is outside the UWK and consists of a sphere shell of black holes (SSOBH) one black hole thick that is in equilibrium, has momentum, and with the UWK makes up a critical mass. Thus, the homogeneous/isotropic assumption for the presently accepted theory of the universe is not valid for the Alternate Theory. The present view of gravity, relativity, is accepted in the alternate theory. The SSOBH conceptually provides a new geometry for gravity that allows gravity to surround the UWK and when evaluated can provide plausible answers to many of the outstanding questions that remain with the present theory. The alternate theory only needs SSOBH (gravity and spin) and momentum to do it all. Since this new idea of a SSOBH with a critical mass and momentum in itself has many questions, it represents a whole new area of study that should be looked at by leading minds along with the dark energy theory.

## 1 Introduction

How we got to dark energy

When looking back at Fritz Zwicky's study of galaxy clusters in 1940 (1), he showed that the galaxies could not be moving as they are without about 5 times more mass than is identified. He termed this

invisible mass as dark matter. Dark matter is accepted in modern cosmology as part of the matter in the UWK. When Hubble discovered that the Universe was expanding (2) and later it was discovered that the universe was even accelerating (3) the same logic was used to explain this by adding in a term dark energy (4). In this case 70% dark energy (the cosmological constant) was needed to explain this observation. This is also the term that Einstein used to balance his equation to make the Universe static. Dark Energy, however, needed to apply a force opposite of gravity to cause the expansion and acceleration observed (5). Dark energy is said to be throughout the UWK but has not been found after 20 years of exhaustive searching. The assumption of dark energy is a natural progression from dark matter in a homogeneous/isotropic universe. Zwicky used dark matter to explain his missing matter in galaxies so why not use similar rational to explain the universes missing matter? The modern model is based on Einstein's theory of General Relativity (6), a good model of gravitational interactions at large scale and the cosmological principle, that above a certain length scale, the universe is both isotropic and homogeneous (the same everywhere and in every direction). Little was known at the time about black holes and a shell sphere of them outside the UWK was unimagined. Besides, matter outside the UWK would break at least the cosmological principle so has been given little consideration. In the modern theory the Cosmological Constant that Einstein used to keep the universe static (6) was resurrected to represent dark energy (4). The present theory connects dark energy to Einstein giving it much too much acceptance as if Einstein himself agrees with dark energy. So, with this all the matter and energy in the universe was assumed to be in the UWK. In the present theory the UWK is homogeneous, isotropic and flat, thus, the universe overall has zero energy, bolstering that the big bang came from nothing. It will expand forever, losing site of all other galaxies based on the whims of dark energy.

### **Another possibility, in fact the only other possibility**

The other possibility that has not been considered is that the missing matter and energy is outside the UWK. An article published in 2013 by Alexander Kashlinski indicates evidence of this (10). There is evidence that our universe is being tugged from outside. The configuration that would be required is a shell sphere of black holes (SSOBH) that is one mega black hole thick, in equilibrium and has momentum and surrounds the UWK Fig 1. So, the SSOBH would pulsate collapsing and expanding by its own gravity, absorbing and generating the UWK in endless big bangs collisions. The alternate model also assumes that a critical mass exists when UWK and SSOBH are combined. SSOBH is a new geometry for gravity that provides a surrounding force of gravity. It would cause the expansion/acceleration we see now as SSOBH has been collapsing for 5 billion years (11) from the outer reaches of space to start compressing space/time as it proceeds to next big bang collision. With this alternate model nearly every question the existing model fails to answer, can be feasibly explained using only SSOBH and momentum. No dark energy that is opposite to gravity and turns on and off in an unexplained manner is needed. The dark matter in galaxies, however, is accepted in the alternate model. It should be noted that SSOBH has noticeable effects on UWK at the big bang, during inflation and during the collapsing phase the alternate theory would propose we are in now. During the moderate expansion of the UWK, SSOBH would have little effect on UWK due to its distance away from UWK, so that the present theory of the UWK would be observed as being flat no net energy, and expanding with acceleration. Generally, when a body is

accelerating, gravity is assumed to be the force causing it. This is the case with galaxies that propose dark matter. **A Test To Prove Alternate Theory** A further proof that indeed SSOBH is causing expansion and acceleration can be established by a test that invokes time dialation predicted by relativity. Measuring and recording digitally or visually a time period, say 2 months, by an atomic clock and comparing it to an atomic clock running at a present time should yield a slower time in the present reading if the SSOBH gravitational field is present and increasing. This assumes the recorded time will remain unaffected by a change in gravity. The rate of change of gravity could be determined by iterations of this test, recording several time frames and comparing all to a live atomic clock for a similar period.

