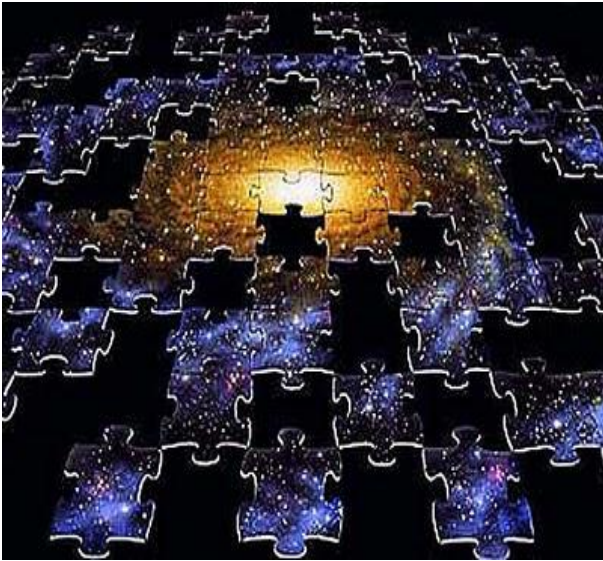


## Dark-Matter, Dark-Energy and the Big-Bang All Finally Resolved



### The Crisis in Cosmology

Today's crisis in Cosmology is perhaps best demonstrated by an apparently *accelerating* expansion of the universe where a 'Dark Energy' must be postulated to justify this extraordinary acceleration apart -- an energy that *itself* defies both explanation and the *Law of Conservation of Energy*.

And the crisis only deepens considering there would have to be between *5 and 50 times* more matter in the universe for Einstein's gravitational calculations to match observations, which is why unseen 'Dark Matter' was conjectured to keep these calculations "correct", and account for the "missing mass".

A further reason for this crisis is the now familiar 'Big Bang' theory -- the current consensus belief backed by the attendant vested interests, and therefore largely unquestioned, but which actually *fails* under objective analysis showing a universe that is *not expanding apart at all*. Objective observation shows a universe where *billions* of stars organize into *inwardly spiraling* galaxies that group into larger stable Galactic Clusters, then further into enormous Super Clusters that thread throughout the universe providing definition even on the grandest scales.

The fact that one camp solidly and consistently reports this stable observational structure of our universe on all scales while a separate camp powerfully and enthusiastically promotes a completely incompatible "Big Bang" / "Dark Energy" ever-accelerating universe merely reinforces the enormity of the crisis in today's Cosmological community.

### Deepening the Crisis: Painting the Wrong Picture of Our Universe

However, despite the enormity of this crisis, it can be readily resolved once we identify where it all began -- a fundamental flaw in *Hubble's Law* which incorrectly assumes that *redshifts* observed in starlight shifted toward lower frequencies correspond to *velocity away through space*. But first it is worth taking a brief overview of the journey that brought things to this point:

Earth was once considered flat and at the center of the universe until it was found to be round and in a Sun-centered solar system as only a small part of a huge galaxy. And even our galaxy, the *Milky Way*, was later found to be one out of billions of galaxies in our immense universe. Meanwhile, the universe itself changed from three dimensions to presumably *four* -- once *time* was included, and from entirely regular matter to apparently mostly *invisible matter* filling the cosmos. It even changed from a *static* universe to one *coasting* apart, and now even a shocking *accelerating expansion*.

This creates a picture of a universe composed of a *literal* 'four-dimensional space-time fabric' bursting forth from an *actual* 'Big Bang' creation event, with unseen exotic *physical* 'Dark Matter' filling the universe, and a *new form of unexplained*

*energy* -- a mysterious 'Dark Energy' repelling everything apart ever-faster. To counterbalance increasing acknowledgement of the complete lack of solid physical and scientific grounding for much of this picture is a unified front of increasingly fortified scientific consensus and continually growing Nobel Prize support.

This process has resulted in a number of key assumptions and theories becoming effective 'laws of nature', after which, by definition, observations must fall in line and not conflict to suggest other interpretations. And while this is an important process for scientific advancement, it can potentially entrench incorrect 'laws of physics' into our science for indefinite periods of time, sometimes with disastrous results. Indeed, even suggesting conflicting interpretations once a 'law' was established was a very dangerous act that history shows often carried severe penalties; it is important to note that today's science has its own tight control and dismissal mechanisms that can indefinitely entrench detrimental 'laws' for reasons of vested interest just as effectively as in times gone by.

