The Real Theory of Everything

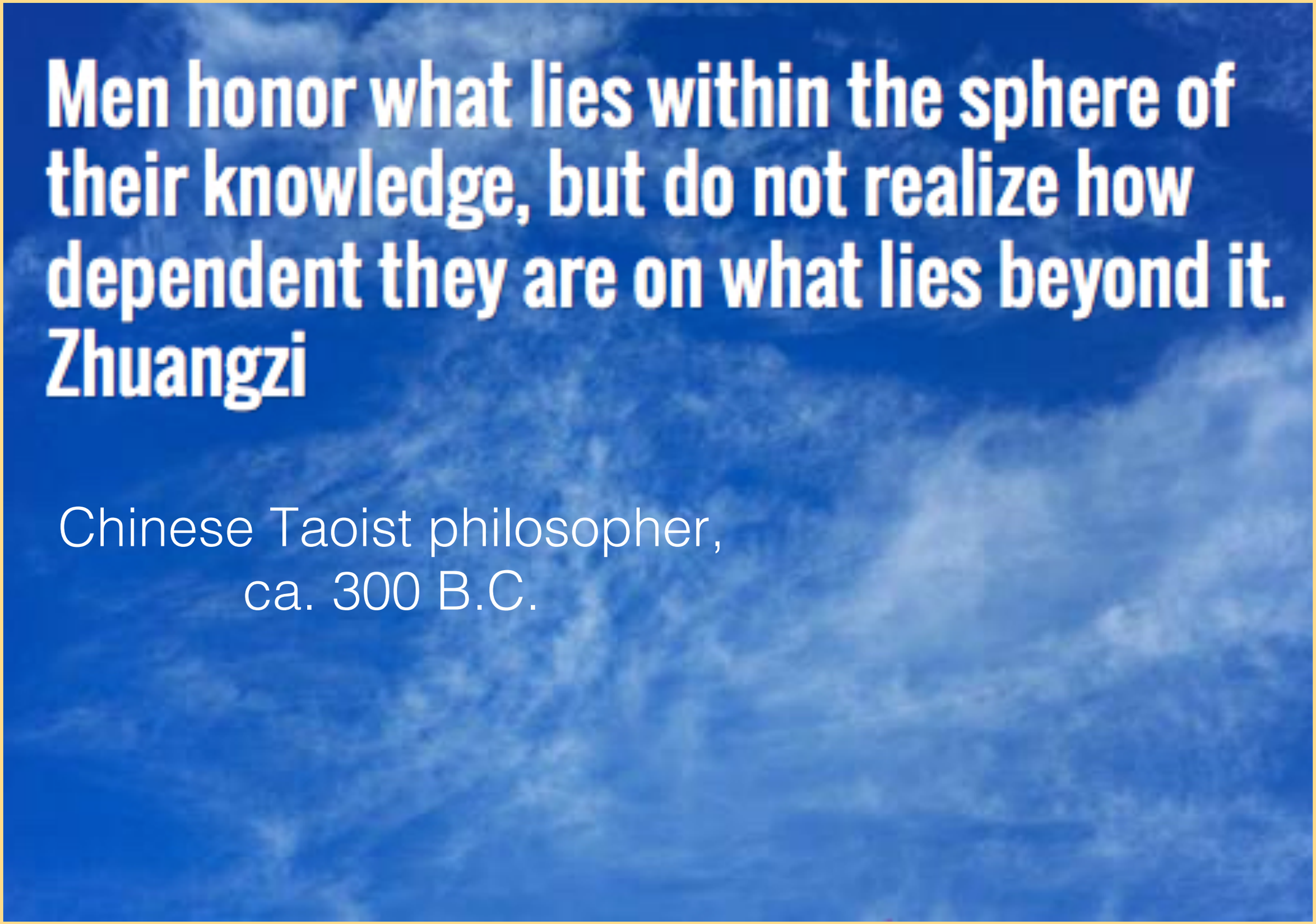
Clark M. Thomas

“Somewhere, something incredible is waiting to be known.”

Carl Sagan

I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore... whilst the great ocean of truth lay all undiscovered before me.

Sir Isaac Newton


Men honor what lies within the sphere of their knowledge, but do not realize how dependent they are on what lies beyond it.
Zhuangzi
Chinese Taoist philosopher,
ca. 300 B.C.

Partial Bibliography: *Starship Troopers, Stranger in a Strange Land, The Moon is a Harsh Mistress, Citizen of the Galaxy, The Puppet Masters, Red Planet*, etc.

Some very obvious objects are not
what they may appear to be.

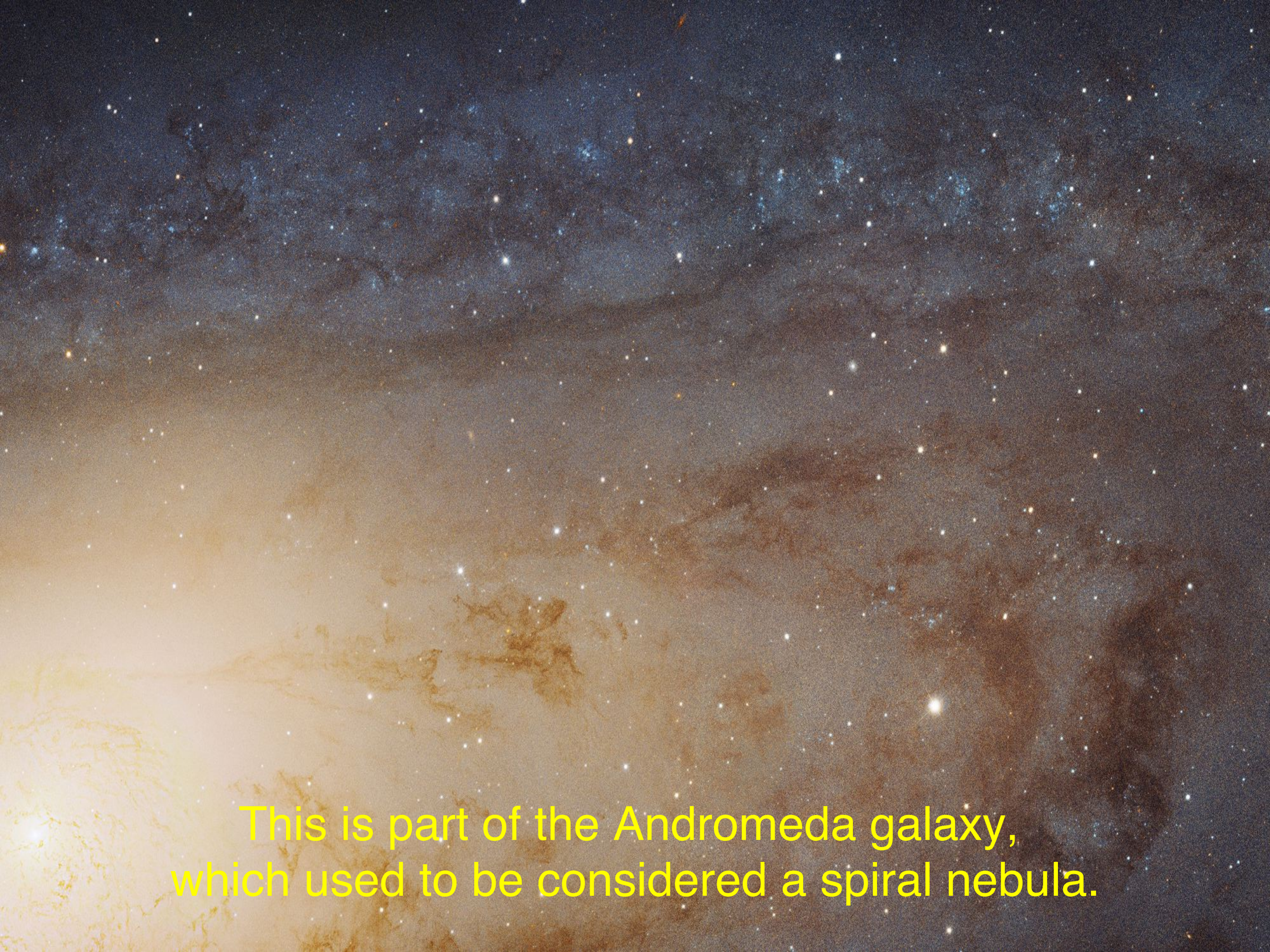
They are what they are.

It is up to us to see them correctly.

Here are five examples:


This is Mercury, not our Moon.


This is Omege Centauri, a remnant galaxy core, not a typical globular cluster.
NGC 5139 | LRGB | AP175 | FtL29050 | © Christoph Kaltseis 2014


This is part of the Andromeda galaxy,
which used to be considered a spiral nebula.

This is the nearby Trapezium galaxy, more easily seen with binoculars than a telescope.

Earth and its Moon directly to the right.
Moon dimly visible, to Earth's lower left.
We are NOT the center of everything.

Imagine Yourself Doing This...

Go to a blank wall in a large room.
Stand in front of it with your nose one inch away,
and only look straight ahead.
What do you see?

You will see NOTHING but blankness.
This is what happens while we go about our routine everyday life, seeing nothing new.

Now step back several feet. What do you see?

You will see a wall in time and place,
not a nothingness. Your perspective on
the same world has changed.

A long habit of not thinking a thing wrong gives it a superficial appearance of being right.

Thomas Paine

My First Experiment

I was a feral child – with no Internet, no smart phones, no helicopter parental supervision, and no TV until I was eight. I grew up in a thoroughly racist culture. I was too innocent to understand the ideology of racial prejudice.

In time I had the opportunity to compare a strand of my northern European hair with a strand from an African lady.

What do you think I discovered?
What is the structural difference between strands of African and European hair?

Around 1915 white professors were justifying Jim Crow in “scientific" publications. They said the people they called Negroes are genetically inferior to the white race, in part because African hair strands are tightly curled.

I later learned that in Africa there are genetic albinos, just like everywhere else. However, African albinos often die before they reach age 40 – from skin cancer brought on by intense equatorial ultraviolet rays.

That means dark mats of curly hair covering and thereby protecting the heads of nearly all Africans everywhere, along with dark skin – are a Darwinian evolutionary adaptation, **not** evidence of racial inferiority.

What looked to scientists in 1915 as a sign of **inferior** genes – looks in 2015 as a sign of **superior** genes from natural selection among people living in tropical Africa.

I did not at first know of this high African albino mortality, so my original experimental design only resolved half of the puzzle. Nevertheless, my original experiment was a pretty good design for a kid five years old.

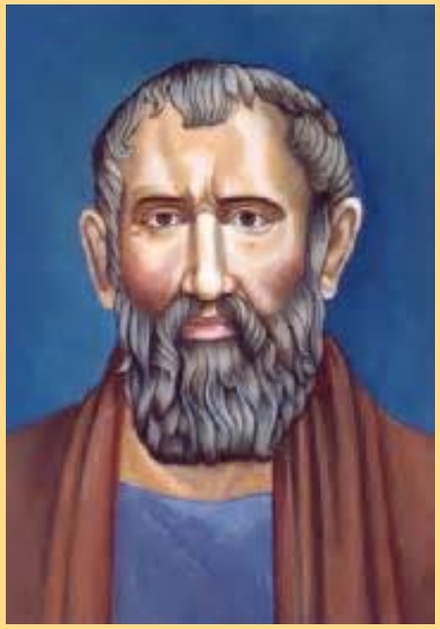
IN HUMAN HISTORY...

THE FIRST SCIENTISTS

WERE ALSO THE FIRST PHILOSOPHERS

AND THE FIRST ASTROLOGERS

Zeno's Arrow and Quantum Theory



Zeno of Elea lived in Greece (ca. 490 BC – ca. 430 BC). A follower of Parmenides, Zeno is famous for his paradoxes, such as Achilles and the Turtle. Zeno said a shot arrow at any time in the air is motionless; but still it moves.

His **Paradox of the Arrow** is a precursor to Werner Heisenberg's seminal Quantum Theory statement that we can know either the position of an object, or the motion of an object; but not both position and motion at the same time.

Zeno's arrow reaches its target. This simple fact helps establish the Quantum Atom Theory "**arrow of time**." We know the arrow has a past, but not yet a future. Therefore, time is one-way, not two-ways. Zeno's arrow reinforces the observation that the probability of an expanding Quantum particle wave function moves only forward.

Euclid's Plane Geometry

Euclid of Alexandria (ca. 325 BC – ca. 265 BC). He is famous for his plane geometry, which is built from the definition of a point, then a line, and then geometric shapes.

(His two-dimensional world of shapes inspired **Plato** in his concept of ideal forms in the sky. The gods create the perfect forms, which we humans can only hope to approximate.)

A point exists in fixed space with no length, no width, no height. By joining an infinite number of these points we create lines, and then join lines to make squares, circles, etc. However …

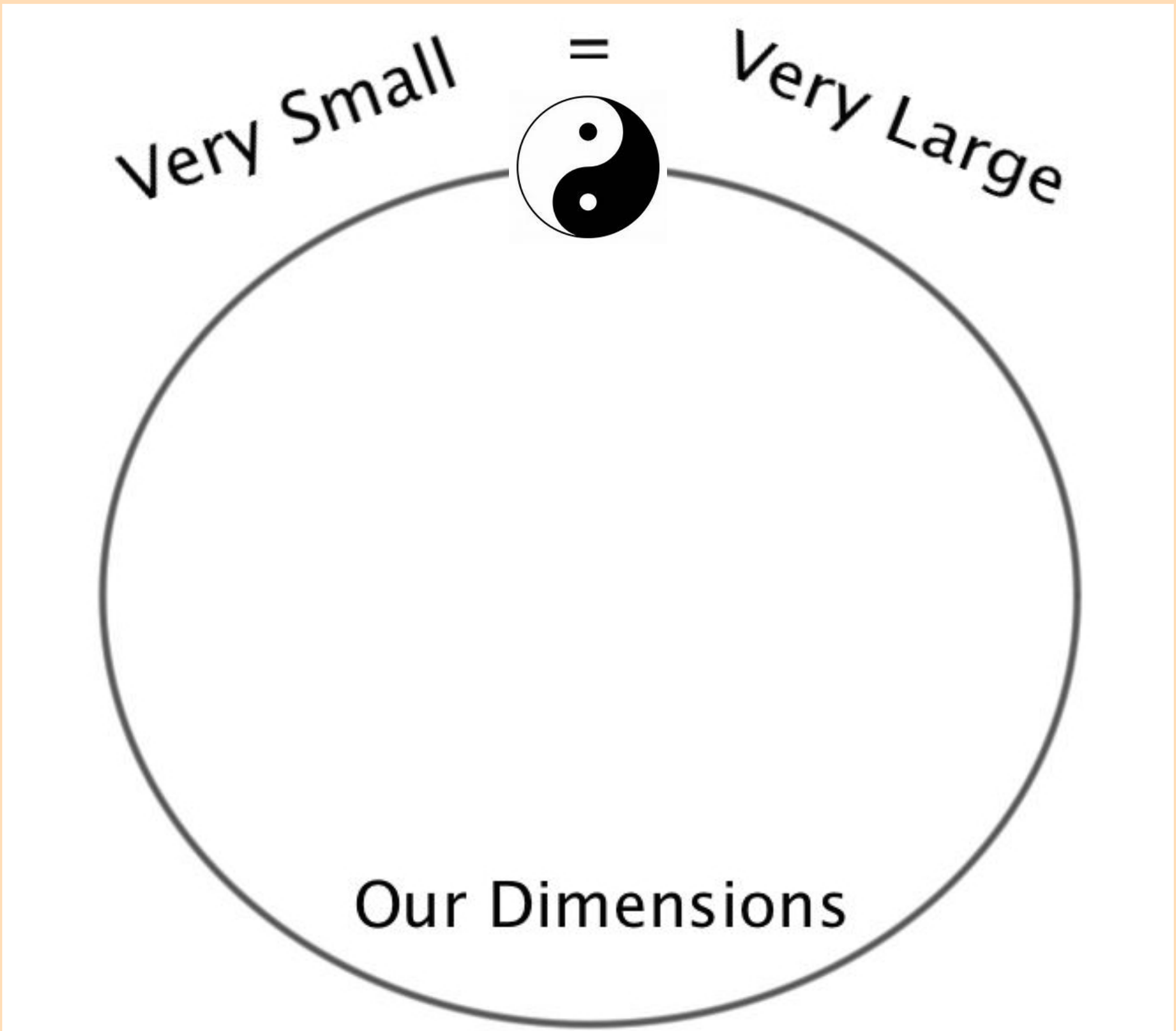
Zero point dimensions times infinity still equal zero length. If lines cannot be drawn, neither can 2-D shapes. If no two-dimensional shape can be drawn, then we can only create three-dimensional objects with "points" having tiny 3-D dimensions. Likewise, no purely two-dimensional planes or branes can exist.

Plato said philosophy begins in **awe.**

Our birthright is to be in awe at that which is beyond our mathematical understanding, and beyond language – but which we must aspire to understand, and ever labor to clothe in language, even if we cannot.

That which is within us, which is our very reality, is ever beyond us – but which we will ever yearn for and stretch out to reach. Only then can we humans become what we are meant to be, creative beings "in the image of god." Not just created beings.

This is what metaphysics AND physics are all about.