## **2 The Alternate Model**

The Alternate Model of the Universe has a SSOBH that surrounds the UWK, is one mega black hole thick, has momentum and is in equilibrium. SSOBH with the UWK has enough matter and energy to reach the critical mass required for a closed, and positive energy universe that cycles. SSOBH and the UWK make up, "The Revealed Universe" (TRU) in the alternate model. When observing TRU at the present time, the SSOBH reached its pinnacle of expansion in the outer reaches of space/time about 5 billion years ago, turning around, coming back toward the UWK. The evidence for this is that the UWK started rapidly expanding 5 billion years ago. We now know that the UWK is even accelerating, which indicates the SSOBH getting closer to UWK. In TRU it can be predicted that the UWK will continue to expand at an accelerating rate based on the gravity of SSOBH attracting it. The expansion/acceleration we observe today is caused by the collapsing SSOBH as its gravity is increased due to ever closer proximity to the UWK. The SSOBH would cause the little crunch while absorbing the UWK, then continuing due to its own gravity to reduce space/time to a smaller and smaller volume, thus reproducing the conditions of the Big Bang, a high energy compact low volume mass. Even at the time of the new Big Bang the alternate model assumes there is still enough space so that only about 30% of the matter collides to start a new inner universe, with the 70% plus black holes forming the new SSOBH that speeds away at nearly the speed of light forming a new shell sphere of black holes that is in equilibrium, with momentum at nearly the speed of light (12). Two things are important, TRU is fueled by relativity as SSOBH reaches nearly the speed of light and it is a probability that determines the number of collisions. So, with the SSOBH that produce gravity and spin, and momentum, TRU can function in a nearly never-ending cycle. All that is required for the Universe to function are SSOBH (gravity and spin) and momentum. In this model nothing escapes the SSOBH, not even light, so all mass and energy are conserved. Hawking radiation is absorbed during all phases by SSOBH so that nothing is lost. With the TRU model UWK has stability, always expanding, avoiding chaos. This results in a never-ending cycle of TRU that provides fresh starts with each cycle. The black holes at the center of galaxies are all sizes even very large due to the collisions of the black holes in the SSOBH during the Big Bang. Since the black holes are the building blocks of the galaxies all sizes will result in the collision each attracting a proportional amount of particle mass. In this alternate model the gravity of the SSOBH mostly affects the UWK during the Big Bang, inflation, and at the stage we are in now as the SSOBH approaches the UWK. During the other times of the cycle, they are too far away to have much effect. During the Big Bang the about 30% colliding matter transformed kinetic energy to thermal energy while the tremendous gravity of the SSOBH is released as it speeds

away at nearly the speed of light and while in proximity, its gravity pulls the UWK with it causing the inflationary period of expansion of the UWK. There is an additional force in this process that will be the subject of a future paper that provides all the necessary energy for inflation. As SSOBH moves away, local gravity takes over to reduce expansion creating the moderate expansion between inflation and rapid expansion/acceleration observed today. With the alternate model the conditions for the big bang are created, feasible reasons for inflation, moderate expansion and our present expansion/acceleration are explained.

### **3 Alternate Model Predictions**

1. The UWK will be consumed by SSOBH in the little crunch that precedes another big bang. The universe will start again as it has many times before based on SSOBH and momentum alone. This will happen time and time again until the balance in SSOBH is disturbed enough to break the cycle.