### **Resolving the Crisis: Where It All Began -- "Hubble's Law"**

One such example is Edwin Hubble's assumption nearly a century ago that an observed redshift in starlight to lower frequencies indicates a star's motion away from us in space -- based on a simple analogy to the known Doppler Shift of moving sound sources in air. This Doppler-like assumption was made at a time when light was presumed to be a wavelike phenomenon similar to sound, and when there was far more interest in the enormous cosmological implications of Hubble's assumption than the actual immense *differences* between light and sound.

Sound, for example, is simple compression waves conducted at the speed of sound in an air medium, whereas, even in Hubble's day, light was considered a somewhat mysterious 'electromagnetic energy wave' that somehow always traveled at constant light-speed -- and with no conducting medium at all. Further, light was increasingly considered an even more mysterious quantum-mechanical phenomenon that is somehow simultaneously also a 'photon particle', only settling on either wave or particle once detected.

Despite these serious problems with Hubble's initial Doppler-inspired 'redshift equals velocity' assumption, the intrigue and controversy created by a possible expanding universe coasting from a 'Big Bang' creation event tipped the scales, entrenching both "Hubble's Law" and this radically new cosmological picture into our science. The increasing observations of redshifted starlight all around us now had to align with Hubble's apparent 'law of nature', which could now only mean everything was moving away and apart, locking cosmology into this line of thought ever since.

So powerful was this view that it now dominates our understanding of the universe despite the fact that light is nothing like Doppler Shift-able sound waves -- and that light is also easily red-shifted merely by passing it through materials such as common plastics. Given this fact, the redshifts observed in starlight across millions of light-years of space filled with all manner of materials and gases might not be particularly surprising -- redshifts could simply indicate a great *distance* across space, and not a Doppler-like *velocity* at all.

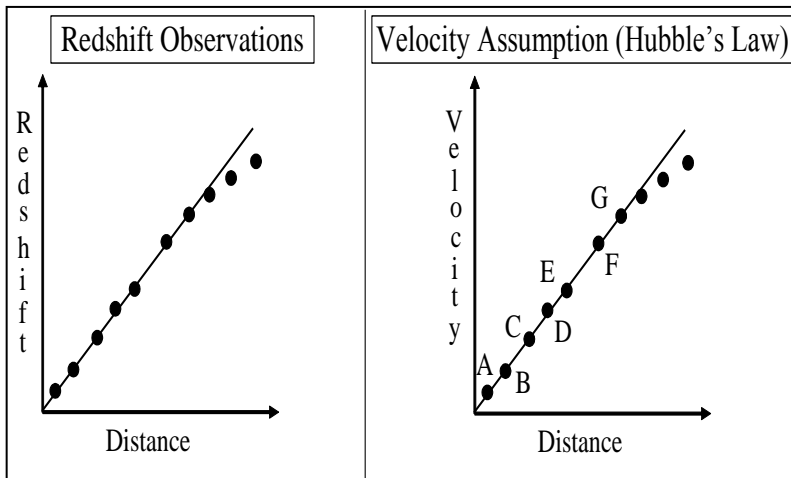
### **The Problems with Hubble's Law Deepen**

One of the most critical problems with Hubble's "redshift equals velocity" claim is that it contains a clearly fatal logical and physical error that has been overlooked for

nearly a century now. If the universe were actually expanding as Hubble claimed, it would produce nothing like the straight-line, regular spacing of the associated Hubble-Law diagram. As the plot progresses to ever-greater distances it also represents observations that are ever further back in time as well.

The universe is now believed to be about 14-billion years old, with billions of galaxies dotted throughout it at such great distances that we can only reasonably describe them in terms of light years -- the distance light travels in a full year. Even the nearest galaxies are *millions* of light-years from us, with most of them *billions* of light-years away across the observable universe extending 14 billion light-years in all directions.

