



Shedding a bit of light on  
**'Everything'**

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Einstein gave us the math  
for **general relativity** but he  
never explained how and why it worked.

In this, you will see exactly  
how & why **general relativity** works  
using a **simple model** to explain not only that  
but how & why **quantum theory** works as well.

Diagnosing what is really going on in science is pretty much  
like diagnosing what is really going on in the medical world.

Only a few (very few) scientists or doctors do it right: Doctor Joseph Bell at the University of Edinburgh taught his medical students to do it right. He taught his students 'never to accept first impressions.' Bell told all his students to examine everything, especially the little things. He said, "**The importance of the infinitely little is incalculable.**" He taught this to Conan Doyle who realized its significance in fighting crime and later wrote about 'not overlooking anything' in his "*Sherlock Holmes*" stories.

I'm afraid that our big science problem today is that most scientists are going on first impressions and very few are examining everything.

Back in 1950, while Einstein was still alive, I ground & polished, to a perfect parabola, a 6 inch telescope mirror for Linden High School and after I graduated, I gave them all my radio equipment that I had for my amateur radio station W2YDW. I knew, at that time, if our present science was absolutely right then we should be getting right answers **ALL** the time and not simply a fraction of the time.

Today, I consider myself very lucky indeed to have been given over four score *(80)* years, of good health, and to have found out *exactly* why we haven't been getting **ALL** the right answers **ALL** the time.

And the reason for that is, we haven't been considering **ALL** the forces.

Berkeley and Mach said there had to be invisible force inertial linkages with our surroundings (*Mach's principle*). Proof they were right is the fact that gyroscopes, pendulums, vibrating elements and Helium-2 all have the same ***one complete rotation*** in one sidereal day which is 23 hours 56 minutes and 4.0916 seconds. This rate of rotation is termed "Earth rate": This is the exact rate (*or time*) any stationary (*relative to the "fixed stars"*) observer in space, would see this Earth make one complete rotation.

Because the Earth rotates in the same direction as it revolves around the sun, in one year (one revolution) the Earth will have made 365 and a quarter rotations in respect to the sun but 366 and a quarter rotations (sidereal days) in respect to the stars.

In other words, looking out we see the Earth's spin frequency at a lower frequency than it really is spinning in space: And as we look further and further out we see lower and lower frequencies, than we should, as well (**red shift**).

The 3 paragraphs above are **important** so keep reading them until you fully understand the concepts they describe.

Gyro "Earth rate" rotation is extraordinary: This is quite a substantial deviation from field theory where our Earth, the largest mass near the gyro, has no effect on the gyro's behavior whatsoever. But the fixed stars, light years away,

have total control over the gyro: Why?

To actually see this, do what I did in the 1970s and start an aircraft vertical gyro running at noon time: Because it initially levels itself, its rotor axis will be pointing straight up, pointing at the sun. Then you can observe its "Earth rate" rotation: At 5 PM it will no longer be pointing straight up. It will be pointing at the sun while the sun is setting in the west. I've done this many times. The gyro is simply holding its position - to what are commonly called the "fixed stars" - in space and the Earth is the thing that is really rotating. So what we see is the gyro holding its position to the sun while we, on Earth, rotate in respect to the gyro. However, the gyro isn't holding exactly to the sun. It's holding **exactly** to the "fixed stars" that *seemingly* are going around us about 4 minutes faster than the sun every day: This is why the stars in winter are at a different part of the sky than in summer.

**To do this the gyroscope must attach itself to the fixed stars: But exactly how does it do this?**

Your present science can't explain exactly why the gyro does this. This is proof that our science is not giving us the **complete** picture.

I've worked with and trouble-shot the very latest gyro systems as they came out and I've flown using both vertical and horizontal (*Directional*) gyro information to keep my aircraft correctly oriented. I stayed alive because I **knew** about gyros.

For over forty years now I've been asking why scientists are not trying harder to find these invisible forces that not only make gyroscopes hold to the "fixed stars" but are responsible for our inertial mass and the conversion of energy from this inertial mass:

This gyroscopic "**Quantum Entanglement**" inertial force linkage to the surrounding "fixed stars" is the **phase symmetry** part of "Mach's principle."

I saw all these things in 1966 and knew electron spin was conserved: Later I saw quark spin wasn't. This pointed to quark spin as the cause of gravity and inertia but it took me decades after that to figure out exactly how quark spin was doing this.

Even though it's been over a hundred years since Max Planck proved that energy is not absorbed continuously but only in discrete amounts (**quanta**), a great many scientists still fail to understand exactly **WHY** this is so.

We have **quantum theory** because of "**Impedance Matched Bonding**" and the laws of "**Phase Symmetry**". Read on and you'll see it's as simple as that, really.

**Impedance matched** circuits abound in radios and TVs to allow various frequencies to transfer energy. Why didn't scientists see this was necessary for ALL **quantum** energy exchanges?

Ampere showed us that when an electrical current was put through two parallel wires in the same direction (**in phase**) then those two wires would **attract**.

Ampere also showed us if electrical currents went through those parallel wires in opposite directions (**out of phase**) then those two wires would **repel**.