2. With the alternate model, at the present time the UWK is surrounded by a gravitational field that is getting stronger and stronger as SSOBH accelerates closer and closer to UWK. This represents a strong gravity field at the edges of the universe that surrounds the UWK and is moving ever closer. As a result, all measures taken that rely on redshift need to be evaluated. Redshift is affected by Einstein Shift (6) since light measurements are made in an increased gravitational field from their generation. The red shift needs to be corrected for the blue shift that occurs at elevated gravity. Thus, UWK is expanding faster than is presently observed by the present model.

3. If a "recorded" past measurements of an atomic clock is compared to a more recent live measurement, the more recent measurements should show that time has slowed down indicating the UWK is in an ever-increasing gravitational field based on time dilation of relativity. If this is the case it would be consistent with the presence of SSOBH. If several recordings of the atomic clock for different time periods are compared to the clock presently running, the rate of change would be seen that represents the gravitational field rate of increase that would reflect the SSOBH getting closer. This would verify that gravity is increasing due to SSOBH and point toward the alternate theory correctness. This test assumes gravity changes will not affect the recordings.

4. For much of its cycle, SSOBH is in the far reaches of space so that light generated from objects from 5 to 10 billion years ago is generated in low gravity. Thus, UWK looking back is observed to be flat, open, with no energy. This is observed by the present theory.

5. In a publication entitled, "Scientists: Time itself May Be Slowing Down" (7) it is observed that Supernovae stars viewed at extreme distances seem to be moving away from us faster than those nearby. With SSOBH consideration needs to be given to the direction of the observations. When looking in the opposite direction to our acceleration we are looking back in time, when looking in the direction of our acceleration relative to SSOBH we are looking forward in time. The forward direction would have greater expansion rates due to the proximity of SSOBH.

6. With TRU perhaps some of the missing dark matter can be explained in galaxies. With the surrounding gravity of SSOBH, galaxies that are close to SSOBH could have their light bent toward SSOBH to the extent that no light reaches earth. Thus, light from matter in galaxies under these conditions may be unseen. This would occur with galaxies that are closer to SSOBH which would mean when looking in the direction of the Milky Way's acceleration we are looking into our future.

#### **4 Points to clear up**

1. Newton's Shell Theorem does not apply since the SSOBH is based on point sources that form the shell. In his Theorem, Newton has taken a point source of mass like the earth or sun and removed the core leaving a shell sphere of symmetrical, uniform matter. The SSOBH shares this geometry but when the shell sphere is made up of point sources such as black holes, gravity is felt in all directions. A new theorem needs to be written for this geometry of gravity:

**A shell sphere of asymmetrical, nonuniform matter made up of point sources such as black holes will have attractive forces emanate from all directions. The attractive force of gravity will be felt both outside and inside the sphere shell.**

2. Homogeneous and isentropic assumptions do not apply to the alternate theory. This assumption is the reason why SSOBH has not been considered by any scientist earlier. However, once the observed redshift data is corrected for the surrounding gravity of SSOBH by the more accurate picture of TRU will result.

3. A universe that has critical mass is a possibility for the existing theory and thus is viable. The critical mass postulation is proof of Newton's shell theorem does not hold up in this case since a critical mass would represent a shell that indeed does collapse due to gravitational effects.

4. SSOBH is a new geometry for gravity and violates no physics. Thus, even if the alternate model is considered flawed, this configuration should at least be studied as a possible new geometry for gravity.

5. The fluid analysis of the existing model cannot be used for the alternate model. SSOBH is not in the fluid mix of the UWK.

6. With SSOBH providing a critical mass, it is shown that an explanation for all the observed expansions of the UWK is feasibly explained with the alternate model. The conditions of the big bang recur in the alternate model. The energy required for the big bang and inflation is feasibly explained in the alternate model.

7. With existing black holes in the SSOBH and the about 30% collision matter, an explanation of large black holes and their corresponding matter with spin at the center of galaxies is feasible. In the alternate model the black holes already exist and do not need to be created.

8. The difficulty in accurately measuring the Gravitational Constant (14) may well be related to SSOBH and its unseen gravitational affects over time.

