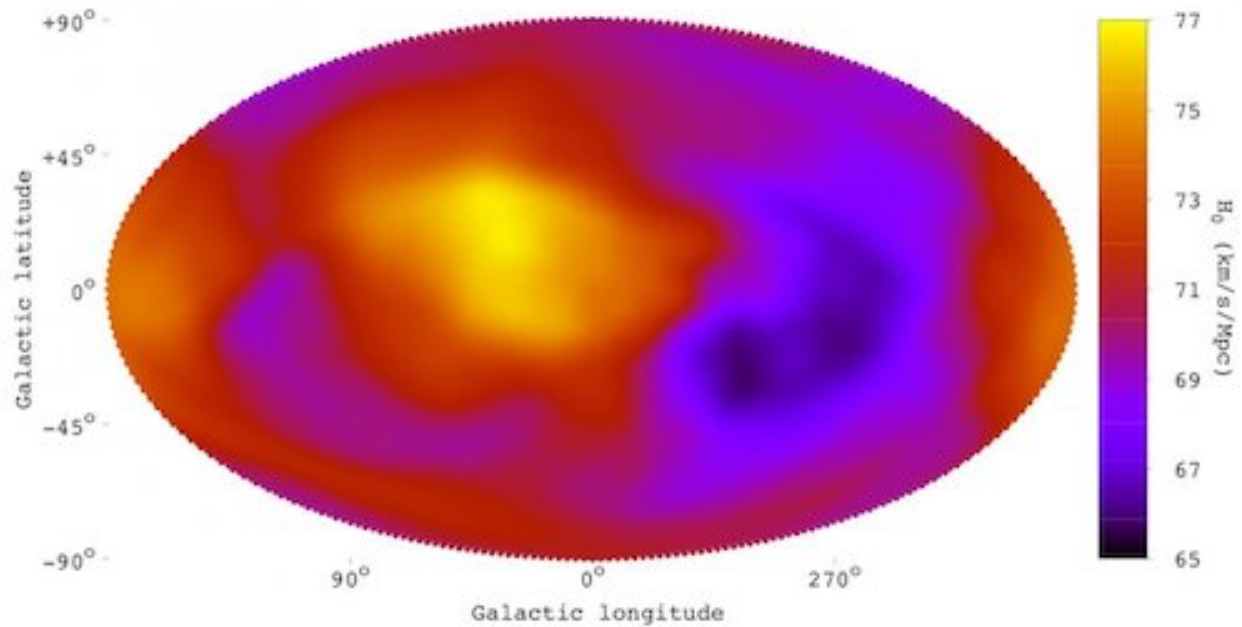


Universal Anisotropy Explained

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Recent multi-platform data has revealed that previously modeled Cosmic Microwave Background (CMB) *universal isotropy* (equal Dark Energy expansion) *is not isotropic* (smooth in all directions), *but directionally anisotropic*.¹ Major cosmological implications follow.

¹ <https://phys.org/news/2020-04-basic-assumption-universe.html>

In the 2D visual above, representing our fourth-dimensionally expanding 3D universal bubble, the CMB would be smoothly red shifted everywhere – only if expansion of our local visual universe were evenly controlled by so-called Dark Energy, and without influences from different external push/shadow gravity sources.

The exaggerated color palette indicates where yellow inside the illustration supposedly represents regions of more rapid post-Big-Bang expansion *caused by* more outwardly pressing Dark Energy. Areas toward blue represent where universal expansion is slower from less outwardly pushing Dark Energy.

The lambda Dark Energy idea began with Einstein's "fudge factor" explanation of universal inflation. Subsequent math tweaked "lambda" to *correlate* with new data. No satisfactory *causative* explanation has ever been developed for inflationary Dark Energy. There is a much better science model:

CMB differences strongly support an emerging 21st-century multiversal paradigm for regions directly outside our visible universe's boundaries. Think of our local universe and others juxtaposed four-dimensionally to ours as our proximal region within the incredibly vast multiversal "bubble bath" of all local universes, each with their own juxtaposed universes.

The new CMB data in fact support how *adjacent universal masses have unique "net attractive" effects* from just beyond different regions of our visible bubble. This data gives us a crude tool to begin creating a picture of the awesome gravitational shadow masses beyond our visible universal boundary.

A less massive proximal externality in any direction from our bubble sphere results in a weaker receding Doppler effect from our local frame of reference when viewing CMB radiant objects. Because a less proximally massive external universe filters less of the Multiverse y/y flow from its distal direction, there is less force difference between the flows from opposite linear directions.

In other words, less net outward acceleration from our universe toward a less massive gravity shadow (with greater penetration from opposing flows toward us) – yields less net Doppler elongation of viewed CMB electromagnetic waves. Such areas above are shown in exaggerated blue tints.