Very Small
=
Very Large
Our Dimensions

The Law of Conservation of Energy and Matter

White areas are YANG. They represent light and *kinetic energy*

Dark areas are YIN. They represent matter and *potential energy*

The Tao Symbol

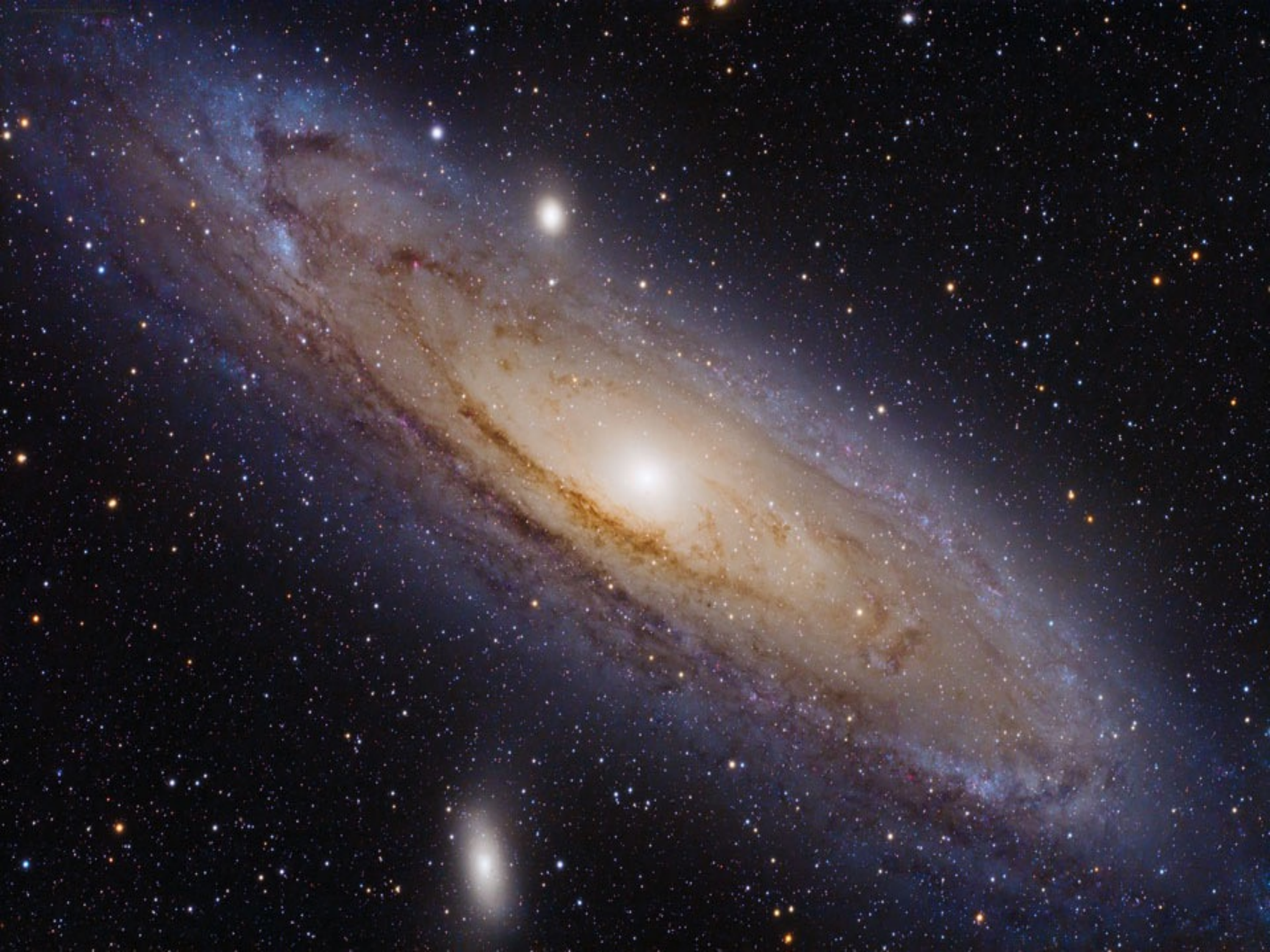
About 2,500 years ago what we call the Tao Symbol appeared in China. It was associated with the Taoist philosophy, and since that time many eastern religions have incorporated it. This intuitive symbol is actually a very advanced expression of astrophysics, as well as a guide to human philosophy.

It applies at all levels of existence, from the incredibly tiny Planck dimension, all the way up to the Multiverse. Nobody 2,500 years ago had heard of these other dimensions. That such a symbol appeared is almost a miracle.

The Tao, or Yin-Yang, symbol is the best expression of the Theory of Everything. There is no cute math formula that could say more.

Within its symbolism we see the interconnection of mass and energy. We see energy in mass, even at the extremes of mass; and we see mass in energy, even at the extremes. It covers both inorganic and organic matter. It also reflects the web of all substances, from quantum up to all forms of dark matter and energy.


To us moderns this is a pretty day.
To the ancients this is the realm of gods and magic.



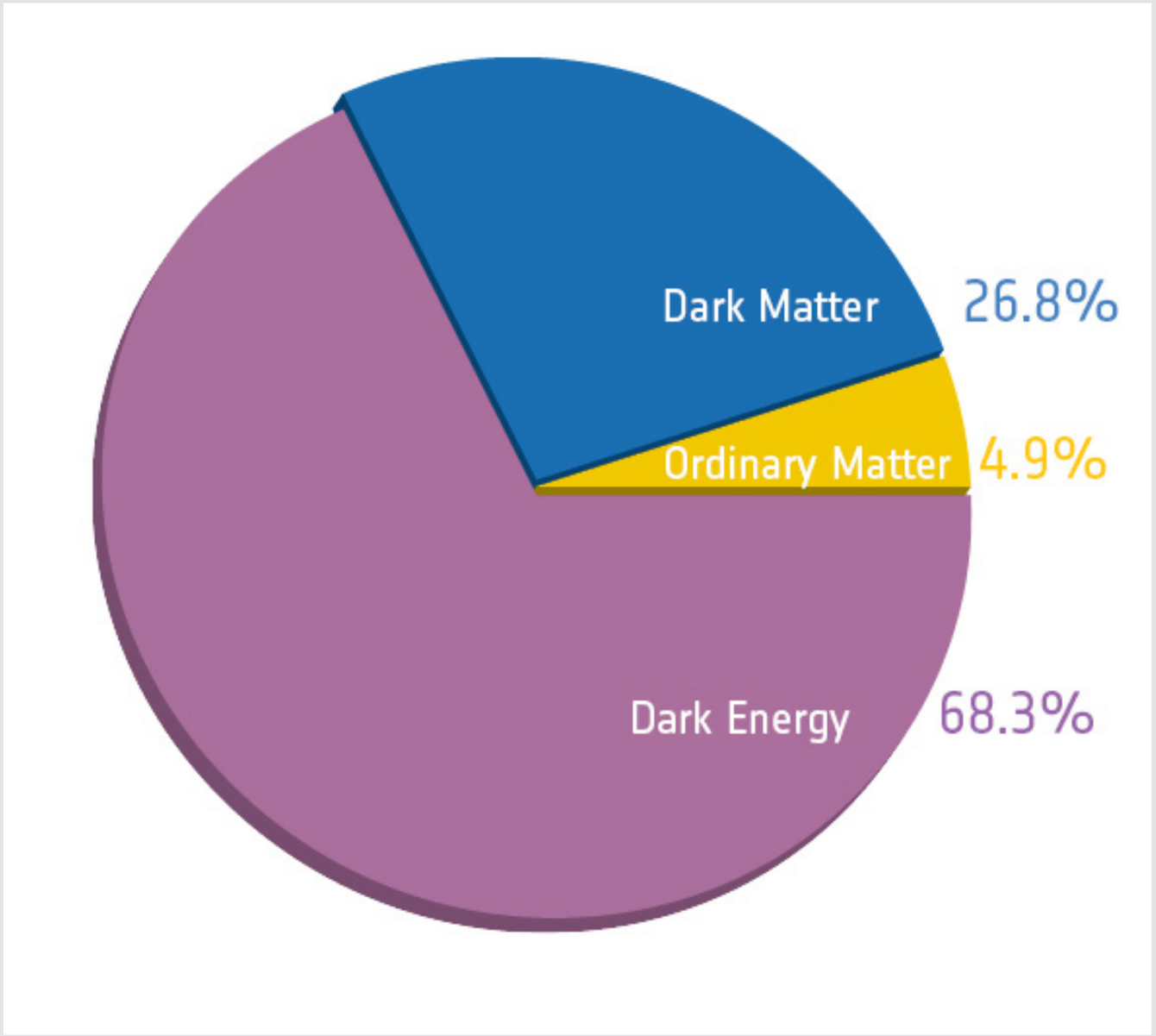
Astrology was the ancient world's sky science. It explained the stars and planets for their bronze age, up until the dawn of our modern era.

With the arrival of telescopes and the scientific method, metaphysical astrology was replaced by the physical science of astronomy.

Nevertheless, today's astrophysics is in danger of becoming tomorrow's metaphysics, because:

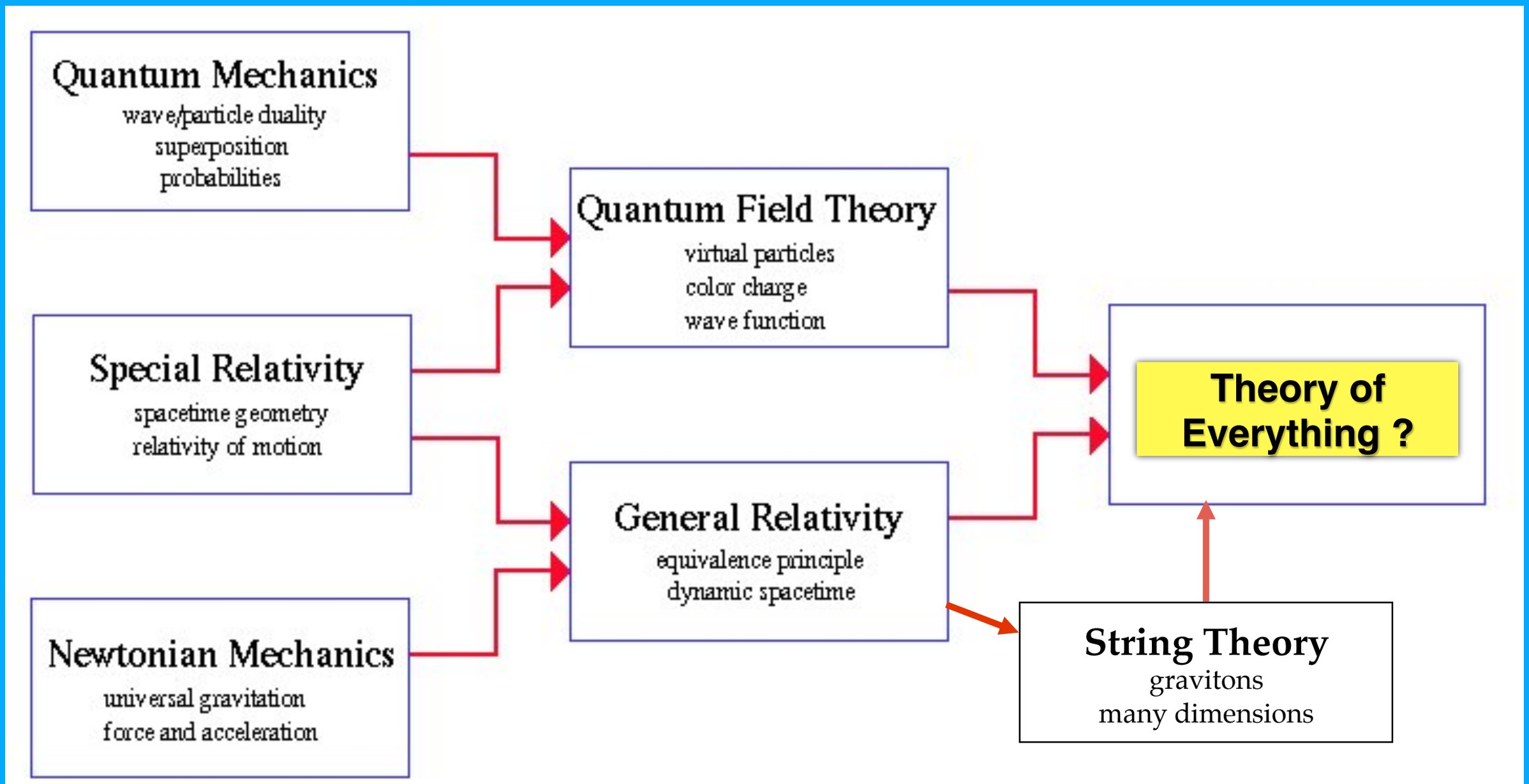
- ★ **We use only 3 of the 4 "fundamental" forces.**
- ★ **Whereas the fourth unifies and explains it all.**

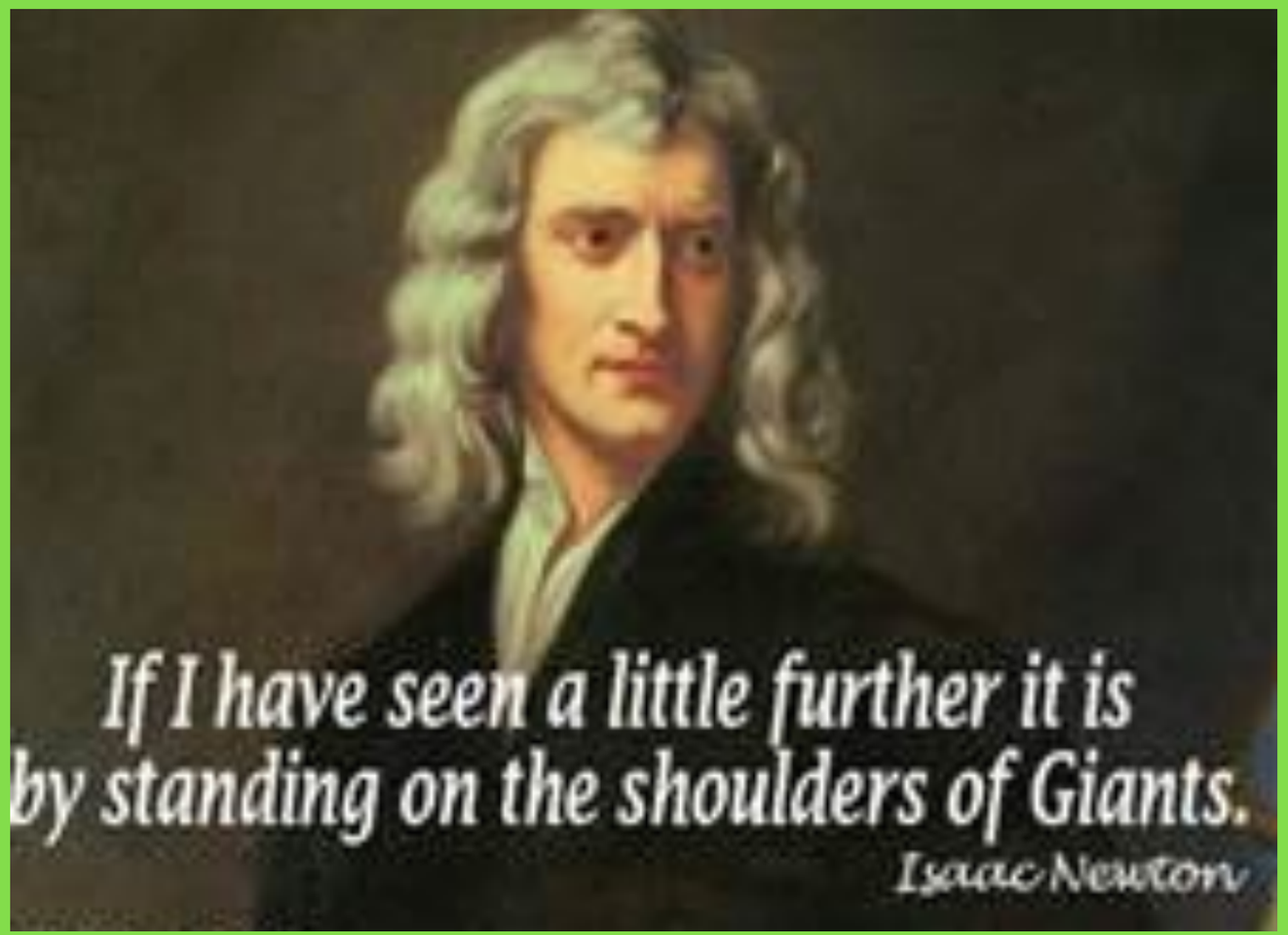
In our 21st century we can detect less than 5% of what makes up our universe. Why do we feel justified in building all of our astronomy and astrophysics on this small percentage alone?

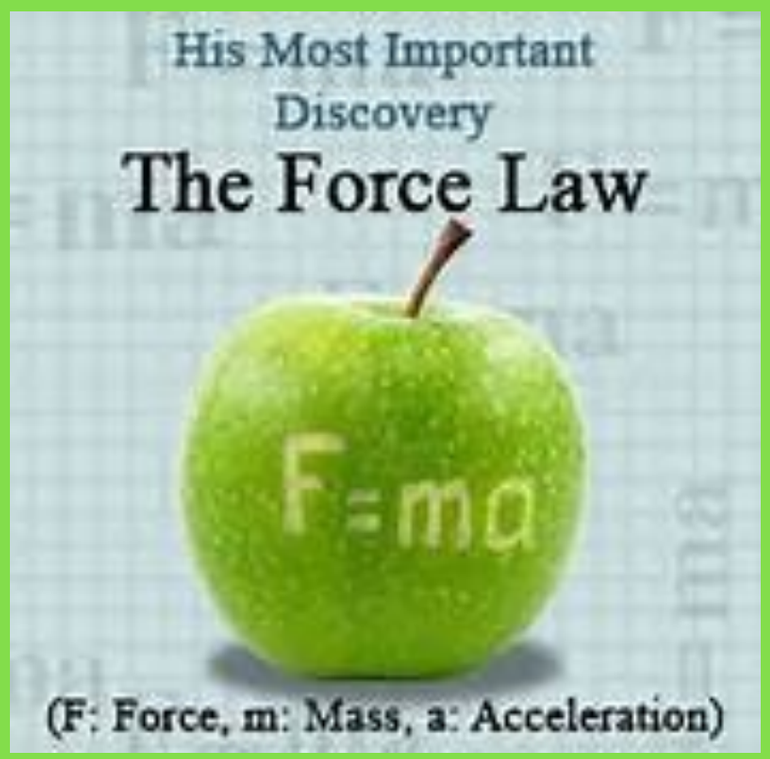


2013 CMB data from Planck Observatory

Not Unification:
Fundamental Incompatibilities




If I have seen a little further it is
by standing on the shoulders of Giants.
Isaac Newton


His Most Important
Discovery
The Force Law
F=ma
(F: Force, m: Mass, a: Acceleration)

Newton's Three Laws of Motion

FIRST law: When viewed in an inertial reference frame, an object either remains at rest or continues to move at a constant velocity, unless acted upon by an external force.