## 5 The Shape of TRU

Looking at Friedmann models (8) considering TRU with SSOBH and predicting there is enough matter to reach the critical mass, the shape of the TRU is spherical, closed, with positive energy. With this new geometry of gravity, and SSOBH that provides gravity that surrounds UWK, the Friedmann model that applies is a triangle combining angles larger than 180 degrees. The view is transformed to inside the sphere looking out (intrinsic) and traces the triangle on the inside surface of the sphere. Friedmann's model is still valid with this new way to view TRU.

## 6 Properties of the SSOBH

This new geometry for gravity, existing as a surrounding force of gravity, has many properties that need to be considered:

1. The math associated with this configuration needs to be developed. It would seem to use existing formula for calculating the gravitational effects of two masses, the prominent black hole in SSOBH closest to our Milky Way and the Milky Way and then integrated for the semi sphere of black holes that have vector forces in the direction of the acceleration that act as well on our galaxy.
2. Each Black hole in SSOBH would travel in nearly a straight line as it radiated out and then after its potential energy (momentum) is depleted returning to the next Big Bang. Viewed from outside and sped up SSOBH is a pulsating object, expanding out to the outer reaches of space/time and then contracting back to a point. Since black holes would allow nothing to escape this could not really be observed from the outside. Each black hole would be locked in by the closest black holes in the shell sphere and would jockey for position being accelerated and decelerated depending on their positions in a never-ending dance to maintain equilibrium.
3. In this geometry, as the SSOBH is returning their speed increases, and their volume decreases due to the increase of gravity as they get closer due to their gravity alone. Their speed approaches fractions of the speed of light. With that, based on relativity, gravity increases and the mass increases, thus acceleration increases, and this continues until they nearly reach the speed of light. Thus, it can be stated that in this configuration, relativity fuels this process. Time would slow down, and space would shrink as part of this process (12a).
4. The SSOBH after colliding with the UWK proceeds to the next big bang, at that time about 30% of the black holes collide based on the present observations and there still is enough space for the remaining SSOBH to pass through. The number of collisions is based on probability and thus some big bang cycles could have more or fewer collisions. The number of collisions affects the cycle time between big bangs. The SSOBH conserves all matter and energy since nothing escapes the SSOBH.
5. An observer outside this process would see nothing since no radiation could escape SSOBH including

Hawking radiation (9). The SSOBHs would absorb all Hawking radiation thus, mass and energy are conserved.

6. The configuration of the SSOBH would point toward an origin from super super black hole the mass of TRU that reached the point where gravity and the counter force within the black hole that keeps the system in balance reached a critical mass so as to release the stored energy in a colossal event causing a SSOBH and momentum. With this, additional universes derived from the same process can be postulated. They could not be in proximity of each other since gravitational interference would disrupt their SSOBH.

7. Inflation is caused by the thermal energy of the collision, the release of gravity from SSOBH speeding away, the release of potential energy stored in the black holes due to gravity and the potential energy stored in the black holes due to relativity. The black hole potential energy for gravity and relativity will be discussed in a future paper. The new SSOBH speeds away having little effect after inflation until the SSOBH turns around heading back. At around 5 billion years ago, the SSOBH turned around and thus the UWK is experiencing the higher gravity field that will ever increase as the SSOBH gets closer. The UWK expansion/acceleration will increase until reabsorbed by SSOBH. If the alternative model is correct, the UWK is in an increasing gravitational field right now. This means Einstein Shift is affecting redshift measurements as well as the expansion measurements. Thus, anything derived from redshift by the present theory could have errors. In the present theory universe expansion, distances and size may need correction.

8. UWK in the alternate model is always surrounded by a gravitational field or space/time. So UWK does not create space/time, that is already there because of SSOBH. UWK merely imposes its gravity over the existing field.

## **7 Time Cycle of Big Bang**

Based on the existing theory the universe is 13.7 billion years (BY) old. Considering the alternate theory the SSOBH reached its pinnacle about 5 BY ago. This means 5 BY ago the universe reached half its cycle so that the full cycle between big bangs is 17.4 BY, this would leave about 4 BY to the next big bang. Meanwhile UWK has expanded towards SSOBH so that the small crunch may be closer than we would like. Looking in the direction of the acceleration, relative to SSOBH, we will be looking into our future.