If these laws Ampere gave us are seen as **phase symmetry** laws then they explain magnetism, AC & DC electric motors and the entire microscopic particle world *including gluons* far, far better than Maxwell's field theory ever could.

**Phase symmetry** even explains, *believe it or not*, Gravity. And it explains precisely how *Quantum Entanglement* works as well.

**Phase symmetry**, therefore, not only unifies the forces but *finally* also shows us exactly what space and time really are.

Let's take a look at what Ampere showed us almost two hundred years ago:

Copied from Encyclopedia Britannica DVD 2013, "... Had Ampère died before 1820, his name and work would likely have been forgotten. In that year, however, Ampère's friend and eventual eulogist François Arago demonstrated before the members of the French Academy of Sciences the surprising discovery of Danish physicist Hans Christiaan



Ørsted that a magnetic needle is deflected by an adjacent electric current. Ampère was well prepared to throw himself fully into this new line of research.

Ampère immediately set to work developing a mathematical and physical theory to understand the relationship between electricity and magnetism. Extending Ørsted's experimental work, **Ampère showed that two parallel wires carrying electric currents attract or repel each other, depending on whether the currents flow in the same or opposite directions, respectively. ...** (My bold lettering.)

If you look up "Ampere's laws" on the internet today you will get electrical laws quite unknown to Ampere. Yes, Ampere was the first to equate the forces associated with these laws you will find on Google but Ampere did his calculations with long wires; he didn't even know about electrons. There was no such thing as voltage or amperage back then. Current flow (amperage) is named after Ampere.

Just about half a century ago Scientific American published a good account of Ampere's long wire laws. I remember reading it like it was yesterday. Part of it went like the aforementioned Britannica statement or something like this:

Ampere discovered that whatever was coming out of his batteries when put the **same** direction through two parallel long wires made those wires **attract** each other.

If this substance (later found to be electrons) was put through these long parallel wires in an **opposite** direction, in each wire, then these long wires **repelled** each other.

So basically what Ampere gave us was a simple relative motion law.

But you'd never know that — or even believe that — if you looked up "ampere's law" in a search engine. **Try it. You'll see! And this is the big problem, getting the right facts today when EVERYTHING is now all confused with the Faraday-Maxwell field rules and field math.**

You could also see Ampere's laws as "phase" laws: If the current through two parallel long wires is moving the same direction or "**in phase**" then these wires will **attract**. If the current through these two parallel long wires is moving in opposite directions or "**out of phase**" then these two wires will **repel**.

If you see Ampere's laws this way then Ampere gave us the initial concept of **phase symmetry** which is exactly what Einstein looked for his entire life: This **simple model** called **phase symmetry** unifies all the invisible forces.

Mathematician Stephen Wolfram said, "Math can only explain simple things but a **simple model** can explain a complicated universe."



**Phase symmetry** gives us the "phase" **simple model** answer to a Theory of Everything: [Ampere's Laws - that apply to SSSWRs](#)

What is absolutely astounding is that **phase symmetry** not only simplifies but clarifies this entire complicated universe in both the microcosm and the macrocosm. It's utterly amazing!

To learn exactly **WHY** we have all these things, you will have to learn what it's taken me many years to learn:

A very important discovery of Einstein's was something he detected even later than  $E=mc^2$  and relativity:

In 1954, about a year before he died, Einstein wrote, "***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.***"

Few listened to what Einstein said back then in 1954. It took me 12 years after Einstein died to see a bit more about this misconception of fields than he saw. I then published my first book that explained how **Ampère had given us the method to unify gravity with the other invisible forces** but scientists completely missed — and are still missing — its supreme importance: There was a full page devoted entirely to that first book of mine in the June 18, 1967 New York Times, on

page 29 of the Sunday Book Review section.

Einstein, back in 1954, was telling us *modern science had to change drastically* and we had to look for a better theory than field theory. Field theory is OK *sometimes* if you want to see the end result of billions of these individual quantum type forces. An example of this being OK *sometimes* is the following regarding general relativity:

Your GPS wouldn't work without the field theory and tensor math of general relativity. It compensates for the difference in time because time on Earth is slower than time in those GPS satellites: General relativity shows us gravity slows down time. Earth time passes slower than time in those satellites that have considerably less gravity and — *because radio waves go a certain distance in a certain time* — time is important because time is what is being used to measure distance on your GPS.

Even though this firm belief in fields have given us some spectacular insights, such as Einstein's general relativity, **phase symmetry** makes it crystal clear that field theory has prevented us from seeing the big picture of what is really going on.

**Phase symmetry** ends up with the inverse square rule, the same as field theory, but obtains it a different way with **impedance matched, resonant quantum bound pairs** and the **Milo Wolff limit** (*Hubble limit for the electron*).

The Milo Wolff limit is needed with all these **impedance matched, resonant bonding pairs** because these bonds **do not lose any of their strength with distance**:

This is why your eye receives full quantum packets of energy no matter how far a star is in the distance.

However, the number of **bonding pairs** drops off inversely with the square of the distance: Thus, **phase symmetry** ends up with the inverse square rule the same as fields do.