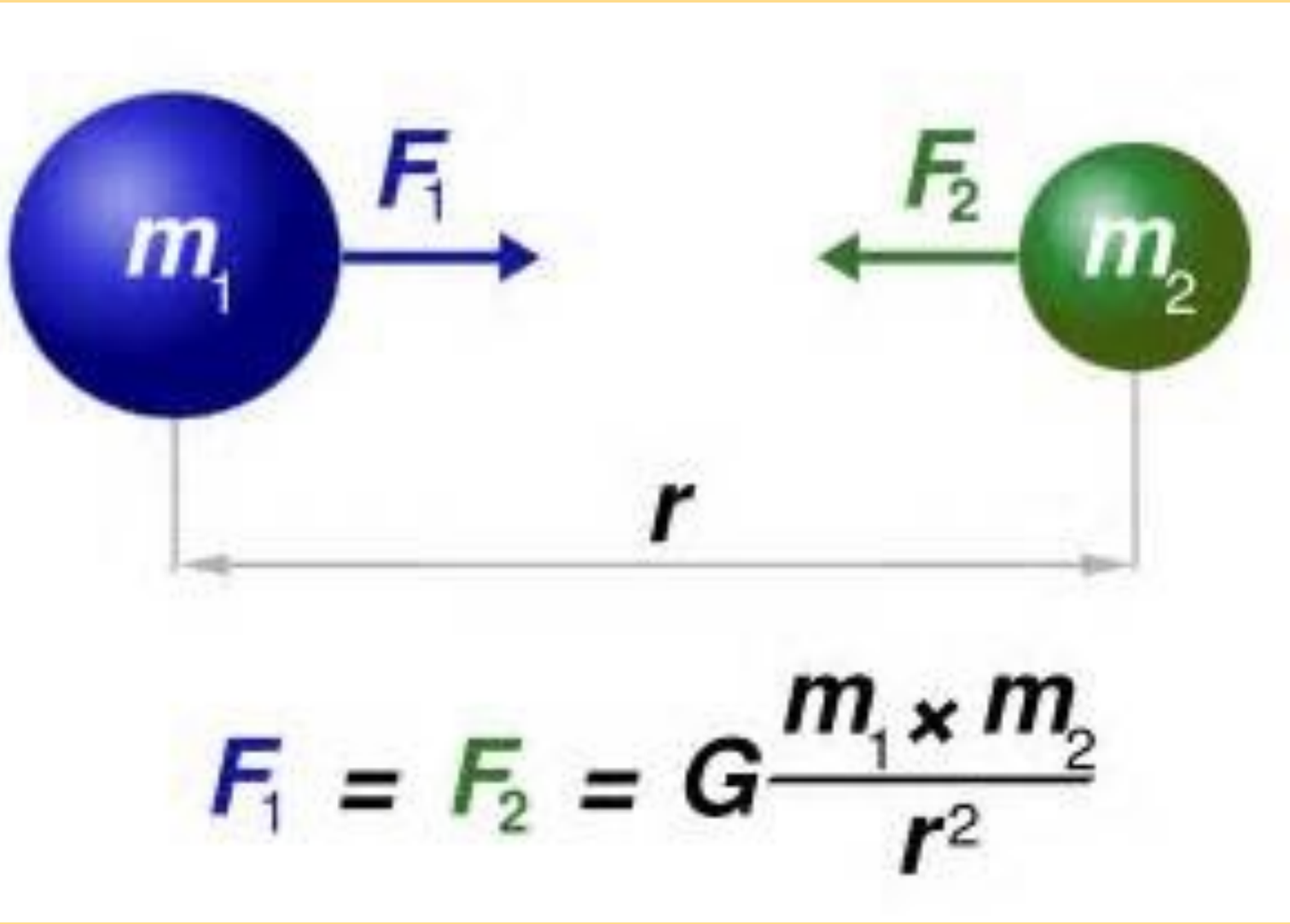
This law describes the inter-universal motion of gravitons.

SECOND law: F = *m*a. The vector sum of the forces F on an object is equal to the mass "*m*" of that object multiplied by the acceleration vector "*a*" of the object.

This law accurately describes the net effect of mass blocking and deflecting. The net gravity on an object is what results from differential acceleration vectors.

THIRD law: When one body exerts a force on a second body, the second body simultaneously exerts a force equal in magnitude and opposite in direction on the first body.

This law has puzzled many people. How can we push down on the Earth, and the Earth push back up at us equally? Graviton gravity shows how this happens, as the change in flow of gravitons in one direction equals the change in flow from the opposite direction. Only a tiny portion of the larger body's blocking power affects a small body such as us, but all of our body affects the direct line to the larger body.



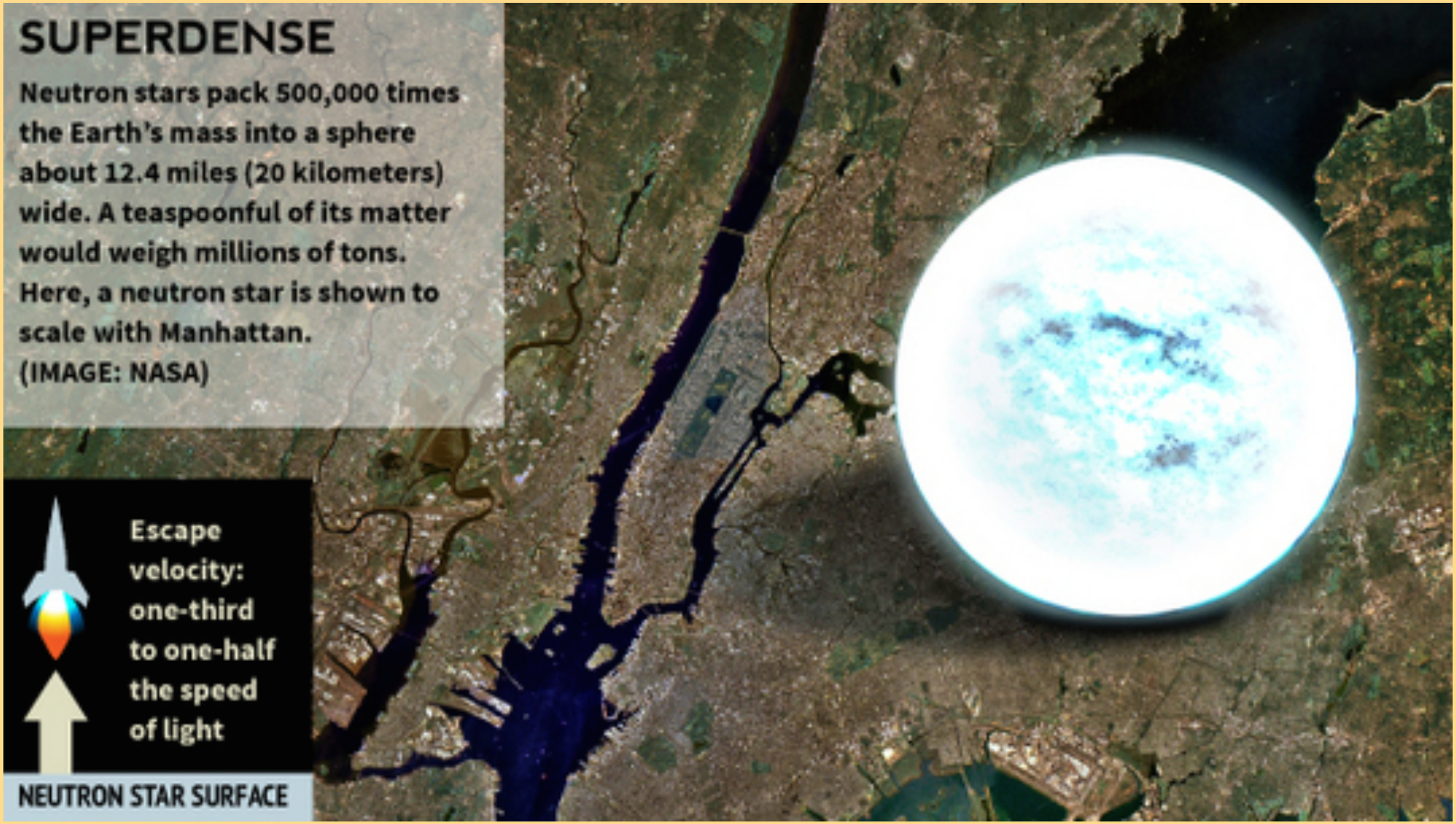
Ignore for now the very weak "G." Note how much the force "F" increases as the distance "r" between the two centers of mass shrinks. At *very* small scales the "attractive force" is awesome, even if the masses are *very* small.

If you weigh 150 pounds on Earth, what would your mass weigh on the surface of each object below?

Our Moon	25 #
Mars	56 #
Jupiter	355 #
Saturn	160 #
Uranus	133 #
Pluto	10 #
The Sun	4,061 #
A White Dwarf	195,000,000 #
A Neutron Star	21,000,000,000,000 #

SUPERDENSE

Neutron stars pack 500,000 times the Earth's mass into a sphere about 12.4 miles (20 kilometers) wide. A teaspoonful of its matter would weigh millions of tons. Here, a neutron star is shown to scale with Manhattan. (IMAGE: NASA)



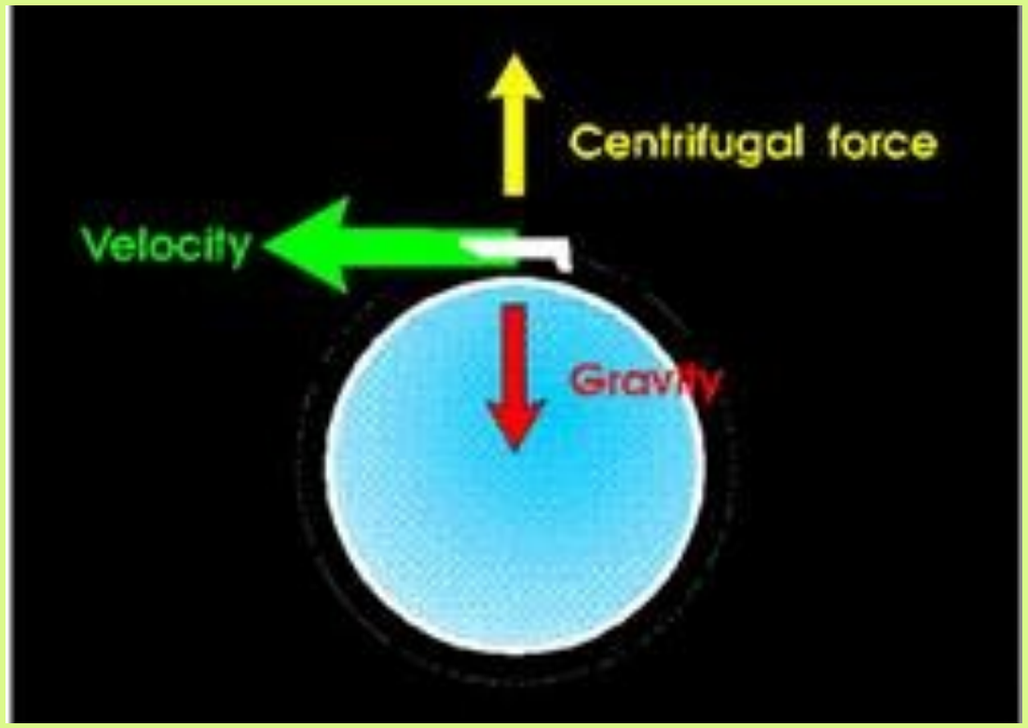
Newton's Theory had Company…

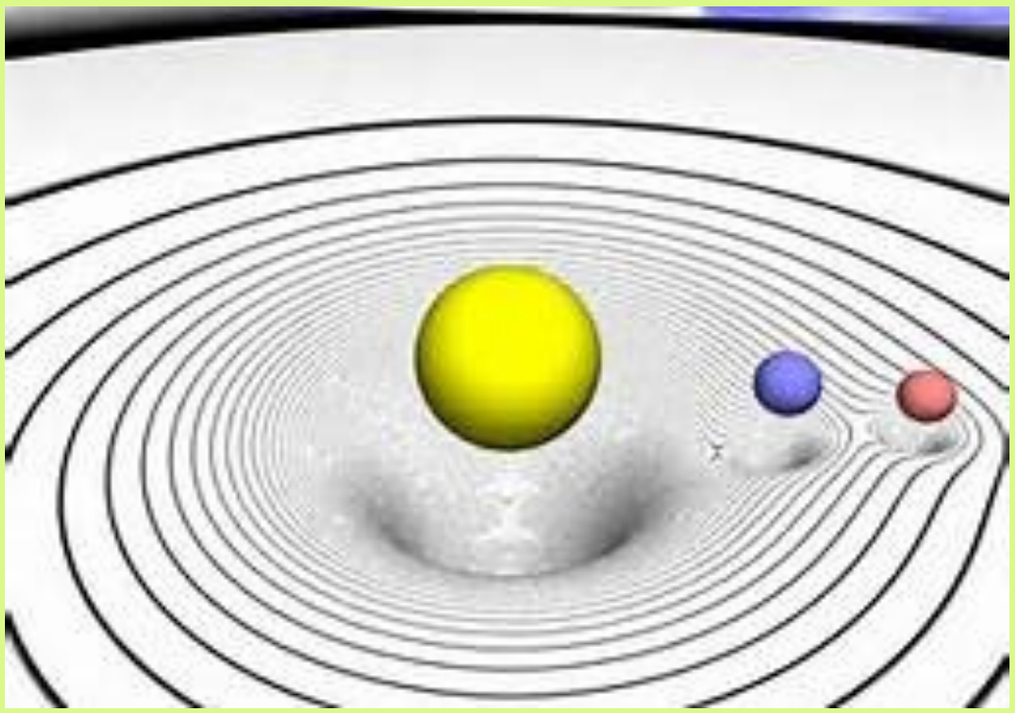
Isaac Newton was the super genius of his day. There was another idea of gravity involving particles, advanced in 1690 by his junior contemporary, Nicolas Fatio.

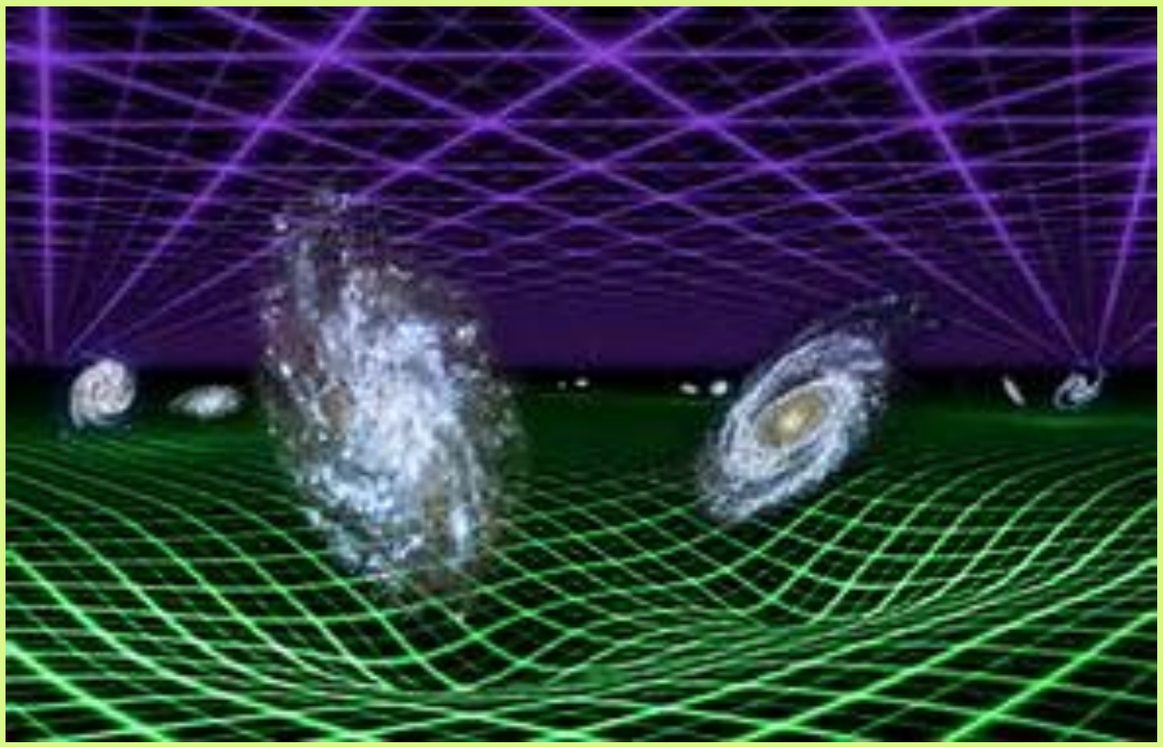
In 1748, Georges Le Sage, improved on Fatio's idea by coming up with nearly the same theory that I thought I had discovered this year. Le Sage's idea has been called *push gravity* or *shadow gravity*. His idea of gravity as a force of relative propulsion from "ultra-mundane corpuscles," not attraction, had a mixed history. By the early 20th century it was essentially discarded by serious gravity theorists.

Nevertheless, updating Le Sage's theory allows it to remain vital as part of a graviton universe, especially since General Relativity Gravity has its own problems.