The *Doppler effect* on Earth as conventionally represented involves *sound waves* stretching out after a train whistle passes by. As a train approaches the passenger station its whistle has a higher, compressed frequency from our perspective. The whistle from its own moving frame of reference has no change in pitch. It is *relative directional motion* that influences the sound pitch we hear. The degree of Doppler shift is related to the train's speed.

When looking at CMB data we are looking at *Dopplerized light waves* as seen from our frame of reference. Photon waves are much shorter, but can appear to us like receding sound waves, thus the famous red shift. With isotropy there is equal red shift in all directions toward the CMB, but not with anisotropy.

The *cosmological effect from our frame is perceived Doppler lengthening of outward expansion* of visible photon radiant energy at this side of the receding CMB, leading to longer and thereby less energetic photon waves that reach us. *Faster net outward flow would be received and perceived from our Milky Way field of reference as more red-spectral shifted.* Radiant elements within the CMB frame of reference are *not* frequency shifted, just like a train's horn frequency doesn't shift from within the train. What is different is our Milky Way frame, which is similar to the train station versus the train.

On the net, *the push/shadow equation proximal to greater exo-universal masses just distal from immediate areas of our local universal expansion leads there to stronger net pushing outwardly from the direction of our universe toward the more shadowing distal universe. The omnidirectional push force is always the same, but in this case the shadow is more effective, controlling the net effect.*

In the evolved paradigm the "super frame" of the overall Multiverse is the source for all omnidirectional kinetic y/y units in the pushing part of inter-universal net gravity, just like the train horn itself is the base frame of reference within its local sound range. Multiversal yin/yang flows interpenetrate in all directions with the same rate of speed and force among all local universes. Unshadowed multiversal "push" flow is equal in force from all directions, and thereby becomes the multiversal reference.

CMB light frequencies reaching us with relatively shorter waves and higher energies will shift toward blue in the electromagnetic (EM) spectrum, or less red shift – with reference to isotropic red. This what we see when luminal CMB elements do not recede as fast. These blue-shifted areas are receding, but less rapidly when compared to apparently longer-wave faster receding. The CMB all can look to be variants of red when using less-sensitive instruments, which is why it was earlier seen to be isotropic.

Proximal push/shadow net force looks as if it were classical tractor-beam gravity between branes, and locally between Newtonian masses. Of course, there is no real tractor-beam effect as such, only a net difference with the same apparent effect as shadowing. Thus, the fully embracing multiversal gravity model is obviously more elegant, and at least partially understandable within the Standard Model of physics.

I have also covered the correct multiversal paradigm in the recent *Faster Dark Energy* thesis.² There are additional essays of interest within the "Clark's Web Pages" section of *astronomy-links.net*, some referenced in this supplemental thesis.

Here are *some* fundamental areas where the correlative 20th-century understanding is absolutely unable to causatively solve the anisotropy revelation, and thus needs to be updated:

² <http://astronomy-links.net/Faster.Dark.Energy.pdf>

(1) ASSUMING THAT OUR UNIVERSE IS THE ONLY UNIVERSE.

This error goes back to the earliest astrologers in prehistory. We then thought of ourselves as the center of it all, accompanied by earth and sky gods. The sky above was just above, and it revolved around our flat plate. Literally, the sun rose and set.

Ptolemaic codification of this general error lasted for over a millennium, where math correlation substituted for causation. This tidy fantasy ended with Galileo, who nevertheless had the celestial center at our sun. There was much more work to do in subsequent cosmology. Galileo's model was expanded even as recently as the end of the First World War, giving priority to the Milky Way and to its so-called spiral nebulae.

Since the advent of General Relativity (GR), cosmology has mostly been locked into another tidy model that forces facts into a specious spacetime framework. Institutional astrophysicists have generally been reluctant to stray from comfortable one-universe GR and quantum theory (QT) models.

Just as Galileo made the astrophysical leap from geo-centric to solar-centric, science in this 21st century needs to update models from local-universe-centric to Multiverse-centric.

(2) NOT GIVING THE MULTIVERSE ITS TRUE PLACE IN THEORY.

Because GR and most other theory in cosmology is happy with the current correlative math models, it is *convenient* to ignore the real 4D universe of local universes, the causative Multiverse.

Furthermore, when Einstein did his General Relativity work astronomers still believed numerous "spiral nebulae" were merely nebulous entities in our galaxy. Over the remaining 20th century popular GR cosmology "bravely advanced" the center of it all from the Milky Way to our local visible universe.