**This is why we were tricked into believing in field theory.**

We have also been tricked into believing that this is only a frequency universe in the microcosm. I'm afraid it is a frequency universe all throughout and that's why we need these **phase symmetry** "phase" rules instead of field theory.

Too few seem to realize that Dr. Milo Wolff has proven the electron is a spinning, scalar, standing wave: Once scientists see that the quark is too, then a brand new look at our macrocosm is needed because elements there indicate it too is obeying these spinning, scalar, standing wave **phase symmetry** phase rules exactly as in the microcosm: **And this is truly a revelation.**

What we see as tiny, are higher frequencies than we are tuned to. What we see as solid, is the frequency we are tuned to. The macrocosm, that we see as larger, is a lower

frequency than we are tuned to.

ALL of these spinning entities, quarks, electrons, stars, galaxies, galaxy clusters, super clusters, etc. obey identical **phase symmetry** "phase rules" via their spin frequencies. And the higher the spin frequency the higher the energy. The quark has the strongest force and the fastest spin frequency.

Once you **know** your smaller building blocks are spinning, standing waves and you see the larger building blocks — galaxies, galaxy clusters, super clusters — also spinning then you **know** what your larger building blocks really are. (If it walks like a duck and quacks like a duck then it's a duck.)

We sense that we are built of quarks and electrons. This works in a standing wave universe as well, where the higher frequency standing waves build the lower standing wave structure: The reason for this is that higher frequencies have higher energy than the lower frequencies. We can count six of these spin frequencies going from quark to super cluster but how many this universe contains, no one knows.

Where field theory sweeps the quark strong force under the rug, (*strong force containment*) **phase symmetry** doesn't have to because it is this quark spin along with impedance matched, resonant momentary bindings that give us not only gravity but all the inertial forces as well.

The quark obeys the **same phase symmetry** "phase" rules that

electrons, stars, galaxies, galaxy clusters, super clusters, etc. use.

We know the maximum star rotation period to be 30 days and our galactic rotation period to be 240 million years: These are several billion cycles apart.

But the separation between the star spin frequency and the electron spin frequency must be more than that or else we could detect the electron's spin frequency: It's above our detecting range.

Thus the spin frequency **norm** between each of these entities might be more than **many trillion cycles**.

The much, much closer number of cycles (*close harmonic*) of spin frequency resonance between the electron and down quark, responsible for element and molecule structure, therefore is not the **norm** and must have happened because of this particular beta decay type of **Big Bang** that you'll see later.

— *Importance of impedance matched, resonant bonding pairs* —

**All attractions** (that we know about) **come only via in phase impedance matched, resonant bonds**.

This means, "the **in phase mass of the binding pair has to match** at the very instant that the bond is made and energy is exchanged."

**Phase symmetry** eliminates fields and all the force carrying particles of those fields: The bubble chamber evidence of force carrying particles now have to be seen as evidence of an entirely different spacetime distortion from a particle.

If an electron on a distant star is spinning clockwise in the same exact plane as a counter-clockwise electron in your eye then a tiny portion of their closest sides are **in phase** and the mass of that tiny portion **in phase** is the quantum of light energy that comes into your eye: But both of those tiny portions must have the **exact same mass** or there will be no "Quantum Entanglement" bonding or energy being transferred.

That quantum of light energy came, that long distance, to your eye with no energy loss whatsoever:

The reason for the above is that **these bonds have the same strength regardless of the distance!** It's only the **number of bonding pairs** that decrease inversely proportional to the distance squared.

There are electrons in your eye that are set up to quickly shift binding between binding with electrons on that star and then shift back to closer binding with other electrons in your eye giving you a quantum of light energy, every shift: At the instant of transfer as the electron on the star transfers this quantum of energy — *the star in the higher energy level instantly replaces it* — and few today realize all energy transfers work exactly this way.



Every time your eye electron binds with an electron in the star, via "Quantum Entanglement", it gains a quantum of inertial mass (*equal to a quantum of energy*). When it shifts back to closer binding with your senses, you receive this quantum of light energy. There are many of these electrons in your eye first gaining mass by binding with the stars then shifting that energy to your senses by binding back locally with your senses — *and doing that over and over again* — many thousands of times per second.

Einstein showed you space could be distorted. I'm showing you that space exists because of out of phase forces.

Space (space-time) is not uniform nor is it empty: It's built of quantum chunks similar to energy. Except each space-time quantum chunk is an out of phase repelling pair, the exact opposite of an **in phase** binding energy pair. Electrons and quarks that bind find a "wormhole" through those quantum, repelling pair, chunks of space.

Knowing that, you can now see **phase symmetry** provides brand new insights as to where space is and where it isn't and also it shows you exactly why space curves in General Relativity and even Einstein didn't understand that.

You now know why time is slowed down in super massive, black hole stars: It's slowed because of all the out of phase repelling forces there. This is "compressed space", so to

speak, nevertheless it's still space.

Black hole stars, such as one we know about in the binary X-ray system "Cygnus X-1", can slow down time enough to make itself an unseen black hole. Even though we can't see this black hole, we know it's there because we see a blue star that is orbiting around it: The out of phase repulsive forces BETWEEN all the stars and galaxies is not as strong as this and those forces only slow down time enough to give the "**red shift**".