With this the size of the universe seems to be a problem, projected at 93 billion light years wide (13). In the alternate theory, SSOBH expanded space/time rapidly, in its collapsing phase it will crunch it just as quickly back to the next big bang. The intense gravity of SSOBH traveling at near the speed of light shows the true power of Einstein's Relativity as both a destroyer and creator of each TRU. With SSOBH reaching nearly the speed of light both time and space will shrink rapidly (12a).

Based on SSOBH of the alternate model these observations may need some correction due to Einstein shift that is not accounted for in the present theory.



## 8 Conclusions

This paper provides an Alternate Theory of the Universe that is feasible and should be more closely looked at by scientists of today along with the existing theory. The Alternate Theory and postulation of SSOBH answer many unanswered questions that the present theory leaves to the whims of dark energy. With it, inflation, normal expansion, and present expansion/acceleration can be feasibly explained. The cycle of SSOBH produces the conditions of the Big Bang in a cyclic model. How galaxies have very large black holes at the center and have spin with proportional matter collected is feasibly explained. TRU emerges with a critical mass that produces a universe that cycles, is closed and has positive energy. A universe that makes some sense with how we know nature works is provided by this Alternate Theory. A new geometry of gravity that surrounds and organizes the UWK is introduced that feasibly explains nearly all the unanswered questions of the present theory. With only the SSOBH the complete universe is explained. Gravity, spin and momentum are all that is needed. A method to prove SSOBH existence has been proposed using atomic clocks which would provide evidence for SSOBH's gravitational field and its rate of change.

## 9 Accolades and Author Statement

Tom DeLillo, Math Department Wichita State; Jack Fraser, Oxford University; John Leslie, Philosopher; Mark Faller, Philosopher; Thomas Wingenfelt, NASA; Viktor Toth, Quora

The SSOBH is my own vision to account for all the observations about the universe that remain unexplained. The above mentioned people helped me, even though much criticism has been unleashed by many. Once published I fully expect the battle to begin.

I remain distressed as two years approach that I have known this outcome. If we achieve a certain level of knowledge does God put us on the mantel? Perhaps he is about fresh starts and bad endings? Global Warming will be a self-caused extinction event that we should be worried about now. We are all aware of the many things our world faces besides the new one I bring forward. Thus, we likely will not see the SSOBH event that will consume everything.

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(10) Article published in *Nation Geographic News*, March 24,2013, by John Roach, *New Proof, Unknown "Structures" tug at Our Universe* Mysterious "dark flows" extend deeper than previously seen. Summary: Researchers made the controversial suggestion that the clusters are being tugged on by the gravity of matter outside the known universe. Study leader Dr. Alexander Kashlinsky, Astrophysicist at NASA's Goddard Space Center in Maryland.

(11) *Scientific America*, "The Expanding Universe: From Slowdown to Sped Up." By Adam G Riess and M. Turner on September 2008 and repeat of February 2004 issue of *Scientific America* with Laurence Krauss.

(12) "the accent of gravity" by Marcus Chown, copyright 2017, pg 168, *Singularity theorems*, 2nd paragraph, "Different parts of the collapsing Universe, instead of all piling up at one point, would miss each other and so not create a catastrophic singularity. Since Einstein's theory of gravity would not break down, it would be possible to use the recipe to follow the history of the Universe to earlier time before the big bang."

(12a) Marcus Chown, pg 102, *Time dilation*, 3rd paragraph, "The time dilation effect is greater for cosmic rays 'muons', subatomic particles created when cosmic rays-super-fast atomic nuclei from space-slam into air molecules at the top of the Earth's atmosphere. In fact, the evidence that time slows and space contracts at close to the speed of light is actually coursing through your body at this instant."

(13) Quora, How can it be understood that the universe is 93 billion miles across and yet only 13.8 billion years old? Frank Helle, PhD in Physics Stanford University.

(14) *Scientific American*, *Puzzling Measurements of "Big G" Gravitational Constant Ignites Debate*, by Clara Moskowitz, Sept 18, 2013.