Flowing out of the weak and wrong GR model is the facile idea of lambda Dark Energy, which has always been poorly defined and modeled. Creative math has followed. Errors come from not embracing the elegant 4D Multiverse. Many astrophysicists love a superstring, purely mathematical, 11D Multiverse. However, real gravity is never limitless tractor beams on geometric slopes. Nor do imaginary branes yield actual 10^{500} M-theory universes.

Real gravity is a 4D push/shadow phenomenon that can be modeled by standard mathematics. There was first an attempt in the 17th century by Nicolas Fatio de Duillier (a friend of Newton) to explain gravity this way. Fatio was not privy to the superior data we have today, and thus his deficient billiard balls model was properly dismissed in the 19th century, opening the theory door for Einstein's geometric GR.

(3) NOT REALIZING THAT TRULY FUNDAMENTAL Y/Y PARTICLES ARE MUCH SMALLER AND DIFFERENT FROM TODAY'S SIMPLE IDEAS; AND THEY EMBRACE BOTH MATTER AND ENERGY.

The smallest now known particles are neutrinos at 10^{-24} m. However, neutrinos are relatively huge and complex, composed of large numbers of the real fundamental particles. Electromagnetic (EM) *yin/yang, matter/energy spheres* are the true "building bricks" and energy vectors of our universe and the Multiverse. Individual EM y/y spheres are at the 10^{-37} m scale. Get me enough y/y EM spheres, and I'll get you a Multiverse.

A logarithmic thirteen-scale size difference is like comparing a small molecule [one y/y sphere] to a full human [one neutrino]. At the logarithmic scale of single y/y spherical particles it is easy to embrace the fundamental idea of *primary electromagnetism*.

Bead-like, 3D strings launch as frequencies of photons with differing energy levels and wave frequencies. Many flow in random directions with equal net collective force throughout the Multiverse, interpenetrating and interacting with all parts of local universes, and thereby forming the *push aspect of gravity*.

Other substantial populations of gravitationally coherent y/y dark clouds also form the core of what has been semi-correctly called *quantum foam*. Quantum foam within the correct model is mostly what we call Dark Matter. This form of matter is real (unlike Dark Energy), and can be locally gravitationally dominant (push/shadow), while its high component photon frequencies are too small to be currently detected. We can model the net attractive relationships within Dark matter clouds using both Newtonian and Coulombian formulas.

When yin/yang Multiversal flows encounter other masses, instead of just passing by *some bead strings may transform their EM expression from kinetic-energy-dominant to potential-energy-dominant, even while individual bead strings maintain high photon frequency*. In this way great clouds of gravitationally and electromagnetically bound potential energy elements aggregate.

Individual y/y components within Dark Matter clouds have vibrational photonic frequencies too high to be detected by current technology. Thus has emerged *the false idea that Dark Matter appears dark, even though it shines brightly from very energetic, short frequencies*.

The precise and invariable initial speed of all light in a vacuum is understandable in context - if we go back to the origin of beaded yin/yang strings, which I have covered elsewhere.

The inter-universal shadow aspect of proximal gravity is largely formed by massive cloud-like volumes of mostly dark matter. Whenever dark matter is electromagnetically dense (as with an entire compact exo-universe acting as a single net shadow), incoming push flow opposite our own direction is diminished in proportion to the intervening mass *and* distance.

Both net deflection and absorption occur, so that only some portion of local multiversal flow is affected, which means that cosmic *net* push/shadow is relatively incremental, not either/or.

The reverse of kinetic-to-potential expressions does continually occur – which keeps Dark Matter and its black hole cousins perpetually in dynamic balance with everything else.

Any local universe will be composed of baryonic (or “normal”) matter and Dark Matter. Both types of mass have shadowing effect on passing multiversal flows. We can only see the baryonic matter’s luminosity with current technology, as it generates longer γ/γ photon strings with lower and longer frequencies. Dark Matter beaded strings are very short, and they vibrate at higher frequencies than current detectors can measure. Both types of electromagnetic strings travel at the same speed of “ c ”. It is only for this frequency reason that so-called normal and Dark types of matter *appear* to be different. All forms of matter and energy are equal creatures of the Multiverse.

What may appear most simple is most complex. What may appear most complex is most simple:

Anisotropy is simple to correlatively measure at different zones across the background CMB. However, it is complex to precisely calculate and explain it from a push/shadow causal perspective. Likewise, *the theory of Dark Energy* seems simple, but reality yields a more complex model. To causally envision different CMB areas from our frame is complex, even though the theory is pure.

In sum, 21st-century push/shadow gravity, with associated Coulombic electromagnetism, forms the one elegant model that explains it all. This holistic paradigm works inside all scales from tiny γ/γ EM spheres – all the way up to describing how the vast and beautiful Multiverse is a perpetual symphony.