Even though no light escapes this black hole, higher frequencies like X-rays and gravity are not hidden from us by this massive star. Scientists should have looked for gravity being caused by a higher frequency but they never did.

When Minkowski showed Einstein it was not simply space but space-time, Einstein thought it was some sort of 'mathematical trick'. Later Einstein grasped it:

So Einstein's teacher, Hermann Minkowski was the first to say, "You cannot separate space from time." This is OK if you want to believe in all this "super compressed space" entwined within these massive stars. But if you like to look at space the way most of us see it then the best statement is the one that Daniel P. Fitzpatrick Jr. was the first to say, "**You cannot separate the out of phase repulsive forces,** that cause space, **from time.**"

While these out of phase repulsive forces are producing space, they **ALSO** are producing every bit of what you consider to be a slowdown in time:

Even though you see every star instantly, as soon as you look at it, it's the amount of those out of phase forces between you and the star that determine exactly at what point in that star's past you will instantly see that star.

The one thing scientists do seem to agree on is that the further you look out at the stars then the further in the past you are seeing them. Seeing them means you are exchanging light energy with them:

ALL these energy exchanges **must** be on the same Minkowski light cone. [Minkowski's light cone -- What it is: 10/16/2015](#)

Thus, these out of phase repulsive forces produce **space-time** which is both **space** and **time**.

As things grow more massive then there is an increase of **BOTH** in phase and out of phase forces:

This is why super massive stars can become black holes in which **space** is massively compressed and **time** is massively slowed down (Einstein's curved space). Now back to bonding:

More than electrons can bond momentarily: Quarks can bind momentarily long distances too, via "Quantum

Entanglement", and also shift their binding back to closer local binding. They can bind either near or far: They gain inertial mass with distant binding to the stars and this returns as energy as they re-bind back to local binding as in the following bicycle wheel explanation.

**The following explanation tells you how centrifugal force really works:**

Now think about all those quarks in your bicycle wheels as you ride your bicycle. They are spinning at the square of the electron's spin frequency and they are really massive things. As you ride your bicycle faster and faster all those quarks in the wheels that are spinning in the same plane as the wheels and spinning in the same direction as the wheels are now — *via translational motion* — having a certain portion of their sides, that are already spinning close to the speed of light, moved even **faster up the speed of light asymptotic curve.**

This gives that portion of those quarks in your bicycle wheel **MORE MASS**. Because the asymptotic mass is increasing more than the other side is losing, this gives these quarks more overall mass.

Thus, the faster your wheels turn, the stronger the bonding with the surrounding stars that can offer quarks of any similar exact mass or spin plane to momentarily bind with.

In **phase symmetry** quarks can do the same long distance

"Quantum Entanglement" bonding that electrons can do, so as you ride your bicycle faster and faster those quarks in your wheels are making stronger and stronger bonds with opposite spin quarks in the surrounding stars: This is why we have centrifugal force.

**It's those stars, all around you, that are holding you up on your bicycle.**

A definite **limited** number of quarks inside you is doing this momentarily: That same definite **limited** number of quarks is also attracting you to the earth momentarily as well.

This is why **inertial mass is exactly equal to gravitational mass.**

And these quarks causing gravity have a spin the square of the frequency of the electron's spin (a harmonic) **and thus also can bend light:** Einstein was the first to show us this light bending factor.

**There is a direct mathematical relationship between the spin frequencies of these spinning, standing wave resonances and our concept of speed:**

You will see in the next few paragraphs where our concept of speed — derived from electron and quark spin frequencies — is not a universal concept and will not work all throughout this universe. In fact we have to resort to fuzzy math using our concept of

speed.

Quarks spinning at the square of the electron spin frequency are responsible for the 'speed of light squared' appearing in our math. And Tom Van Flandern's speed of gravity being at least hundreds of billions times the speed of light satisfies most astronomers in giving us a stable universe.

Noted Astronomer [Tom Van Flandern](#) showed us that gravity did not have to happen instantly as Newton claimed but many hundred billions times the speed of light would indeed be an acceptable gravitational speed.

My friend BDJ proved to me I erred when I congratulated Tom Van Flandern on his paper that put the speed of gravity in the area of  $c^2$ , Tom Van Flandern told me, "**You can't square a speed.**" This is absolutely true. But this term  $c^2$  appears in our most precious math of mass to energy conversion. So the math rules are bent to get the answer they want.

Speed is distance over time. Physicists cheat; since speed can't be squared, they break speed into its components, distance over time, and then only square the distance side of that speed, *not the time side*, to get their  $c^2$  answer. Now comes a real revelation: While we can't really square a speed, the universe can. The universe is simply squaring a frequency which **can** be squared **to get a harmonic. The**



quark spin is a close harmonic of the electron spin. This is why we get  $c^2$  in our math.

It's hard for me to believe that no one even looked for the reason we get  $c^2$  in our math.

General relativity,  $c^2$  and Minkowski's light cone are ample proof that our concepts of space, time and speed are not universal concepts that this frequency universe can use. Space, time and speed are only local gauge concepts, handed to us by our ancestors that can only be utilized in the tiny parameters of our particular local space-time realm:

Yes, if we don't go too fast or look too far or gain too much mass then our ancestor's concepts work just fine.