Newtonian Gravity
vs.
Einstein General Relativity Gravity







Einstein's General Relativity…

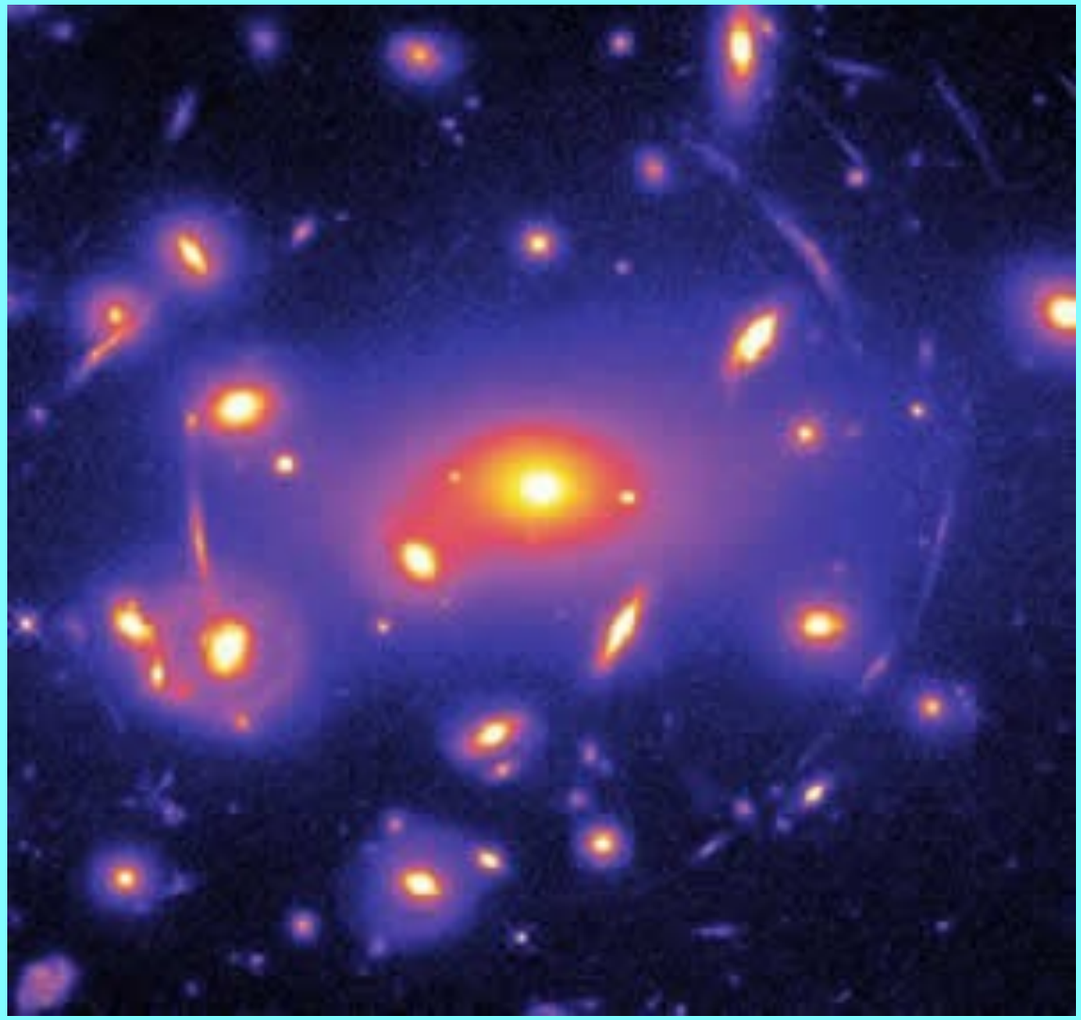
was able to convert his complicated idea of what gravity really *is* for orbiting, spinning bodies into a measure of what gravity *does*.

He did this by describing observed gravitational phenomena – such as Mercury's orbital precession – more accurately than Newton's math. Einstein's Mercury calculus came 56 years after the problem was identified and increasingly accurately calculated.

Here is supposedly an example of the curvature of spacetime. The geodetic effect is said to be generated by a spinning mass in orbit, creating a gravitomagnetic frame-dragging effect on spacetime. Alternatively, it could be explained much more simply as a spin effect associated with normal graviton flows.

The results with both paradigms should be the same with equivalent math. The underlying paradigms however would be quite different.

Galaxy Cluster Gravitational Lens



The partial "Einstein rings" in this galaxy cluster appear to be following the spacetime geodetic created by these baryonic structures. Not seen is the cluster's Dark Matter halo, which has as much as ten times the observed gravity mass. The great halo, not curved space, creates these visual streaks that follow the Graviton Gravity manifold.

We live in a much larger, four-dimensional world than did Newton in the 17th century:

(1) His gravity formula did not have any distance limits.
(2) He was working within one reference frame of modest size.
(3) His mathematical force of gravity worked instantly.
(4) He did not account for time, the fourth dimension, in his three-dimensional box.

Einstein got it right. The fourth dimension of time is critical, and we don't need more. Gravity can operate up to the speed of light, but not faster, within each frame of reference.

Graviton gravity is what Einstein described, even though he thought he was talking about Lorentzian manifolds. He was instead describing "graviton low pressure manifolds."

Graviton manifolds being relative to fast moving objects, such as satellites in Earth orbit – account for key differences between Newtonian and Einsteinian gravity.

Here we have a gravity theory mess…

(1) ***Isaac Newton*** **had in 1687 the brilliance to describe how gravity works within one inertial frame, even though he did not understand the actual force behind gravity. Early on, he toyed with the idea of ethers, but then rejected them for alchemical forces.**

(2) ***Nicolas Fatio*****, a junior contemporary of Newton, and a close personal friend, in 1690 came up with the idea of mechanical particles hitting other particles to produce gravity. Newton did not agree, because Fatio did not find the key.**

(3) **In 1748 *Georges Le Sage* advanced the key idea for shadow gravity; but critical flaws in his original model have led to its rejection. The Le Sage directional push theory does partially answer what gravity really is; but his original model has fatal flaws – and needs gravitons, without continuous structures.**

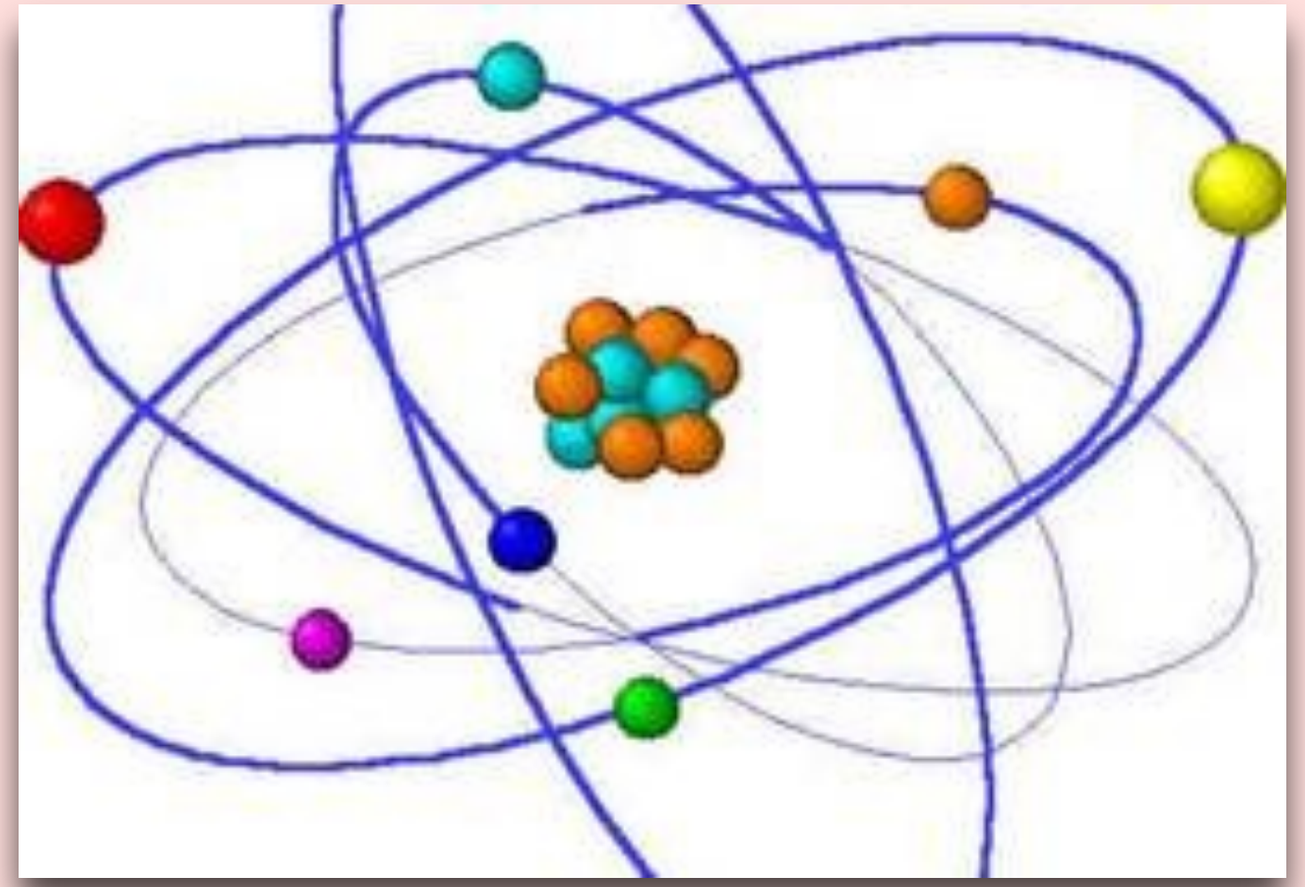
(4) **Einstein made in 1915 major advances on Newton, using the fourth dimension of time to create spacetime. However, as brilliant as General Relativity has been, this century-old model has major flaws that call for a better theory.**

His most serious expression of doubt came in a 1954 letter, the year before he died, to his friend Michel Besso*:

> **"I consider it quite possible that physics cannot be based on the field concept, i.e. on continuous structures. In that case, nothing remains of my entire castle in the air, gravitation theory included, and of the rest of modern physics." – Albert Einstein**

* Pais, A. 1982. *Subtle is the Lord: The Science and the Life of Albert Einstein*, Oxford University Press, Oxford, UK, p. 467.

This is NOT what atoms look like:



If you enlarged one atom to the size of a football stadium – its nucleus would be the size of a small marble.
Its nucleus occupies only one billionth of the atom's space.

An atom's diameter is about 10^{-10} meters.

The core of an atom is about 10^{-14} meters.

A proton or neutron is about 10^{-15} meters.

Quarks and electrons are smaller than 10^{-18} meters.

Gravitons are as small as 10^{-37} meters.

"A proton is composed of three valence quarks: two up quarks and one down quark. The rest masses of these quarks are thought to contribute only about 1% of the proton's mass. The remainder of the proton mass is due to the kinetic energy of the quarks and to the energy of the gluon fields that bind the quarks together." — "Proton," *Wikipedia.*

IF WE CONSIDER QUARKS TO BE THE "ATOMIC BUILDING BLOCKS" – THEN WHAT ARE THOSE MANY TRILLIONS OF GRAVITON ENERGY-MASSES DOING INSIDE EACH PROTON?

It is estimated there are about 10^{80} hydrogen atoms in the visible universe.

That would be about $3x10^{80}$ quarks.

If there are about 10^{20} gravitons PER QUARK, then there may be 10^{100} gravitons inside our VISIBLE universe.

If our visible matter is about 4.9% of the whole, then there are about $20x10^{100}$ gravitons inside the visible universe (including dark matter and dark energy).

In a large multiverse the total would be *much* larger, providing abundant "ultra-mundane corpuscles."

Neutrinos at 10^{-24} meters are about 1,500 times smaller than electrons.

About 65 billion neutrinos (most of which originate from the Sun) pass through every square centimeter of our bodies every second.

10 trillion bound gravitons compose EACH neutrino.

Imagine how many more free gravitons (coming from all directions) pass through our entire bodies every second!!

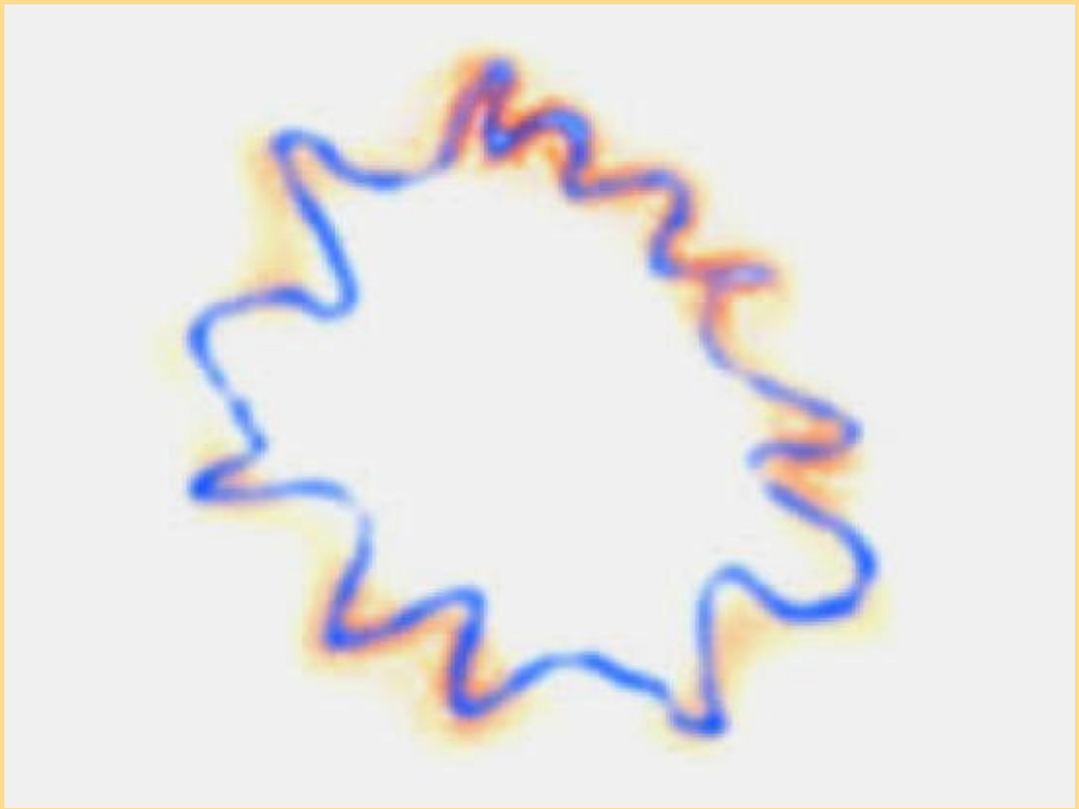
What do Gravitons Look Like?

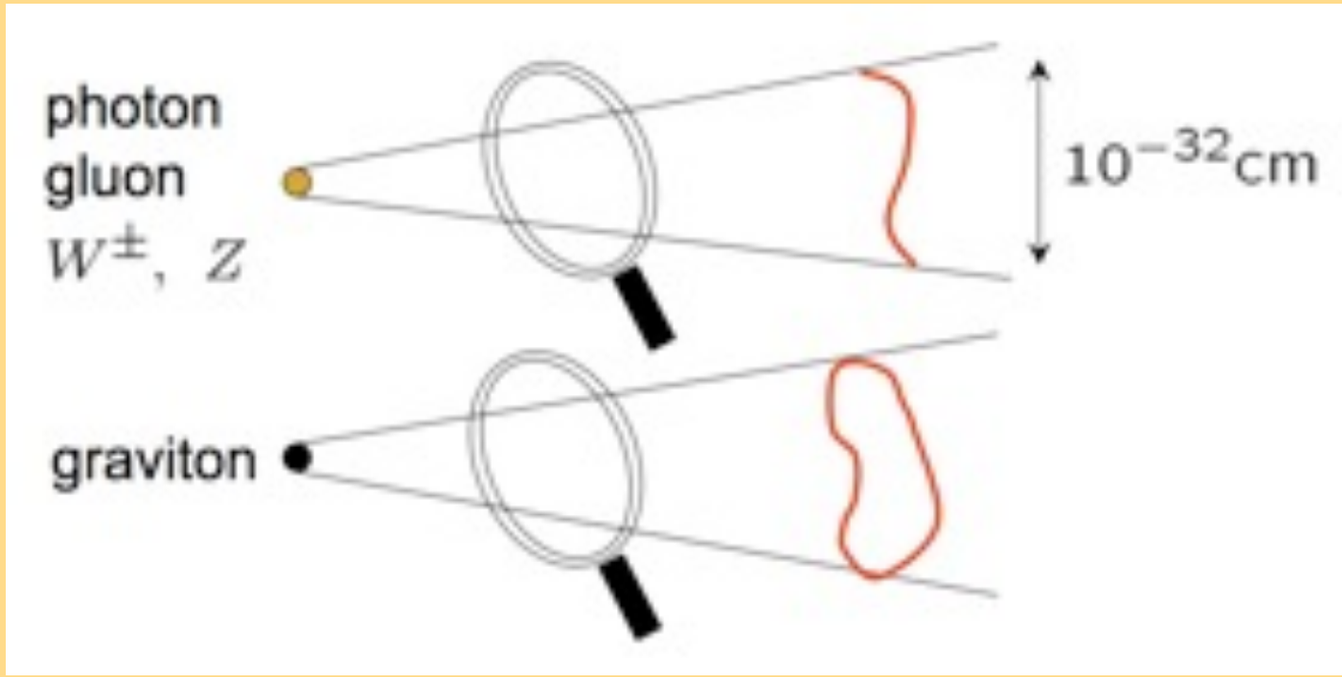
IF we could see an individual graviton, it might look like a 3D circular string – something small and very wiggly.

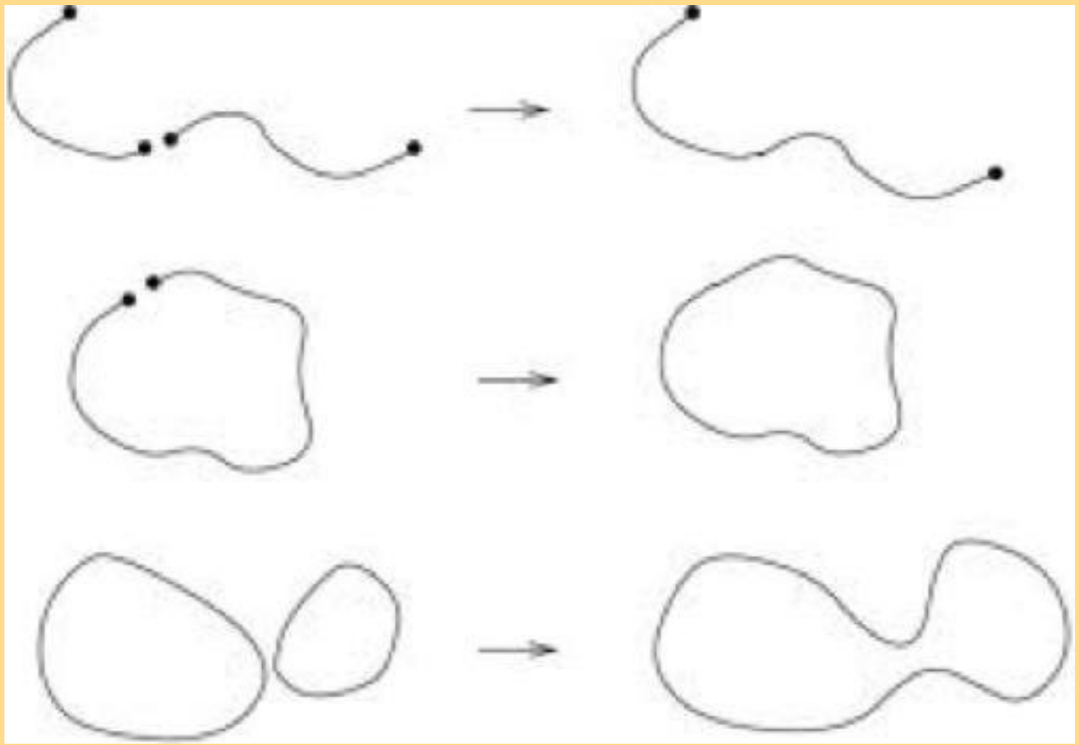
Free floating and associated gravitons, with energy and mass, are responsible for much of the actual universe as Dark Energy and Dark Matter.