As such, the points plotted on the diagram below represent redshift measurements and the associated velocities as required by "Hubble's Law" for galaxies at observed distances of one billion light-years, two billion light-years, three billion light-years, etc. And, of course, these are presumed velocities that *were* occurring one billion *years ago*, two billion *years ago*, three billion *years ago*, etc., since it took that long for their light to reach us.

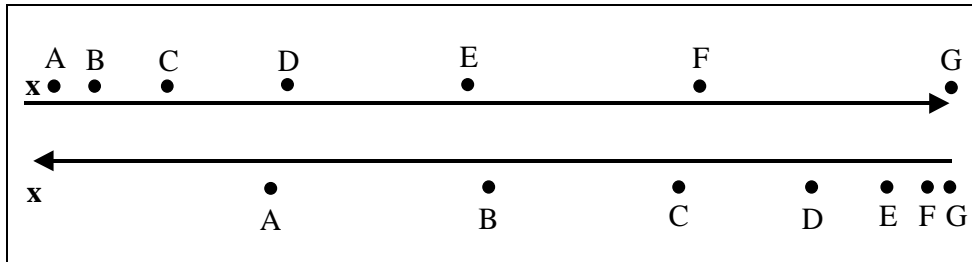


Cosmologists are well aware of this, frequently stating that looking out into space is equivalent to looking back in time, yet they have failed to follow this understanding to its inevitable, troubling conclusion. Galaxy A, spotted one billion light years away, and which was apparently traveling at its redshift-indicated speed *one billion years ago*, will now be far more distant, as it continued speeding away over the intervening billion years.

Any regularly spaced plot of galaxies along Hubble's straight line, where both redshifts and velocities increase linearly with distance, shows galaxy spacing that existed *in the past*, and which must *now* be spaced with *ever-increasing* gaps out from us -- in the *present* state of the universe. This effect would be even more accentuated by, for example, the *third* galaxy out, Galaxy C, spotted three billion light-years away. Its "Hubble redshift" speed is supposedly *three times* faster than Galaxy A, and it would have been speeding thus for *three times longer* than Galaxy A by the time of this observation, making its *present* gaps with the other galaxies greater by a *far* more disproportionate amount than shown.

So, although the diagram shows gaps that all appear fairly equal in size and expand apart fairly equally as well to give a uniform universe from any location -- as *required* by the so-called *Cosmological Principle* -- this is actually not *at all* the case. Hubble's "redshift equals velocity" interpretation actually describes an *impossible* universe where the gaps grow disproportionately larger with distance -- from the perspective of *every galaxy in the universe*. But, of course, it is logically and physically impossible for the *actual, present-moment* gaps to be ever-larger outward from us toward distant galaxies, while also being *simultaneously* ever-larger outward from distant galaxies toward *us*. This impossible, but very real paradox in today's

Cosmology is shown below, with two completely incompatible gaps from galaxies A to G and back again from galaxies G to A:



### **Erroneous “Dark Energy” Invention Draws Nobel Prize**

It is this type of problem that has been building within the Cosmological community to crisis proportions, critically in recent years over the issue of specific types of supernovas and their distances and apparent speeds of recession away from us. Chronic fundamental oversights in Hubble’s Law, redshift interpretations, and logical paradoxes in misinterpretations, have led cosmologists to conclude that supernova evidence proves our universe is accelerating ever-faster due to a mysterious form of “Dark Energy” that is entirely new to science.

Despite the fact that this new form of energy has no scientific explanation, has never been demonstrated in any experiment, and has never been identified on any energy spectrum, its “discovery” roughly 14 billion light-years away via the spectra of a handful of supernovas was recently awarded a Nobel Prize.

However, none of these paradoxes or mysteries would exist at all if the universe were relatively static and the detected supernova brightness and spectral redshifts merely arose from the nature and distance of the enormous spans of intervening space rather than “Hubble’s Law”.

### **Further Crisis Resolution: Einstein’s Erroneous *General Relativity Theory***

Einstein’s *General Relativity* theory presents a similar issue, with Einstein’s reputation helping elevate it also to an effective gravitational ‘law of nature’, modeling the universe as a ‘warped four-dimensional space-time realm’ rather than one of gravitational forces in regular three-dimensional space.