This universe correctly uses spin frequencies and not this incorrect local gauge concept of speed that we use. Using spin frequencies instead of speed, this universe doesn't have any dark energy, dark matter problems.

Unification of the forces can only be done using frequencies and phase. It can't be done using these ancient local gauge concepts handed to you by your ancestors.

The quark produces the strong force but gravity is a weak force. I always saw that if the number of quarks providing this force is exceptionally small then quarks can indeed produce this weak force of gravity. Now that you know why

we get  $c^2$  in our math, let's move on to something else:

These individual quantum forces can only be analyzed using either **phase symmetry** or quantum theory and **phase symmetry** is the better of those two because the present **quantum theory is *not complete***: By turning its back on those quark forces, it only uses half of the existing forces. I learned abruptly in 1966, while solving a problem in the avionics section of Pan American Airlines, that there were forces we weren't seeing. Later I saw the quark spin was causing these forces.

With modern science, we are only looking at half of the existing invisible forces.

**As I write this today, I can assure you that you will get a *very distorted picture of what is really going on if you only view half of the existing invisible forces.***

Even with Einstein's words, "... **physics cannot be based on the field principle,**" scientists are still using that old field concept today over 50 years after Einstein's warning.

I agree with those who say our microcosm is an all frequency universe in which *our* motion may not exist. But we know spin frequencies there do exist, Spin frequencies are important:

We all know the **magnetic force** emanates from the

**electron's spin frequency.** But the following shows us something even more important:

**ALL attractive forces** are **in phase**, impedance matched, spin frequency bindings that also produce your time, the frequency of which is incidently, 180 degrees out of phase with space-time produced by the out of phase repulsive forces (below).

— *Extremely Important paragraphs above & below* —

**ALL repulsive forces** — *plus space-time (that I'll cover in subsequent papers)* — are caused by "**out of phase**" spin frequencies but there's no impedance matching with these: In fact, these "**out of phase**" frequencies make you SEE all this vast space between everything in both microcosm and macrocosm.

Important in **phase symmetry** are some things such as **SSSWRs** (**S**pinning, **S**calar, **S**tanding **W**ave, **R**esonances) discovered, and mathematically proven by, one of those scientists that got us to the moon, [\*Dr. Milo Wolff\*](#). These **SSSWRs** are the building blocks of our universe.

I find it hard to emphasize the importance of standing waves to those who have never worked on radio transmitters. There, standing waves **must** be eliminated. Much of my life has been spent in troubleshooting transmitters and checking standing wave ratio using a Byrd Wattmeter. But what a radio transmitter doesn't need, a universe not only needs but builds with.

I've talked to Milo Wolff quite a bit about standing waves. I knew the electron was some sort of standing wave but it was Milo Wolff who convinced me that electrons had to be **SCALAR, SPINNING**, standing waves or they couldn't even exist:

Standing waves exist only if they transmit a minimum of their energy. This is unlike the normal waves on a transmitting antenna that must transmit a maximum of their energy so radios and TVs can receive this energy signal.

The way these scalar, spinning, standing waves, such as the electron, are able to keep energy leakage to a bare minimum is that they do several things: They spin at a certain frequency and move on a certain path that keep these binding and repelling linkages both minimized and EQUALIZED.

In the above paragraph I put the word EQUALIZED in small capital letters because this equalization of forces, *in several WAYS* — *produced by this standing wave universe* — is very **important** because it is a **main emphasis** of **phase symmetry**.

Keep in mind that if your building blocks are spinning entities then **in phase** attractive forces and "out of phase" repulsive forces will be **EQUAL**: Thus we get this universe of EQUALIZATION of attractive force and repulsive force (space).

**This vast space in both micro and macro worlds is brought forth from this repulsion that equals the attractive force holding everything together.**

**Phase symmetry** shows us this, equalization of forces, works this way both in the microcosm and the macrocosm, thus unifying micro and macro worlds.

If we have this EQUALIZATION of forces then how did we get the Big Bang?

The Big Bang came **because** of this EQUALIZATION of forces: We had a beta decay Big Bang.

A beta decay Big Bang solves another problem too: It gives us the first plausible explanation for the energy needed to create the Big Bang.

Our present science and especially **phase symmetry**, shows us that ALL energy — *both chemical and atomic* — comes from a reduction of inertial mass ( $E=MC^2$ ). But, If there is nothing to begin with, then how do you get the energy needed to create a Big Bang?

So we eliminate that problem with a beta decay Big Bang, saying neutrons were already here:

And that's easy to do because in George Gamow's postulated Big Bang, neutrons had to be constructed first, in the first ten thousandth of the first second.

In 1948 Gamow's group was correct in thinking this was when *our molecular* universe began: Yes, in this Big Bang the first elements and molecules were formed. But the group was wrong in thinking this entire universe began then, because an all neutron universe already existed. We now know the dispersion of the Cosmic Microwave Background Radiation (CMBR) shows this Big Bang happened **all throughout** an existing universe and could **not** have begun at one point.