Bound gravitons populate atomic and subatomic matter.

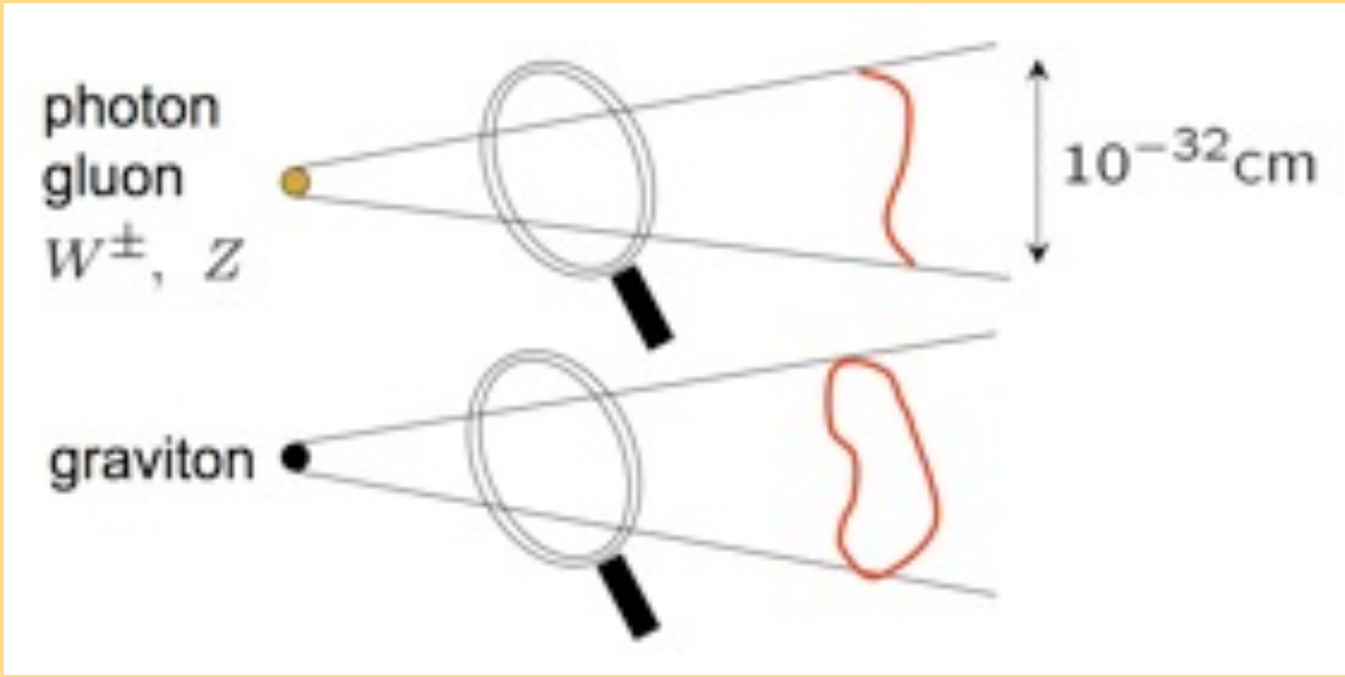
Cellular architecture, starting at the graviton level, is a good example of dialectical systems operating within, and building upon, each other.







String theory says the gauge particles photons, gluons, and W/Z bosons have vibrating open strings. Gravitons have vibrating closed strings.

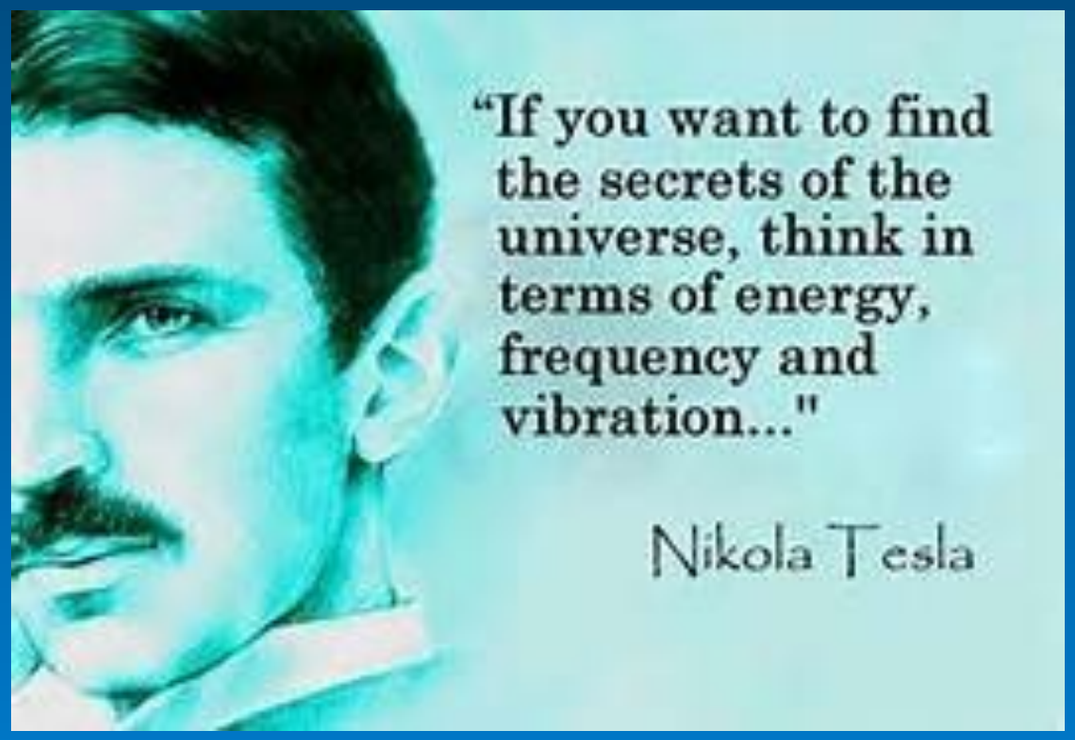


ENLARGE JUST ONE HYDROGEN ATOM TO THE SIZE OF OUR KNOWN UNIVERSE:

At that scale a string would be the size of a tree, and their component YY particles would be the size of marbles.

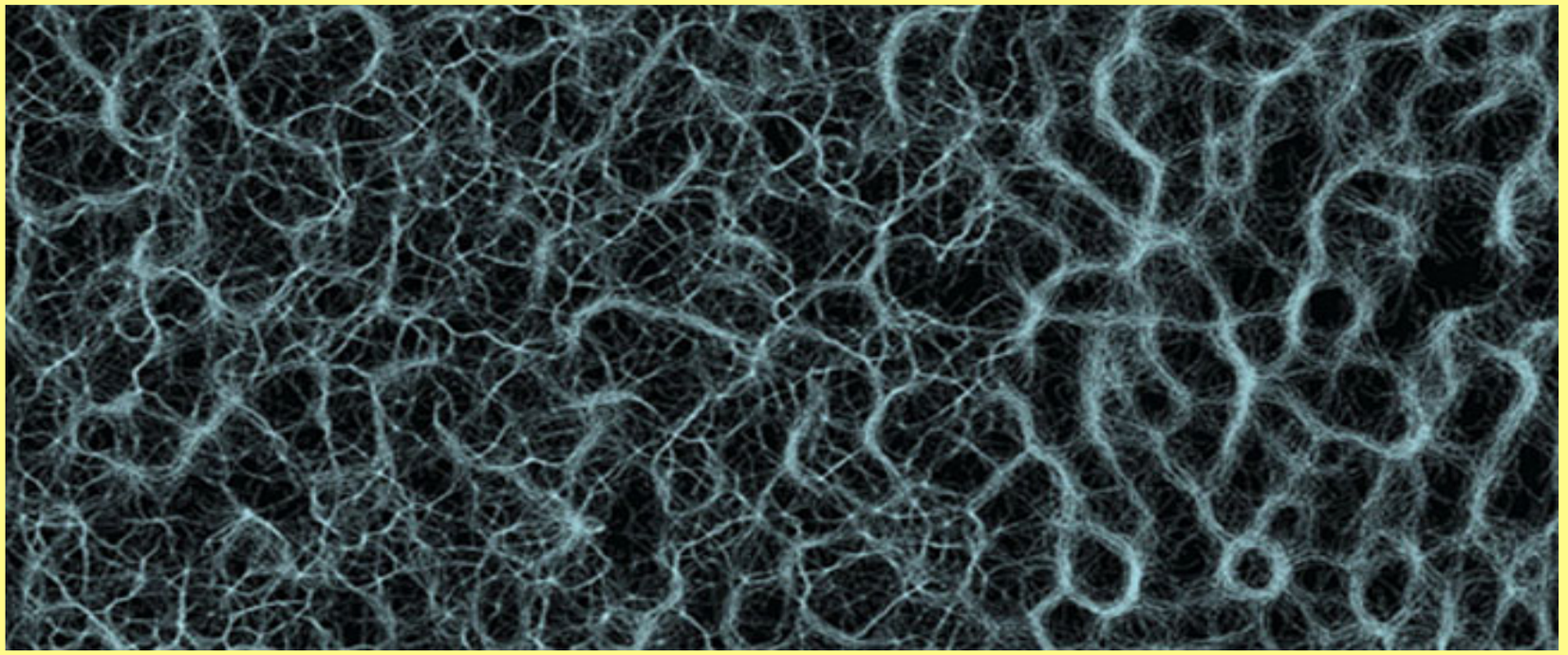
High Frequencies and Short Wavelengths Yield Great Energy

	Frequency	Wavelength	Energy
Plank	1.0	$3.0*10^{8}$	$4.14*10^{-15}$
	3.0	10^{8}	$1.24*10^{-14}$
Visible	$3.0*10^{14}$	10^{-6}	1.24
	$3.0*10^{25}$	10^{-17}	$1.24*10^{11}$
Plank	$1.9*10^{43}$	$1.6*10^{-35}$	$7.75*10^{28}$



Associated Swarm Intelligence

Where a change in interactive quantity yields a change in quality.



Gravitons Exist in Three States

Free

Free gravitons constitute most of the vast flows that make up gravity for individual objects, such as the Earth, and for entire universes (DARK ENERGY). Here, kinetic energy is large, and potential energy is small. Can be expressed as particle waves.

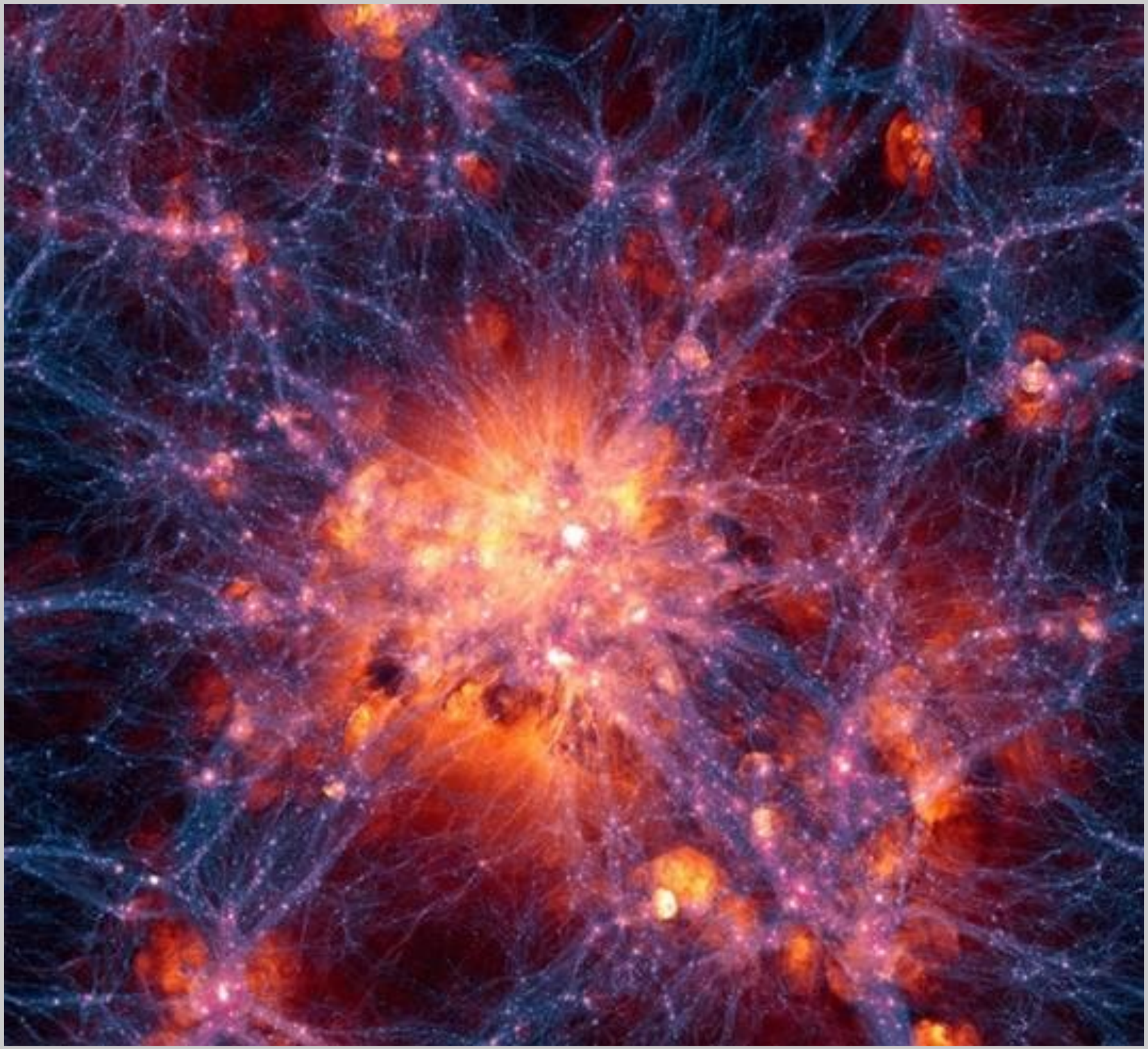
Associated

This is where gravitons may be loosely bound or associated with each other, as with DARK MATTER webs, or galactic halos. Energy types intermediate.

Bound

Gravitons dialectically constitute other particles, such as neutrinos and quarks. Potential energy is maximized as mass, but kinetic energy is large within nucleons. Can display swarm intelligence.

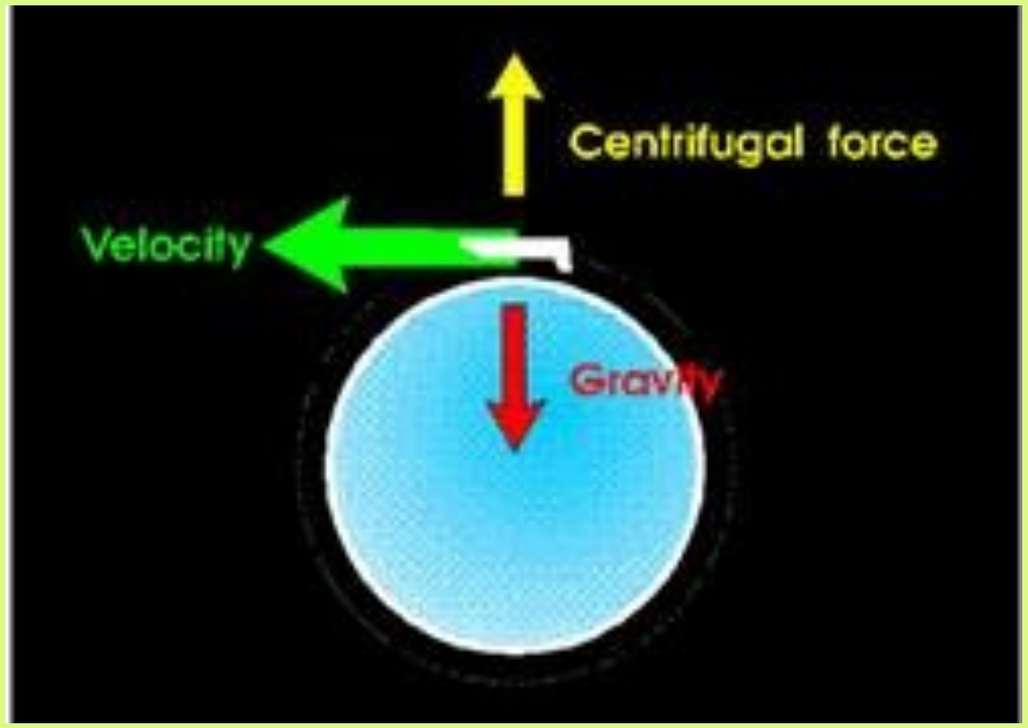
Dark Matter webs shaping baryonic matter