This effective ‘law’ has likewise required observational interpretations to align with it for nearly a century, with cosmologists inventing physically unexplained and completely undetectable ‘Dark Matter’ that neither *emits, absorbs, reflects* or *blocks* light to account for *tenfold* discrepancies between Einstein’s theory and observations.

However, were it not for this ‘law of nature’ status, and Einstein’s reputation, following proper Scientific Method would merely have led to the conclusion that Einstein’s largely untested theory is simply *wrong* -- now verified to be out by an enormous *factor of ten* when simply held to the same objective unbiased scientific observation and scrutiny as any other theory.

A bitter pill to swallow for huge vested interests in the scientific community who have staunchly supported this picture of the universe for decades? No doubt. An embarrassment to see a scientific icon knocked from his pedestal with one of his most long-standing revered theories shown to be completely false? Definitely. Reasons to

knowingly send the whole of science and humanity off-track indefinitely to keep these facts hidden? Hopefully not!

Now, much as with "Hubble's Law", once we allow ourselves to question Einstein's effective 'law of nature' and simply hold it up to the same scientific scrutiny as any other theory, its tenfold disagreement with observations immediately disproves it. And, just as letting go of this communal mental block frees us to completely eliminate the mysterious 'Dark Energy' attached to our "Hubble's Law" beliefs, it also frees us to eliminate the mysterious 'Dark Matter' invisibly dominating our universe, attached to our *General Relativity* beliefs.

### **The Ongoing "Cosmological-Constant Blunder"**

Einstein created his *General Relativity* theory -- a merger of Newton's gravitational-force theory and Minkowski's four-dimensional space-time abstraction -- to try to provide a truly universal model and new physical understanding of gravity, due to his strong dissatisfaction with Newton's theory; hence today's 'warped space-time' notion of gravity was born.

However, finding that his resulting equations could not be used to describe the static universe generally presumed at the time, but only one that either expanded apart or contracted together, Einstein further merged a sizably altered version of his equations describing a hypothetical *mass-less* universe envisioned by Willem de Sitter. Since de Sitter had already added an arbitrary control parameter to Einstein's equations in order to tune the dynamics of his hypothetical universe, Einstein adopted this parameter, later called the '*Cosmological Constant*', hoping he might set it to a value that made his equations valid for our presumably *static* universe.

But during his attempts to model a static universe with these merged equations, Einstein became convinced that the universe was actually *coasting apart*, based on Hubble's 'redshift equals velocity' interpretation of an observed redshift in starlight all around us. Famously calling his arbitrary '*Cosmological Constant*' introduction his "greatest blunder", Einstein removed it from his *General Relativity* equations in the hope that his original equations might better model a universe now apparently *coasting apart*, presumably from a 'Big Bang' creation event.

But cosmologists later noted that observations based on Hubble's 'redshift equals velocity' assumption actually suggest that the universe is not only *coasting apart*, but *actively accelerating* apart ever faster, apparently driven by a mysterious repulsive 'Dark Energy' now dominating the universe. And, since even Einstein's return to his original equations could not model this *accelerating* expansion apart, his "Cosmological-Constant blunder" removal is now being reconsidered for return to *General Relativity* theory. This time its arbitrary addition is intended to model an *accelerating* universe model that hopefully works for this current belief, and is now persuasively renamed from Einstein's "greatest blunder" -- his so-called '*Cosmological Constant*' -- to the apparently new and mysterious 'Dark Energy' pervading the universe.

### **General Relativity -- a Theory that has Never Actually Worked**

The problems from all of these arbitrary abstractions, mergers, additions, removals and re-additions have steadily mounted. Newton's 'gravitational force' theory has actually never been scientifically explained despite its familiar and intuitive nature, and neither has Minkowski's 'space-time' abstraction which Einstein merged with it to

create his *General Relativity* theory. Further, de Sitter never claimed that his hypothetical *mass-less* universe with its arbitrary '*Cosmological Constant*' was to be taken literally, and nor did Hubble ever scientifically explain or validate his 'redshift equals velocity' assumption that compelled Einstein to later remove his 'Cosmological Constant blunder'.