Neither present science nor **phase symmetry** allows any fictitious "**pure energy**" to produce the Big Bang: Present science tells us, "*Energy can neither be created nor destroyed.*" And **phase symmetry** shows you why this is so. Both of these tell us **neutrons were already here** and that an **all neutron universe** existed long, long before our Big Bang.

So we have to change only the first ten thousandth of the first second of Gamow's Big Bang and say that over many trillions of years, there was some sort of energy leakage either into or out of the neutron's standing wave frequency structure: This caused half the neutrons in that previous ALL NEUTRON universe to go into a beta decay. This beta decay continued until the other 50% of the neutrons were safely inside of the newly created elements: Those neutrons then remained neutrons.

Even today a free neutron can last 15 or 20 minutes before it



goes into a beta decay. This is indicative of a stable neutron long before the Big Bang. So **phase symmetry** is telling us the fine structure constant is not such a constant after all.

A good half of our invisible forces — **because of this embedded belief in field theory** — is what present science fails to see: I'll be stressing that until it sinks in. **Believe the facts**, not what the authorities tell you.

How can you believe authorities who don't even agree with themselves? Relativity scientists say nothing can go faster than the speed of light. Yet every astronomical college in the world tells their students that gravity can't act that slow because then this universe would be unstable. And this is only one of many **major science disagreements** today.

So once again, **believe the facts**, not what the authorities tell you, and that is the essence of this paper.

If you insist on using field theory after Einstein said, "... **physics cannot be based on the field principle**," and you tell me gravitational fields or electrical fields are causing all these entities to orbit, then I have to ask you a question: **What is holding all these entities such a vast distance apart in the micro and macro-worlds; just why is all this vast amount of empty space (99.99999%) uniformly between everything, extremely similar in both microcosm and macrocosm?** The reason is crystal clear because it's **phase symmetry's** "out of phase" repulsion forces. But present science has no answer to

this because, **with this embedded belief in field theory**, it fails to see half the forces involved.

As Milo Wolff stated, "Those stars, up there, are more than ornaments!"

In this universe of ours, things that reproduce themselves stay here and things that don't — don't. These **SSSWRs** are the very basis for that because they reproduce themselves.

Dr. Milo Wolff mathematically proved the electron to be a scalar, spinning, standing wave that continually reproduces itself from the minimal radiation energy leakage of surrounding electrons: This shows us our universe produces standing waves much like radio transmitters do.

But — as Milo explained to me, the radio standing waves on antennas that are generated from one point, the transmitter, cannot exist in free space. The only standing waves that can exist in free space are standing waves that are produced by energy coming in from **ALL** directions, which makes these standing waves **SCALAR**.

Please entirely forget these positive and negative fields called charge. These scalar, spinning, standing waves, like the electron **do not obey field theory**; they only obey **phase symmetry** phase relationships: Electrons repel other electrons via an "out of phase" relationship yet if properly positioned, electrons can actually bind together — **whenever their closest**

sides are spinning together "in phase" — exactly as electrons bind together in sigma and pi chemical bonds.

What makes these electrons bind together?

OK, here's where precession comes into all of this: All these spinning items such as quarks, electrons, stars, galaxies, etc. have precession because of their gyroscopic torque. Yes, in **phase symmetry** they all have gyroscopic torque. Perfectly round, free spinning entities — *such as the electron has recently proven to be* — MUST precess away from other similar free spinning entities because as soon as they begin to orient themselves into an attracting position where their closest sides will be **in phase**, this 90 degree gyro torque will precess both of them away from any attracting orientations.

So to get an electron to attract, other electrons, you simply stop it from fully precessing.

Electrons having FULL precession will always repel other electrons having FULL precession: This is what made us believe in the concept of charge.

You prevent the FULL precession of electrons by super-cooling them: In a sigma type bond, spin up-spin down Cooper pairs of electrons are what is moving in super-conductors.

Up to now, we have only been looking at same frequency **in**

**phase** bindings. First the Big Bang then supernovas produced an entirely different type of *HARMONIC in phase* binding in which a down quark — *with a higher resonant harmonic spin frequency than the electron* — binds with an electron.

That's what happened in the Big Bang when many down quarks, in various neutrons, each harmonically bonded with an electron that was created via beta decay. This prevented each bonded electron from fully precessing and it could then attract other free electrons, because it takes **two entirely free electrons** to fully precess away from each other's **in phase** attracting orientation.

Without those down quarks preventing those electrons from precessing fully, there would be no elements or molecules.

I know this might offend your religion if you firmly insist on believing in fields of positive and negative charge but I'm sorry, the **phase symmetry** way is simply the way it is.

We all learned in school that electrons carry a field of negative charge and this makes them always repel other electrons. **But this only works on totally free electrons.** It doesn't work **ALL** the time. **Phase symmetry** works **ALL** the time.

Also, completely discard the old field concept of North and South poles because that will only obstruct seeing the true picture.

Here's the **phase symmetry** true picture of the electron:

The strongest magnetic attraction comes when a good part of the electrons in both magnets are spinning **in phase** with each other and with their pole axes perfectly in the same line: This means having the pole axis of an electron in one magnet lined up exactly with the pole axis of another electron in the other magnet. And when I say axes lined up exactly, I mean **exactly!** All these electrons, in both magnets, must be spinning in the same direction.