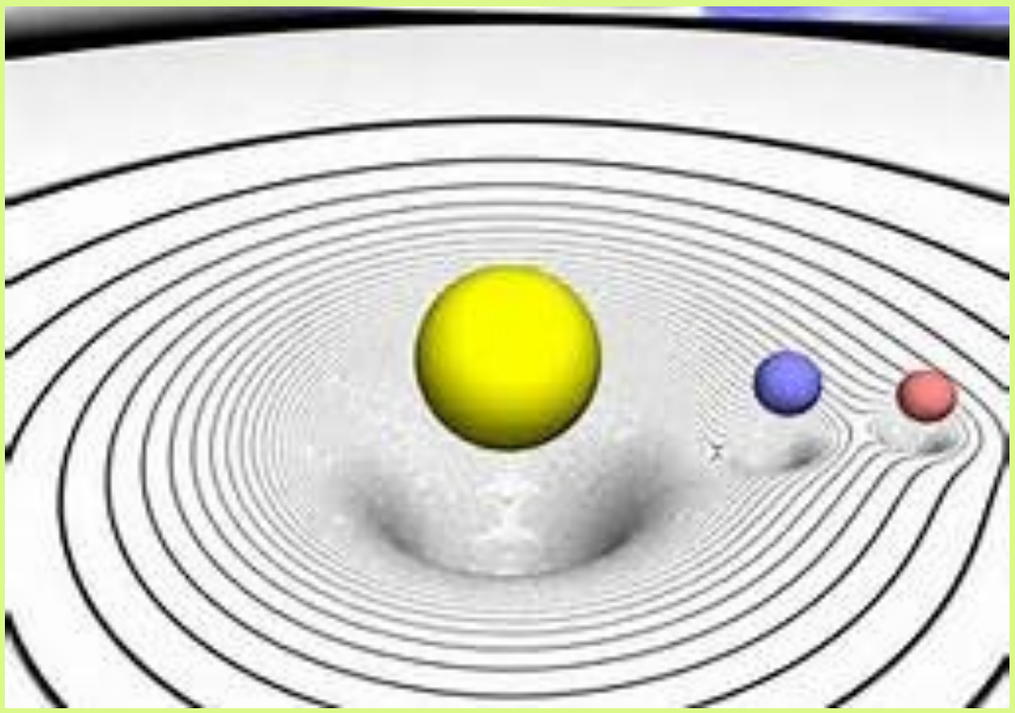


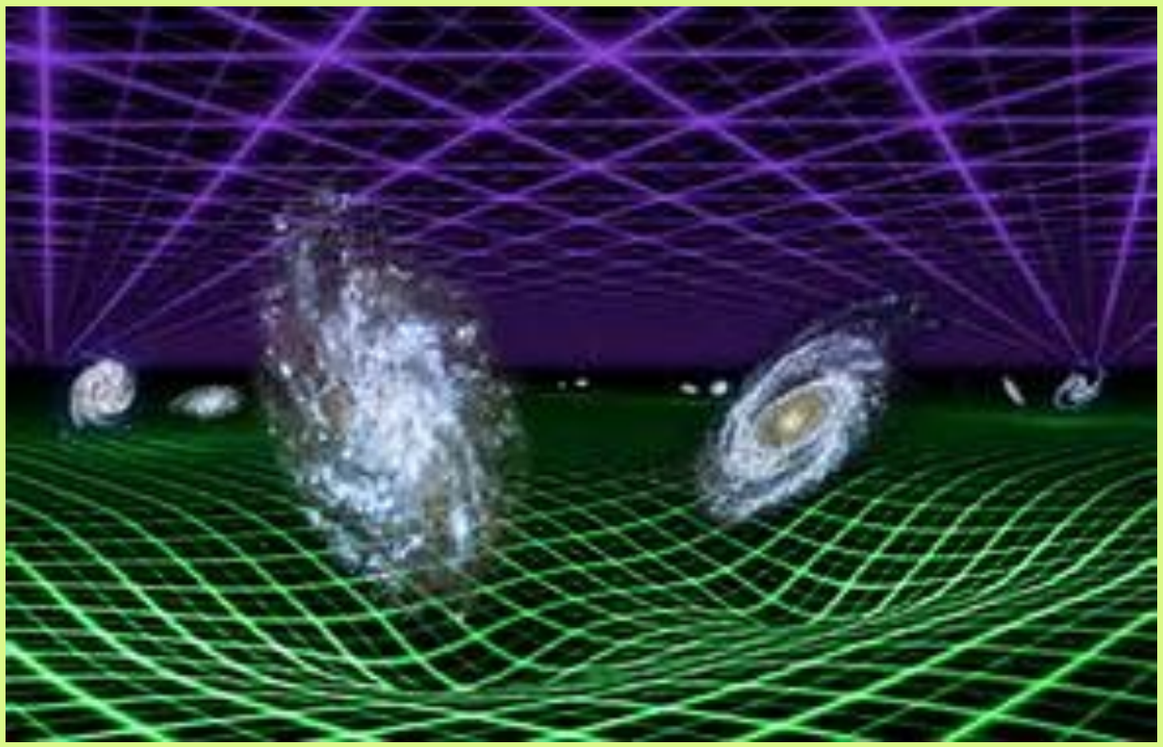
HOW Gravitons Produce Gravity

Tractor Beams Attract?

Newtonian Gravity
vs.
Einstein General Relativity Gravity







Ethers Reconsidered

ETHERS, also known as aethers, are a persistent idea in cosmology. The ancients and medievalists accepted the concept, sometimes called quintessence. After first toying with the idea, Newton replaced ethers with alchemical "force mathematics" in 3D space, while not specifying the force. Einstein's Special Relativity also does not depend on ethers. General Relativity is a different story.

Ethers give us the unseen where there is something, or maybe nothing. They are like the water ocean in which objects move, and waves oscillate. They are a way for gravity to reach out and attract, typically with a slope. Tractor beams lurk here.

Today's alternative LOOP QUANTUM GRAVITY theory envisions empty space filled not with ethers – but with granular, interconnected graviton loops – so that our universe is many springs that spiral outward from our beginnings, ready to retract for future big crunches, and future big bangs. Interesting, but full of its own problems.

General Relativity Ether

Einstein's aether is an integral part of GR spacetime. It constitutes the "sheet" that gets bent by nearby masses. It provides a continuous structure for force at some distance, and for gravity as an attractive force (within the indentations). There are pros and cons regarding his idea:

(1) Because GR math is congruent with graviton shadow gravity in the everyday zones, GR can claim to be modeling geodesic spacetime.

(2) The testable "proofs" of GR are carefully kept in a region between local Newtonian frames and truly great distances. Within this selected area graviton gravity can look like spacetime gravity, and the strange world of quantum dynamics is avoided.

(3) Theories can either be perfect and untestable math – or they can be experimental and testable. GR tries to be both, and almost gets away with it in #s 1 and 2 above.

(4) GR *fails* to explain super-cluster-train gravity w/n 1 billion l.y.

(5) Artistic renderings of GR show large masses somehow suspended above the spacetime ether. However, transform the art from one plane into all possible planes, and the moving masses are deeply imbedded in an ethereal sea, not floating over it. GR math cannot say there is no ether, when it is there in a minimal way with distortions in the spacetime metric.

Consider ONE Ball “Floating in Space”

If this ball were floating far from any obvious source of gravity, then it would appear that General Relativity gravity is not influencing it. If this ball were sufficiently removed from any spacetime indentations, then that would indeed be so.

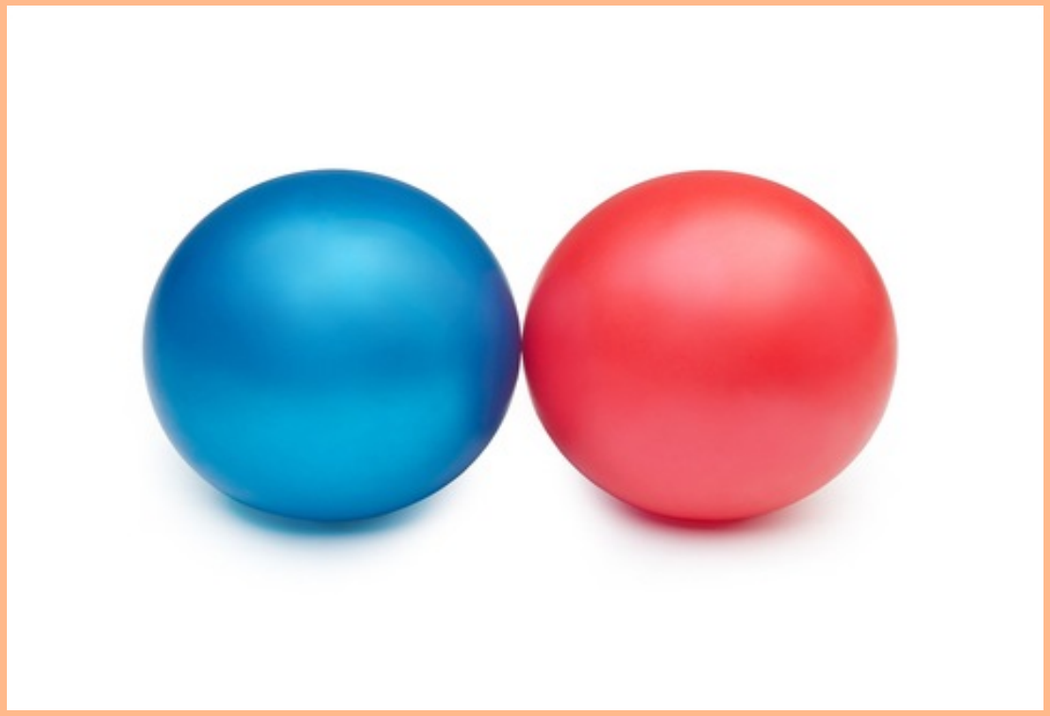
However, Graviton Gravity understands this ball (of any size) to have the same Multiverse flows as the ball anywhere else. Incoming free gravitons are equal in force from all dimensions, and there *appears* to be no NET force from any direction. We don’t need to complicate things with ethereal ethers and local indentations that don’t reach out very far.

VISUALIZE IN YOUR MIND THE FOLLOWING:

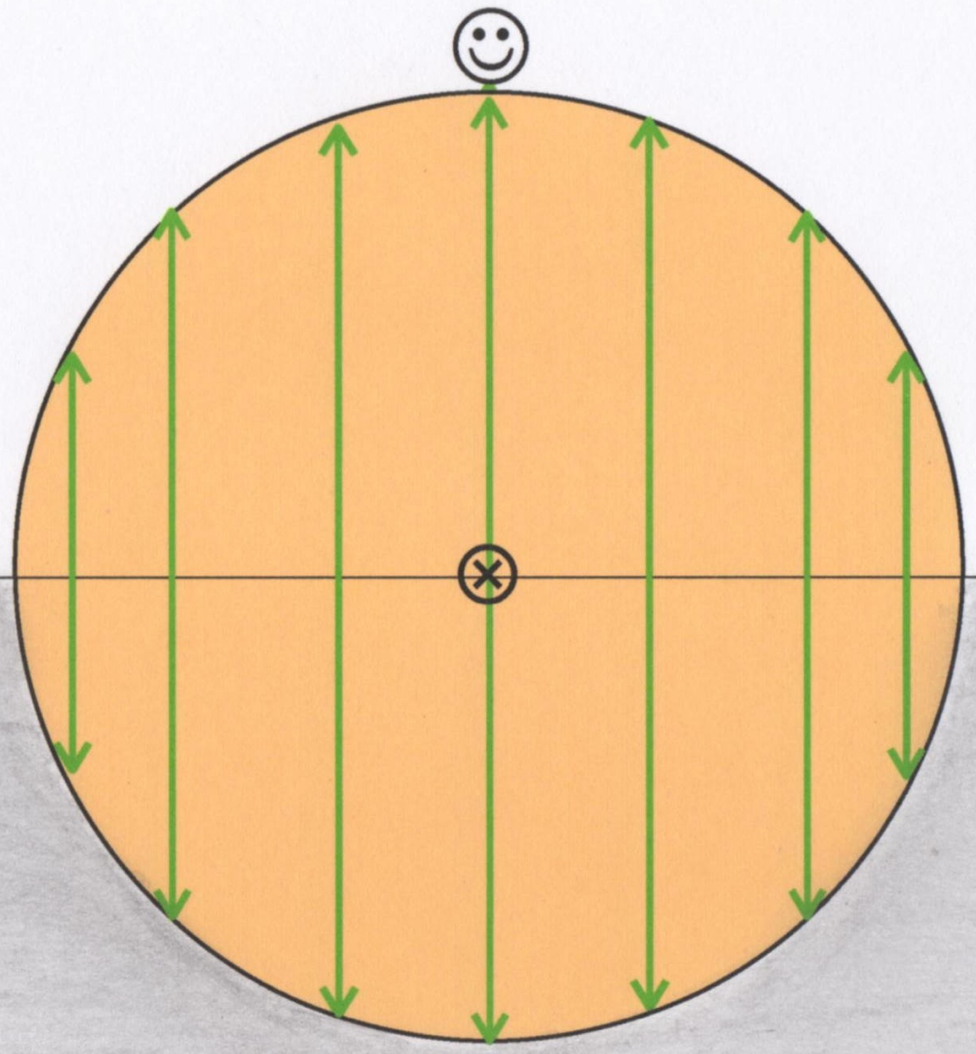
Two objects being bombarded <u>equally</u> from all directions by waves of straight-line gravitons. The mass of each object will absorb or deflect a few of those trillions and trillions of gravitons, <u>partially</u> shielding the other object.

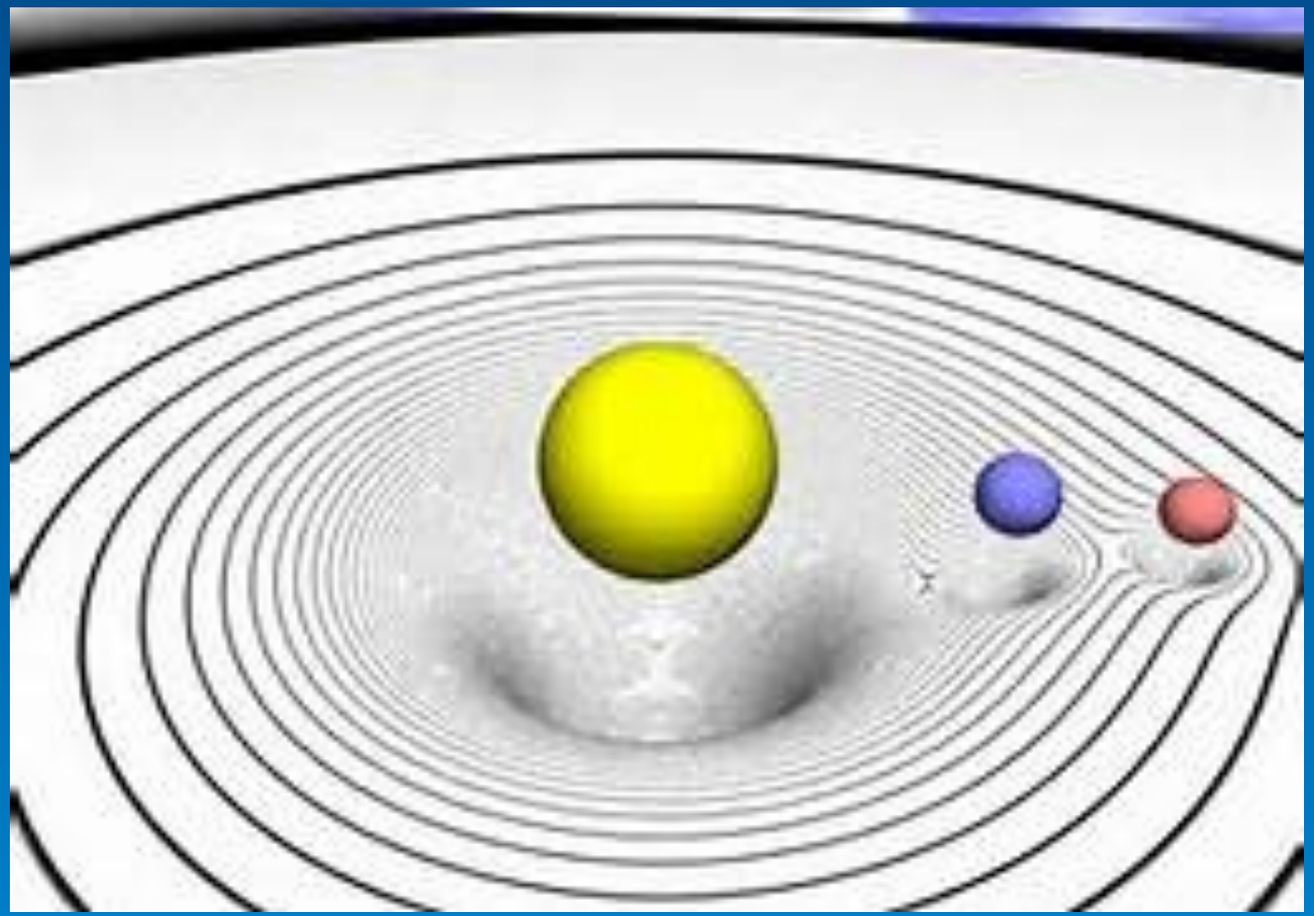
THERE WILL BE *LESS PRESSURE PUSHING ONE OBJECT PRECISELY AWAY FROM THE DIRECTION OF THE OTHER OBJECT.*

IT WILL <u>APPEAR AS IF</u> WE ARE BEING ATTRACTED TO THE SHIELDING OBJECT.



Graviton Gravity "Blocking Curves" Are Congruent With General Relativity "Spacetime Indentations"





Where General Relativity Gravity Fails

Every *universal* theory of gravity must at least *claim* to work in all dimensions:

Dimension	GR G	G G
Planck	No	YES
Everyday world	?	YES
Up to galaxy clusters	?	YES
Up to 1 billion light years*	No	YES
Up to multiverse	No	YES

http://astronomy-links.net/GGvsGR.html

Le Sage vs. Einstein

By the early 20th century, Georges Le Sage's 18th century "push gravity" was pushed aside by the calculus of Relativity.

However, that victory was an illusion. Einstein spent the last decades of his life futilely trying to apply his continuous field gravity in all dimensions, including the quantum.

Le Sage saw streams of tiny unseen particles (*ultra-mundane corpuscles*) impacting mostly empty objects from all directions, the net effect producing shadow, or push gravity. His idea was good, except for his hyperluminal conception of these corpuscles, and the disastrous thermodynamic consequences thereby.

Interestingly, his 18th century idea of "ultra-mundane" required an omnipresent source for these particles from without the Earth. Today we call that vast particle flux source the Multiverse.

Photons and Gravitons

Newton's First Law of Motion indicates that objects in motion will stay that way until altered by another force. There is no limit to the distance such objects can travel.