As a result, and considering further ongoing alterations of Einstein's *General Relativity* equations by various scientific camps, we have had a core theory of gravity for nearly a century now that has been cobbled together and repeatedly and arbitrarily altered to try to match the latest observations and beliefs, yet which has *never actually worked at any point* -- a fact that remains the case even today.

This is the very reason for the seemingly endless stream of 'mysteries' and 'surprises' and 'puzzles' that seem to arise from Cosmology decade after decade; in actuality, it is not our *universe* that is so strange and bizarre, but merely the distorted *theories* and *beliefs* through which we view our universe that make it appear so.

### **False Supporting Evidence: The Cosmic Microwave Background Radiation**

Even further cracks appear once we begin allowing ourselves to question today's cosmological picture. For example, it can be readily shown that faint 'Cosmic Microwave Background Radiation' arriving from space is not the 'Big Bang whisper' it was claimed to be decades ago, but merely microwave noise from our local solar system and galaxy.

It is now known that the early ground-based detector was far too crude to discern any faint patterns from outside our galaxy, and that the featureless detected radiation contained no inherent indication of a distance of origin, yet it was, and still is considered the first detection and mapping of the structure of the early universe. This remains the case despite hindsight now showing that this early 'Big Bang whisper' claim is an obvious error that clearly should be retracted.

Once again, the case cannot be overstated. The original crude ground-based detector initially stumbled into an unexpected random microwave hiss of noise. It was eventually decided by some that this hiss was the highly sought-after proof of the then controversial "Big Bang' theory, after which patterns presumably representing the structure of the early universe were said to be found within this radiation; a Nobel Prize was even later awarded to this effort.

Crucially, it was much more quietly later acknowledged that the original random microwave hiss could only have been just that - *a meaningless random hiss*. This is because an extremely advanced detector would have been required to discern any meaningful pattern from a severely diminished signal across billions of light years of space, then across the 100-thousand light-years of our active galaxy, then through the radiation of our solar system and its burning sun, and finally our dense atmosphere. And the detector in question was orders-of-magnitude too crude - only able to pick up a meaningless random hiss of microwave noise given the task just described for any signal originating outside our galaxy or even well within it, let alone from the distant early universe.

Nevertheless, even today, despite full realization and recognition of the above, no retraction of the original erroneous "Big Bang whisper detection" has ever been issued from the Cosmological community. In fact, in quite the *opposite* move, a more detailed 'Cosmic Microwave Background Radiation' detection performed from orbit is

said to agree with the initial 'early universe' detection pattern, despite recognition that the initial pattern is now *verifiably meaningless* - with the new detection effort also awarded a Nobel Prize.

### **Erroneous Double Nobel Prize-Winning 'Big-Bang' Proof**

Today's now largely unquestioned 'Big Bang' theory was originally heavily debated until ground-based radio telescopes detected background microwave hiss that was claimed to have patterns identifying it as ancient, greatly redshifted radiation from the 'Big Bang' creation event -- drawing a Nobel Prize.

However, first, it is important to note that this background microwave hiss is quite unlike redshifted starlight. It is not associated with any observable distant stellar objects whose radiation is dramatically redshifted down to microwave frequencies, but is instead an almost perfectly uniform hiss of background microwaves arriving from all directions. As such, it is no more evidence of an origin of ancient radiation from the distant early universe than recent microwave noise generated from the billions of stars in our local galaxy or even our nearby blazing Sun.

Indeed, we now know, from the far more sensitive COBE satellite, that the original detected radiation was composed almost entirely of radiation from precisely these local sources. COBE also showed that any patterns that may exist in the faint radiation from beyond our galaxy would be far below the detection threshold of the original radio telescopes, and so the initial Nobel Prize-winning claims of patterns from the early universe were verifiably nothing more than wishful thinking at best.

Secondly, the COBE and later WMAP satellites also showed that any true ancient radiation patterns would be dwarfed by combined microwave disturbances and noise *a hundred-thousand times* more powerful in crossing the immensity of intergalactic space, then our own galaxy of billions of active stellar objects, then our solar system with its blazing sun, and finally our highly absorbing and distorting atmosphere. And since a great deal of this overwhelming distortion is largely or completely random, there is no way to reliably characterize and extract it to uncover any extremely subtle and highly distorted inter-mingled patterns a hundred-thousand times weaker.