These new magnets get far more of these polar axes lined up **exactly** than could be done using the old alnico magnets. This polar attraction is the strongest magnetic attraction because the entire spins of these electrons are then **in phase** with each other.

If there were such things as fields of negative charge around these electrons then electrons would never attract each other; **but they do:**

Magnetic attraction and magnetic repulsion are both caused by electrons attracting and repelling other electrons via phase. The fact is, we have not only attractive electron to electron bonding in magnetism but also in chemical sigma and pi electron to electron attractive bonding. **Phase symmetry** shows us what is really happening, so you need to learn more about this new concept — forgetting, at the same

time, the field concept of positive and negative charge.

In a sigma bond an electron in one element is **constantly** spinning in the exact spin plane as an electron on an adjoining element but one is spinning clockwise and the other counter clockwise, or as we say, one is spin up and the other spin down. Therefore the closest sides of these electrons are "**in phase**". This "**in phase**" attraction holds elements and molecules together.

So ORIENTATION is the key of electron to electron attraction not only in the sigma bond but also in the pi bond where both electrons are not only spinning the same way "**in phase**" with each other but their spin axes must be perfectly in line with each other.

Precession makes it far easier to line up spin planes than spin axes, therefore, all energy photons are derived via **lined up spin planes** in sigma type bondings.

Now we learn something important because the pi bond should be the strongest bond: It's got the entire mass of both electrons spinning together "**in phase**". Yet, in chemical bonding, the pi bond turns out to be weaker than the sigma bond.

Why?

Present science can't answer this. **Phase symmetry** does: While we don't see our motion there, in that spin frequency



realm, **phase symmetry** shows us **motion is certainly there!** The poles of those electrons bonding in a pi bond are only lining up with their axes exactly in the same line — *for a very short time* — periodically during the electron's orbit.

The sigma bond is a **constant** bond: The pi bond is not because the pi bond is obtained by two electrons that are on close parallel orbits: The reason that you need a sigma bond, between two atoms, before you can have a pi bond is *the sigma bond locks in and defines the 2 parallel orbit planes*. The **in phase** pi polar bonding only happens when electrons, in these 2 orbits overlap periodically *exactly* pole to pole.

This tells us a single quantum of energy must come from a sigma type bond where an up and down spin are in the same plane.

**Phase symmetry** is telling us that Niels Bohr was right after all: These are not orbitals. These are **real orbits!** **But since there are many orbits with various amounts of energy changes the end result resembles an orbital cloud.**

Sigma and pi bonding not only **prove** they are real orbits but there is motion in the microcosm's space-time realm.

Computers will someday show that all the myriad bondings believed today in the chemical world will eventually be reduced to nothing but motion and sigma and pi type bondings, because there are **only 2 attracting forces**

**available:**

An attractive pi bond is where both spins are the same direction on the same exact polar spin axis.

An attractive sigma bond is where opposite spins are spinning in the same exact spin plane.

Sorry, there are no other attractive bondings.

Two magnets will show you that: You get a polar attraction when similar poles are facing the same way. You get a weaker side to side attraction when the poles are reversed.

By not following Dr. Joseph Bell's advice to '**look at absolutely everything**', chemists and physicists have greatly complicated things when in reality science is far simpler.

Everyone has to **specialize** today in this science world: Only a very few of us can possibly look at everything.

For that very few of us going from field theory to **phase symmetry** it's like **finally learning the Earth is round**.

**Phase symmetry** shows us why we have Einstein's tensor math curved space. You saw earlier that **Ampere** was the first person to show us how both space and repulsion are produced by things being "out of phase":

Space is the average out of phase and curved space in those massive stars is where there is **above average** out of phase

forces.

There is a definite **limited** percentage of quark forces in elements and molecules that are binding with the surrounding stars and trying to pull all these things apart (*a scalar pull from the stars in all directions*), we notice as **inertial mass**.

There is — *that same* — definite **limited** percentage of quark forces in elements and molecules that are binding with the Earth, we notice as gravitational mass or weight.

This is why — *all investigations have shown* — gravitational mass always exactly equals inertial mass.

Field theory doesn't show that it's the **same quarks involved** that give this equality:

Scientists can't see this yet.

Now to iron:

Remember that small capitalized word EQUALIZED earlier that I said we'd come back to: Well, not only does **phase symmetry** equalize quark binding and repelling forces — within limits — but it is the EXACT EQUALIZATION, in the element iron, of **internal** quark binding forces (*binding the element together*) to the **external** quark attracting forces from the "fixed stars" (*pulling the iron element apart*) that is of **supreme** importance.

The bindings of the other elements are not quite equalized as

well as **iron**.

Iron, nickel and cobalt are together at the peak of the energy curve. They can all be magnetized but iron at the very top can be magnetized best. Why do you think this is?