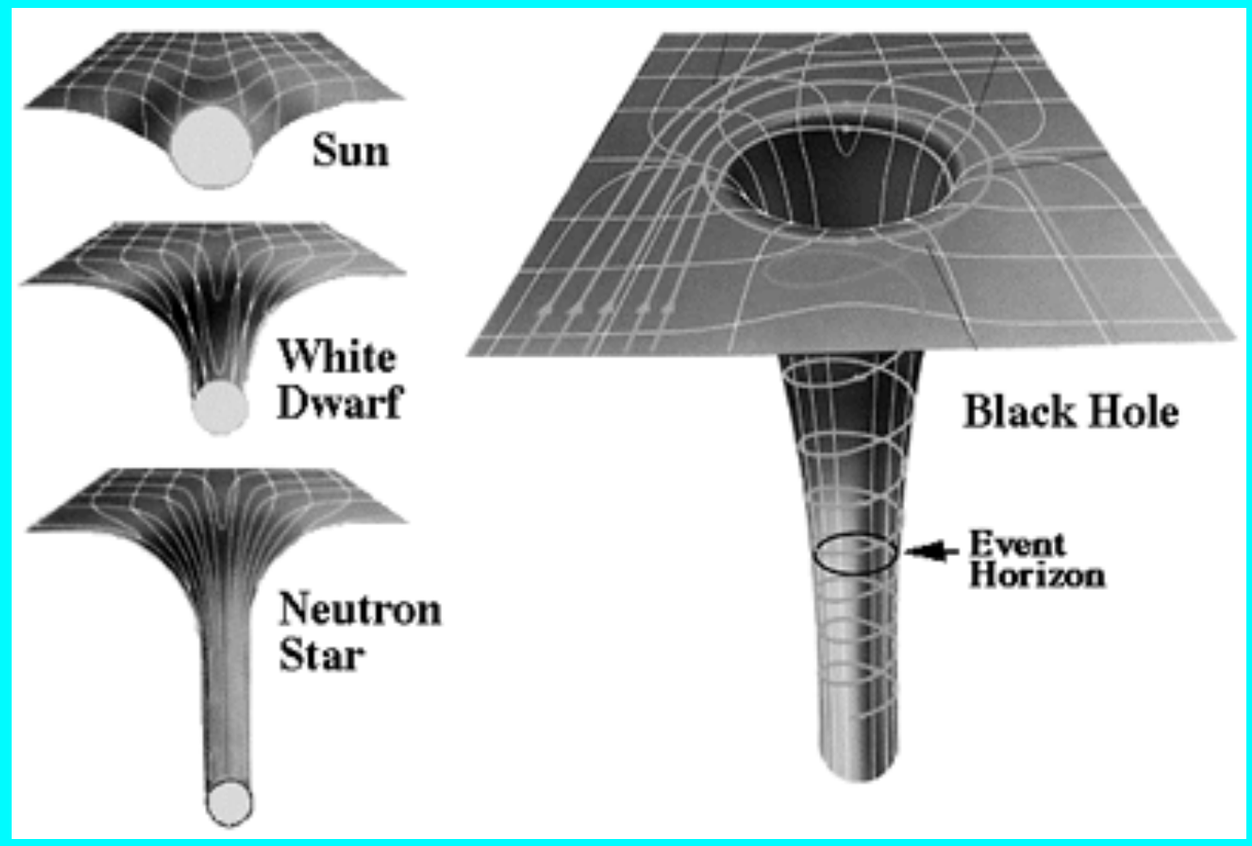
For Le Sage in the 18th century, what we call today gravitons were elementary corpuscles like very tiny billiard balls. Their rectilinear motion followed the First Law.

For Einstein's General Relativity, photons were understood not as gravitons. His photons followed both the First Law of Motion and spacetime undulations. Neither photons nor any other "corpuscle" entered into his idea of gravity. Photons just flowed along curving spacetime as formed by massive bodies. Later, with string theory, gravitons and their inter-dimensional tractor beams sneaked into the picture.

The stage was set for push gravity's resurrection.

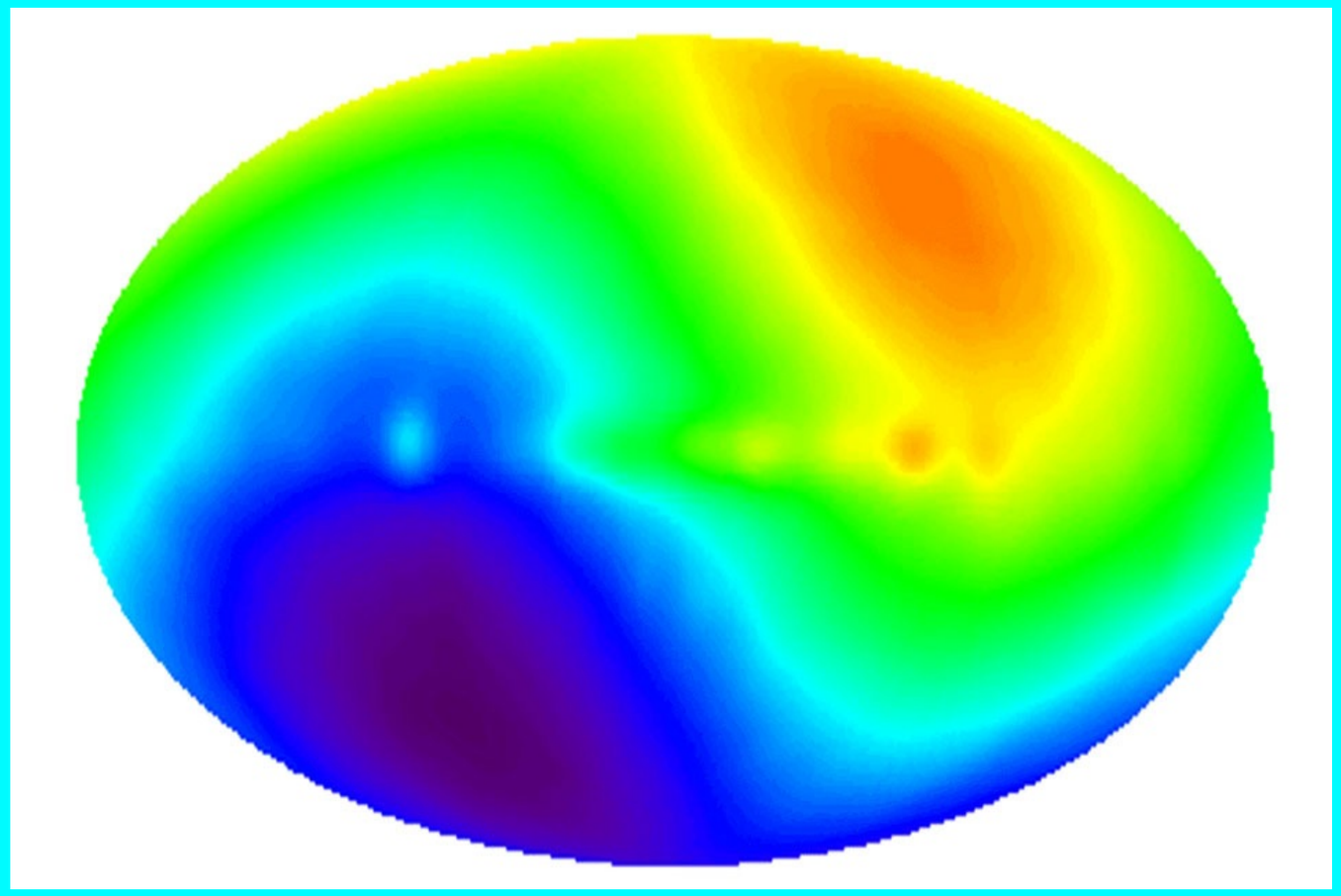
General Relativity's Achilles Heel

General Relativity calculus <u>apparently</u> works well in the everyday dimensions, and up to the level of *separate* galaxy groups. However, this tidy paradigm has an Achilles heel:



Masses that supposedly indent the spacetime manifold do that very locally. The spacetime sheet quickly levels out, taking away the sloping vortex into which photons enter and then emerge. This is a FATAL problem for General Relativity gravity.

A Cosmic Puzzle Explained, but Not by General Relativity

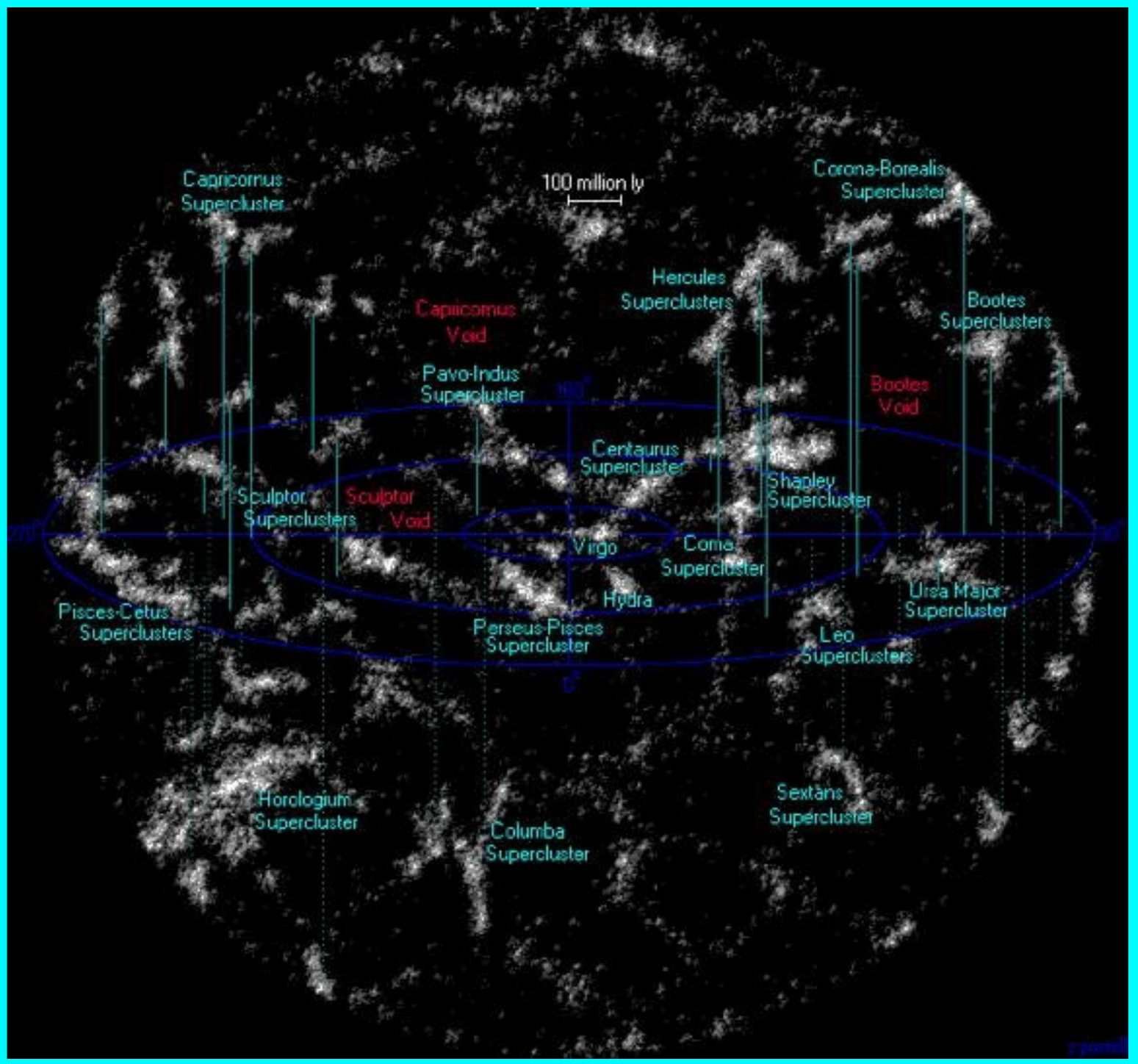


Astronomy Picture of the Day, 06/15/2014

(1) Why are we moving toward parts of the Cosmic Microwave Background at some 600 kilometers/sec., and away from the opposite direction equally fast?

(2) In a Big Bang expanding universe shouldn't all directions be moving equally fast outward?

(1) Within the nearest one billion light years (7% of our visible universe's volume) there are several superclusters.
(2) We are drawn to the region of the Norma supercluster, and to the nearby Virgo-Centaurus-Shapley supercluster chain.
(3) In comparison, we are less attracted to the Leo supercluster.



Laniakea Supercluster

In early September 2014 the results of a 40-year survey of thousands of galaxies within 500 million light years was released. Galaxies moving toward us, and those moving away were plotted. Overall universal expansion was accounted for.

We belong to the newly named Laniakea Supercluster, and there is a net gravitational flow toward the mass center in the area of Norma and Centaurus, with the Shapley Supercluster in line beyond. This data refines and confirms the earlier COBE and DSS data used for this superclusters shadow gravity thesis.

Our apparent linear "attraction" from a great distance is easily explained by the concept of shadow/push gravity, within Newton's First Law.

It IS NOT explained by so-called Dark Energy, as that effect operates equally in all directions.

NOR can random General Relativity local mass indentations, with vast level areas in spacetime between these dips, explain this phenomenon.

The Milky Way and our Virgo supercluster are being pushed by the Multiverse toward the CMB in the direction of Harlow Shapley's supercluster, thanks to the shielding effect of at least ten times more Dark Matter in that direction than the visible baryonic matter we can detect.

“Dark Energy” and the Multiverse:
Blocking-Curve “Low Pressures”

Any theory that claims to be a “general” theory must work equally at all dimensions. You cannot pick and choose where your theory works.

Here we see just six of a potentially vast number of universes, some or all of which have physical laws like ours. THE CLOSER OUR MASS UNITS GET TO THE EDGE OF OUR BUBBLE, THE CLOSER THEY APPROACH (AND ACCELERATE) TOWARD THE ADJACENT UNIVERSE’S GRAVITON-SHADOWING MASS. **This is a two-way shadowing across universal bubble boundaries. Here we see a clear, logical, and simple explanation for our universe’s** DARK ENERGY.

It's Time to Rescue the "Good Parts" of Le Sage's Theory

What we know of astrophysics in the 21st century is way more than what Georges Le Sage knew in the 18th.

He could not have known of gravitons and quantum mechanics. He saw the "ultra-mundane corpuscles" as coming in vast numbers from beyond the Earth. He had the right idea about shadow gravity.

Even with all the original weaknesses of Le Sage, his shadow paradigm can be fixed by substituting gravitons traveling at different speeds for his hyperluminal solid corpuscles. General Relativity's paradigm, in contrast, is fatally flawed at the core, despite its beautiful math.

Criticisms of Le Sage Gravity

Because Le Sage talked about gravity itself, rather than dancing around it, cosmologists considered his ideas for almost 150 years.

The lethal problem with his original idea of gravity is that the forces involved would translate so much energy/heat to the Earth, that we would burn up within one second. That was Henri Poincare's observation.

There were some other strange elements that arose to support Le Sage's ideas, not the least of which was the idea of these corpuscles traveling at many times the speed of light.

Replacing Corpuscles with Gravitons

Gravitons are not tiny billiard balls. They are flexible, vibrating, 3-D forms at the edge of both energy and matter – displaying changes in frequency as changes in energy, and obeying the equivalence principle.

Importantly, when incoming subluminal free gravitons encounter trillions of gravitons within a proton or neutron, the pushing gravitons avoid overheating the nucleon.

Pushing gravitons energize the baryons, but not to the point of their destruction. Surplus push energy is offset by higher frequency gravitons vacating to make room for incoming lower frequency gravitons, typically toward the nearest Dark Matter cloud. This phenomenon is similar to solar electron neutrinos being ejected to preserve the equivalence principle.

Thereby, various fundamental laws of physics are honored, such as the conservation of energy and matter, while still allowing for the push effect.

More…

Unlike the hypothetical hyperluminal corpuscles, gravitons are free to go as fast as they can, but only up to the speed of light, within each inertial frame.

***They can also go much more slowly*, as do photons in certain media. Gravitons will slow down if they just glance off nucleons, transferring some energy, rather than being absorbed. Slower gravitons are thereby candidates for becoming part of the local Dark Matter cloud, or they can continue on.**

In this way we see how Baryonic Matter and Dark Matter are entwined, and essentially variations of the same. Gravitons are the core constituents both of baryons, and of Dark Matter clouds and spider webs. All forms of matter thus constitute a dynamic and versatile ecosystem in which energy and matter are conserved. It is graviton gravity that mediates many of these interactions and transformations.

Looking Now at the Very Small…

Gravity, as Newton said, is a function of mass and distance from centers of mass. We weigh more on dense objects than on less dense objects, given equal diameters. That too is why even adjacent nano-scale objects with low mass can have great attraction to each other with their virtually nil distance.

A teaspoon of a neutron star will have the mass of something weighing millions of tons on Earth. That's why we would weigh so much standing there, if we could. It's extremely dense mass, and very close centers of mass.

Compress the neutrons in a neutron star more, and you could get a black hole. Even that super dense object at the center of its event horizon could become compressed a lot more, if and when its gravitons are sufficiently compressed.

Below that diameter we move on down toward, but *never at,* a zero-dimensional singularity. Graviton frequencies become so high from increasing pressures, that their quantum push-back initiates the chain reaction of another Big Bang.

The dimension a thousand times smaller than gravitons.

YY particles

How to Envision the Unseeable…
Ask the right question!

If gravitons are ring-like,
wiggling strings, and
if photons and gluons are
linear strings, then

WHAT MAKES UP THE STRINGS?