Despite these facts, those behind the COBE and WMAP satellite projects claim that not only have they clearly discerned even more detailed patterns of the early universe from this radiation, but also that these patterns correlate with those in the original detection claim, drawing yet a second Nobel Prize. Yet, as just described, it is a physical impossibility to recover and reconstruct any faint original signal from the overwhelming distorting random noise. Also, these later projects actually show that it would have been impossible for the original detector to discern any actual 'early universe' patterns whatsoever in the original radiation.

So the first scientifically responsible outcome from the COBE and WMAP projects should have been a resounding retraction of the initial Nobel Prize-winning claim, as the technology to make such a claim was now unquestionably lacking -- by *orders of magnitude*. However, not only was no such retraction made, but instead the verifiably meaningless "structural map of the early universe" was re-released after the COBE and WMAP data had been processed for months until it was convincingly superimposed on top of it, reinforcing it with further detail, and collecting a second Nobel Prize in the process.

As a result, a meaningless noise signal is, even today, held as verification of the 'Big Bang' theory, cementing it into our science and our collective psyches and belief systems to the point where it is now a largely forgone conclusion and unquestioned -- if not even *unquestionable* - scientific 'fact'.

## **Time to End Our Mounting Theoretical and Physical Crisis in Cosmology**

So, from a *theoretical* perspective, our core gravitational theory in Cosmology, *General Relativity*, is a patchwork of scientifically unexplained, abstract sub-theories, with a 'Cosmological Constant' that is continually added and removed in repeatedly failed attempts to match observations, proclaimed as everything from a "great blunder" to a mysterious 'Dark Energy' permeating the universe.

And from a *physical* perspective, we have recent claims of a universe somehow *accelerating* apart after a presumed 'Big Bang' creation event despite conflicting observations increasingly showing all the stars existing within stable galaxies or galactic clusters threading throughout the universe. The recent law-violating claims of a universe accelerating apart are based on Hubble's largely unquestioned and scientifically unverified assumption that redshifted starlight equals velocity, and the best 'Big Bang' evidence is now actually verifiably erroneously Nobel Prize-awarded microwave noise.

This is undeniably the current state of Cosmology today -- and the current destination of billions of public tax dollars earmarked for scientific investigation and advancement. It is clear that vested interests in the scientific community are not about to enact any significant change to this state of affairs, so it is up to an informed and concerned public to do something about this ongoing state of crisis in our science.

## **Farewell 'Big Bang', 'Dark Matter', 'Dark Energy' and 'Space-Time'**

If we simply allow ourselves to take a critical look at a double Nobel Prize-winning observational claim and re-think two highly questionable century-old 'laws of nature', we remove three of today's largest mysteries from Cosmology: the '*Big Bang*', '*Dark Matter*' and '*Dark Energy*'. It is worth noting that these Cosmological claims, 'laws' and observations are largely abstract or remote in nature, and so are far more susceptible to being thrown wildly off track, and require extra care and scientific due-diligence.

However, now with appropriate corrective analysis, there is no longer a mysterious infinitely small singularity from which the entire universe burst forth, no longer completely undetectable exotic 'Dark Matter' dominating our universe, and no longer a mysterious law-violating 'Dark Energy' accelerating the universe apart. In their place is a possibly static universe of potentially infinite size and age, within which stars of regular matter undergo continual births and deaths, with gravity-driven dynamics in ordinary three-dimensional space.

This leaves a number of immediate questions: Does the scientific community for some reason *want* to retain our current cosmological picture, with its deep and possibly irresolvable, ongoing mysteries and unquestioned "laws of nature"? And if not, and they are truly sidetracked on a centuries-old journey in search for answers, then what might this gravity *be* that is driving our simple and possibly static and endless universe? Newton's *gravitational-force* theory has many problems, as Einstein recognized in trying to replace it, and Einstein's *warped space-time* theory has even



greater issues. And we certainly won't get anywhere inventing "Dark Matter" or "Dark Energy", so what is the answer?

We need a credible new Theory of Everything including a new theory of gravity. See these previous articles and excerpts:

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**Cosmology in Crisis** (excerpt by Mark McCutcheon upon which this article is based)

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