Answering this string question, with the Tao and Euclid in mind, opens the door to envisioning the final dimension of the small:

Gravitons are the smallest dimension of push gravity, and the doorway to a new form of attractive electromagnetism:

Primary Electromagnetism
where there is no fixed linear polarity in the internal, adjacent charge, and which becomes

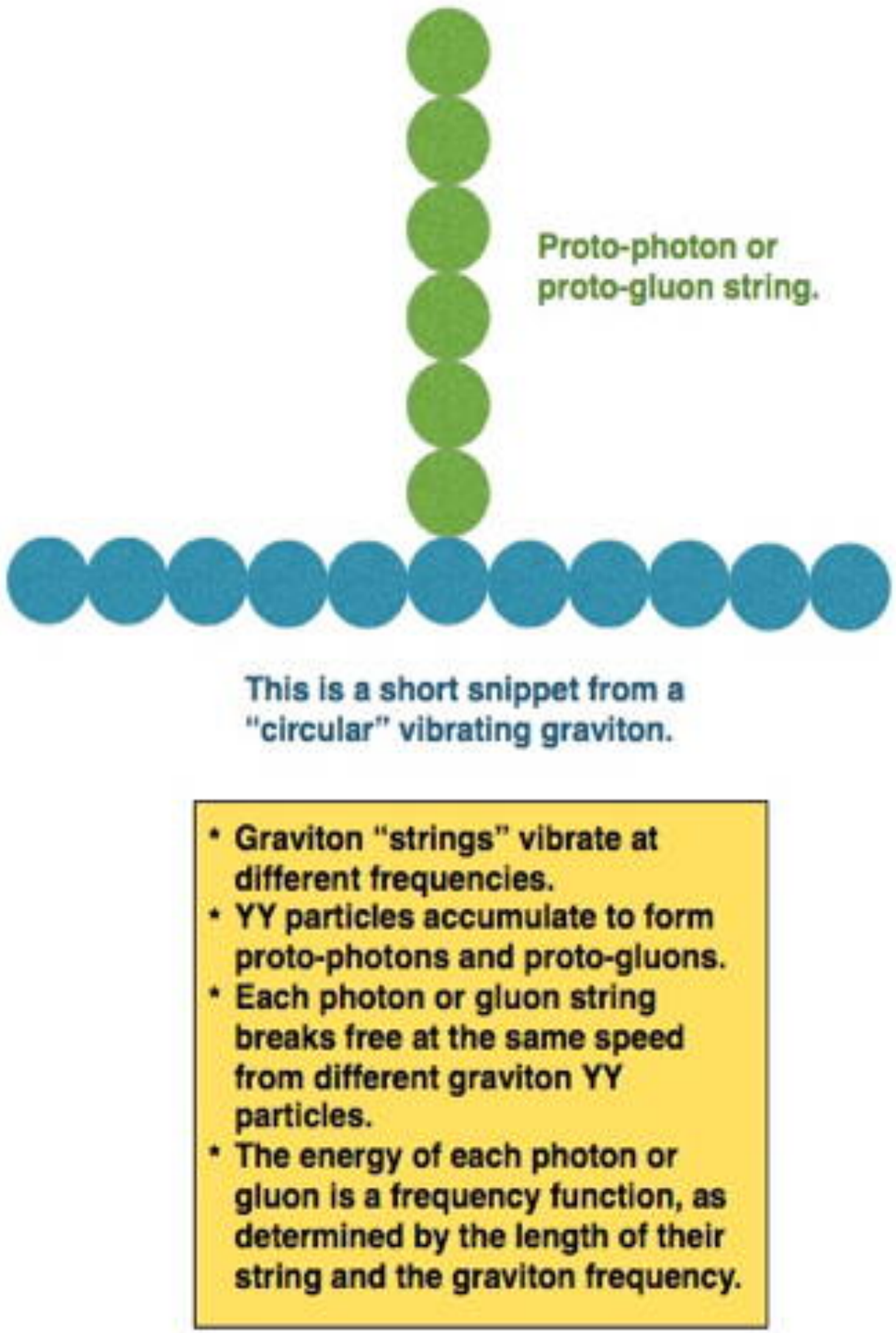
Secondary Electromagnetism
expressed as polarized magnetic fields at levels above the graviton.

At the 10^-40 meters dimension YY particles exist. They are spherical, elastic corpuscles shaped by their own primary EM. Classical corpuscles were incorrectly like rigid billiard balls. YY particles are as much energy as they are matter, embodying the ancient wisdom of Yin and Yang.

These spheres can attach to more than two other particles, since they are not bipolar. They form strings that attach to individual YY particles in the graviton's ring.

Strings break off from the graviton as a function of frequency change in the graviton. Higher frequency equals higher energy to "shake off" shorter photon strings. The frequency of free photons is a function of their length. All laws of physics are honored in this dance between matter and energy.

Primary EM dialectically transforms into Secondary EM at levels larger than gravitons, as in Weak Force particles.



YY Particles Exhibit:

(1) Coulomb's inverse square law for electromagnetism.

(2) Primary and secondary magnetisms express in the weak and strong forces.

(3) Magnetic superposition, amplifying attraction.

(4) Strings of YY particles stretch and simultaneously snap free at "c":
This is how the so-called universal speed limit is created.

Why “c” is “c”

The speed of light in a vacuum is “c” everywhere. However, that so-called speed limit is not god-created. It is the product of what happens, and how fast, when a string of YY particles constituting a photon escape from their graviton launch point.

Each attached YY particle in the string elongates into an egg-like shape, and thus when the string itself breaks free from the vibrating graviton YY particle to which it has been attached, the entire chain of YY particles synchronously snaps back to their normal spherical shapes. This elastic process takes a very short time, all equaling a time/rate of acceleration which is behind Einstein’s implied “1” as the denominator of his E = mc^2 formula.

BTW, linear accelerators need huge amounts of energy to launch protons, and their launching velocities are never equal to “c” itself.

$$E = \frac{mc^2}{t}$$

Where t = 1

= the time to accelerate an elastic photon string from its graviton YY anchor to its terminal velocity of “c”. This time is independent of the photon’s length.

Where t is <1 (less than one)

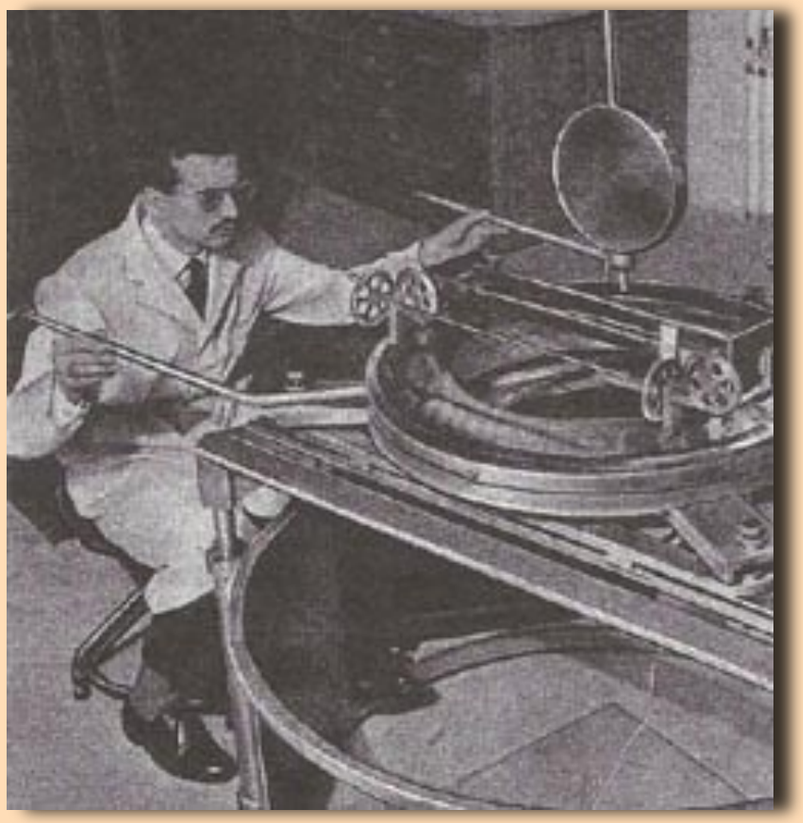
= a shorter time, and therefore a faster rate of acceleration for any mass, which needs more energy to overcome the inertia of “m”. Zero time with any mass would require infinite energy. However, zero mass would require zero energy, and acceleration of the impossible zero mass could be at infinite speed.

Where t is >1 (greater than one)

= a longer time, and therefore a slower rate of acceleration, which needs less energy to overcome the inertia of “m”. Infinite time would require zero energy. At zero acceleration, E = m, which is the potential Tao of energy and matter.

The Allais Gravitational Anomaly

The Allais effect, or gravitational anomaly, is named after the French Nobel laureate (in economics) who described and tried to explain changes to gravity during a solar eclipse.



Maurice Allais in 1954 with his paraconical pendulum

This brief increase has never been explained using currently popular theories of gravity, but is easily explained with a 21st century version of push gravity. In so doing, it provides a satisfactory answer – and challenges General Relativity gravity, which has no explanation.

Both General Relativity's curved space, and Le Sage's original push gravity, give similar results during a total eclipse. Both theories seem to predict that there will be a brief and **slight DECREASE** in gravity in the eclipse's full shadow. *However*, there is a **slight gravitational *INCREASE*** when measured by pendulums moving slightly faster in the shadow.

In GR, a decrease would be due to two stacked depressions in the gravitational membrane. That increases the "tractor beam" effect during a full solar eclipse, so that the new "pull away" from Earth's "pull in" would yield lower net weight. In classical push gravity, there would be a combined blocking of incoming particles, leading to a very temporary decrease in gravity.

Any theory of gravity MUST be valid at all dimensions, not just in our Solar neighborhood. General Relativity fails to explain gravitational anomalies within the half-billion light years radius. In contrast, push gravity clearly describes effects on that scale.

Because **GR is a failed gravity theory**, there is left only one valid theory, if it can describe the Allais effect – and it can!

The Einstein Cross is an example of light bending when a background quasar (*quas*i-stell*ar* object) is aligned with a foreground galaxy, and especially with that galaxy's core. This "cross" is an interesting example of a "gravitational lens." Astronomers use gravitational lenses to see background objects that could not otherwise be detected.

This unusual object indicates that there may also be four areas of dark matter near the core capturing and focusing some quasar light, making what appears to us as a cross.

There is a *vast flow from all directions of the* ***multiverse*** *of gravitons and their associated YY particles,* traveling at "c" or below. Nearly all of these particles pass through our bodies in the many trillions every second. A tiny number are absorbed or deflected by baryonic matter. Net push interactions with normal/ baryonic matter establish gravitational force.

Some particles passing near such massive objects as planets, large moons, stars, and star clusters will be directed partially around by DARK MATTER, and thereby focused AS IF there were a boost of energy in the quasar's light. That is the lens effect. The focused flow of primary particles (only some of which are in visible light), and most of which are gravitons, pushes harder on what is ahead. In our case, our gravity/weight tends to slightly increase, and pendulums swing slightly faster.

<u>Bottom line</u>: Regular push gravity forces are always in effect from all directions – but the lensed invisible push effect is slightly greater than the ongoing decreased push effect from net particle flows.

It is tempting to suggest that General Relativity (GR) could explain solar eclipses as well as does Graviton Gravity (GG). However, that equality is not so. Thus dissolves the GR world view.

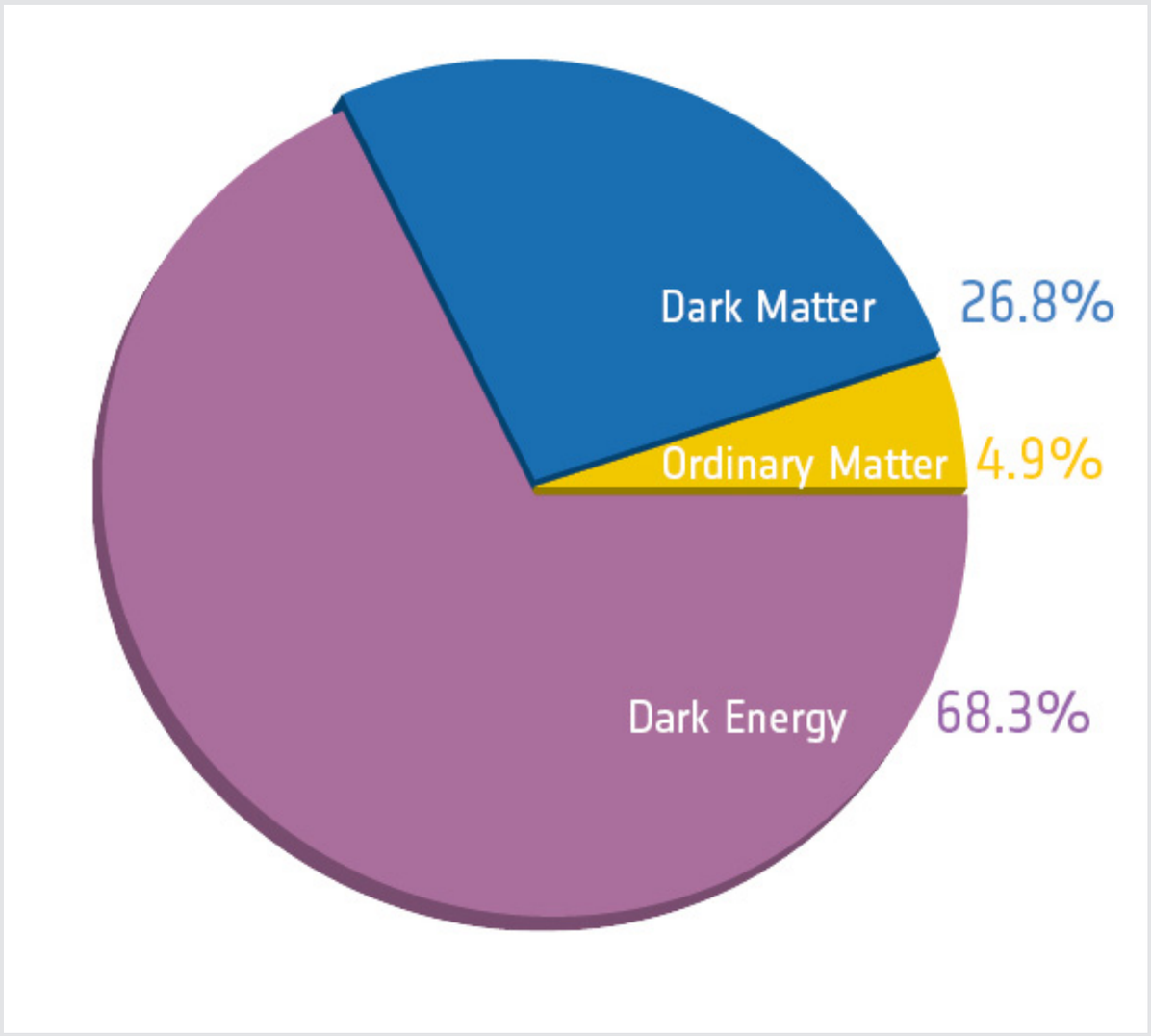
First, GR has already been disproved by its failure to explain phenomena on a very large scale, even though in the nearby everyday world it looks like graviton gravity. Either a theory is right, or wrong, in all scales of the real world. Science moves on.

Second, we can see gravitational lenses on a very large scale, but nobody has shown them working on the scale of a body as small as our Moon. Even if the Sun does exhibit this effect all the time – but the Moon cannot under General Relativity – then there would be no Allais effect during solar eclipses.

Third, visible light has just the mass and energy to nicely form gravitational lenses. Electromagnetism at extremely high energy frequencies is much less affected by push gravity. At lower energies associated with <<c mass/energy objects in the stream, their mass is high enough to be strongly affected by push streams. We would not see these flows as lenses. We would experience them in this situation by their slight increase in our net gravity.

What have we learned from all these different ways of looking at what we often take for granted?

The Real Theory of Everything embraces 100% of the universal pie, not just 4.9%.



We now have found Carl Sagan's "Something incredible waiting to be known."


Thank
You!

APPENDICES

For Additional Information:

http://astronomy-links.net
(Look under "Clark's Web Pages.")

http://rvasclub.org
(Home page of the Roanoke Valley Astronomical Society.)

https://www.astroleague.org
(Home of the largest national association of astronomy clubs, The Astronomical League.)

mass → charge → spin →

QUARKS

2.4 MeV/c²	1.27 GeV/c²	171.2 GeV/c²	0
2/3	2/3	2/3	0
1/2	1/2	1/2	1
u	c	t	γ
up	charm	top	photon

≈126 GeV/c²	
0	
0	
H	
Higgs boson	

4.8 MeV/c²	104 MeV/c²	4.2 GeV/c²	0
-1/3	-1/3	-1/3	0
1/2	1/2	1/2	1
d	s	b	g
down	strange	bottom	gluon

LEPTONS

0.511 MeV/c²	105.7 MeV/c²	1.777 GeV/c²	91.2 GeV/c²
-1	-1	-1	0
1/2	1/2	1/2	1
e	μ	τ	Z
electron	muon	tau	Z boson

<2.2 eV/c²	<0.17 MeV/c²	<15.5 MeV/c²	80.4 GeV/c²
0	0	0	±1
1/2	1/2	1/2	1
ν_e	ν_μ	ν_τ	W
electron neutrino	muon neutrino	tau neutrino	W boson

GAUGE BOSONS

Fermions

Leptons (spin 1/2)

Electron (Charge -1)	e^-	Electron Neutrino (Charge 0)	ν_e
Tau (Charge -1)	τ	Tau Neutrino (Charge 0)	τ_e
Muon (Charge -1)	μ	Muon Neutrino (Charge 0)	ν_μ

Quarks (spin 1/2)

Bottom Quark (Charge -1/3)	b	Up Quark (Charge 2/3)	U
Down Quark (Charge -1/3)	d	Top Quark (Charge 2/3)	t
Strange Quark (Charge -1/3)	s	Charm Quark (Charge 2/3)	c

Baryons (spin 1/2 2/3)

Proton (Charge +1)	P^+
Anti Proton (Charge -1)	$\bar{P}^-$
Neutron (Charge 0)	N^0
Lamda (Charge 0)	Λ^0
Omega (Charge -1)	Ω^-

Measons (spin 0,1)

Pion (Charge +1)	π^+
Kaon (Charge -1)	K^-
Rho (Charge +1)	ρ^+
B-zero (Charge 0)	B^0
Eta-c (Charge 0)	η_c

- Any member of a group of subatomic particles having odd half-integral angular momentum (spin 1/2, 3/2).
- Fermions obey the Pauli exclusion principle, which forbids more than one particle of this type from occupying a single quantum state.
- Fermions include nuclei of odd mass number.

Bosons (spin 1)

Photon (Charge 0)	γ
W^- Boson (Charge -1)	W^-
W^+ Boson (Charge 1)	W^+
Z^0 Boson (Charge 0)	Z^0
Gluon? (Charge 0)	g

- Subatomic particle with integral spin (i.e., angular momentum in quantum-mechanical units of 0, 1, etc.)
- Bosons (force carriers) differ significantly from fermions in that there is no limit to the number that can occupy the same quantum state.

2nd September 2009

What Happens to New Ideas

"The four stages of acceptance:

1. This is worthless nonsense.
2. This is an interesting, but perverse point of view.
3. This is true, but quite unimportant.
4. I always said so."

— J.B.S. Haldane

Arthur C. Clarke credited him as "perhaps the most brilliant scientific populariser of his generation."

(Review of *The Truth About Death*, in: *Journal of Genetics* 1963, Vol. 58, p.464)"

This quote is from a July 3, 2014 *National Geographic* Q&A with Woods Hole oceanographer, Camrin Braun:

What advice would you give to a budding explorer?

"Despite extensive global connectivity and rapid dissemination of ideas, much of the world remains unexplored. Although physical occupation of a space is almost completely lost as an exploratory avenue, we still lack even basic knowledge about many seemingly common phenomena.

A simple curiosity about the natural world and its inhabitants, combined with perseverance and passion for discovery can go a long way toward advancing our understanding of the world around us. Never stop asking questions and pushing boundaries because you think (or are told) something has already been explored."

His last tweet:

"A life is like a garden.
Perfect moments can be had, but not preserved, except in memory. LLAP."