It's this *equalization* of quark internal binding with surrounding star quark attraction, trying to pull the element iron apart, that allows this. This allows certain electrons to all have their spins going in the same direction: This is magnetization. But it can only happen where quark internal binding is about equal to the quark external, surrounding star, binding attraction. Knowing this we can make a **phase symmetry** prediction:

Saturn's rings are in a similar *equalization* area. Remember, gravity is quark to quark distant binding, and **phase symmetry** does not distinguish between micro and macro worlds. So the **phase symmetry** prediction is this: Each one of those individual rocks making up Saturn's rings will be spinning, in the same direction, as Saturn's rotation; much like the magnetized electrons, will all be spinning in the same direction, in magnetized iron.

Astronomers have a formula for where rings can form. As soon as I saw it I knew what it really meant. It meant *equalization* of internal binding with surrounding star external binding.

Now let's go back to iron again because what's coming now is extremely important:

\* \* \* \* \* — Here's where it gets really interesting —

On the energy curve, as the elements to the **left** of iron get heavier, *local* quark to quark binding is progressively **increasing** compared to mass, which is quark *distant* binding with the surrounding stars. So we gain energy (local binding) and lose inertial mass by fusing these elements via atomic fusion.

There is *proportionally* more and more quark to quark local binding up to EQUALIZATION at iron: But then, it's progressively more and more quark to star binding, over local quark binding, after iron.

On the energy curve, as the elements to the **right** of iron get heavier, *local* quark to quark binding is progressively **decreasing** compared to mass, which is quark *distant* binding with the surrounding stars. So we gain energy (local binding) and lose inertial mass by dividing these elements via atomic fission.

\* \* \* \* \*

Therefore *phase symmetry* shows us, that **atomic energy evolves** when the **new element** proportionally loses quark binding with the stars and gains quark to quark local binding. It also obtains **better** EQUALIZATION or **balancing** of *internal* or *local* **quark to quark binding with *external* quark**

**binding** to the surrounding stars.

— *Extremely Important* —

Inertial mass is nothing more than multiple *external* bindings to the surrounding "fixed stars".

When this *external* binding to the stars is shifted back to *internal or local* binding then mass becomes energy as per  $E=MC^2$ : It's as simple as that.

\* \* \* \* \*

Absolutely nothing in field theory will even prepare you to gain this knowledge.

**Phase symmetry** is the very first **simple model** that perfectly explains our complicated universe.

**Phase symmetry** not only tells us but **proves** beyond any reasonable doubt something else that is of the utmost importance but, in showing you, I won't use **phase symmetry** terms; I'll use terms you understand, so bear with me in this.

Einstein put words to this very important concept that Newton understood: It's called The ***principle of equivalence***. It means you cannot discern gravity from an **acceleration**.

In other words: if you are weightless in a spaceship far from earth and that spaceship begins to accelerate at a speed of 32 feet per second, per second then you would not be able to



discern this acceleration force from the force of gravity.

But for us back here on earth, is this acceleration really here?

The answer is **no**. The gravitational force we feel is here but the acceleration itself is not really here: **Phase symmetry** proves that. But the important thing is, we do discern **this force itself** as an acceleration.

**Phase symmetry** can explain exactly what is going on here but present science can't because it completely discounts half the forces, with the surroundings, that are involved and that Ernst Mach told us about.

What about this discovered acceleration that Saul Perlmutter's group discovered?

Saul Perlmutter, himself, stated that this perceived acceleration was really Einstein's **cosmological constant**, a force equal but opposite to gravity holding all the stars and galaxies apart.

But few listened to that statement just as few listened to Einstein's statement in 1954.

Einstein, himself, said his **cosmological constant** was a force equal but opposite to gravity holding all the stars and galaxies apart.

If this force, holding the stars and galaxies apart is exactly

equal and opposite to gravity then **where does this EXTRA expanding universe force come from?**

ALSO if there is no **actual acceleration** via the force of gravity then how can there be any **actual acceleration** with gravity's equal and opposite force (**cosmological constant**)?

If the Newton-Einstein *principle of equivalence* is valid for (gravity), then it must also be valid for anti-gravity (**cosmological constant**).

As the *principle of equivalence* states : We can discern the acceleration but it is not really there.

The *principle of equivalence* is telling you that even though you perceive this 32 feet per second, per second acceleration by standing on this earth or even though you perceive this acceleration, of anti-gravity (**cosmological constant**), by looking back in time through our latest telescopes, **neither of those perceived accelerations are really there.**

It's the force itself that we are discerning (**cosmological constant**). It is this **actual** equal and opposite force to gravity we are discerning and nothing more. This acceleration that Perlmutter's group discovered is not any real acceleration that produces an expanding universe. It's only that same type of counterfeit acceleration associated with gravity.

So what this essentially means, boys and girls, is that we

must have no **actual** acceleration moving all these stars and galaxies apart!

If they were moving apart then we should, according to "Mach's principle", be experiencing less and less inertial mass with time: Well, we aren't are we?

There is this notable "**blue shift**" in the microcosm: I have never heard anyone say, "**This means the microcosm is contracting.**"

Even the great astronomer E. Hubble, who discovered the **red shift**, **warned** about us thinking this meant the universe was expanding. *'Hubble favored the concept of a stationary universe!'* — and you will find that almost word for word in the 2013 Britannica but instead of *favored*, they spell it *favoured*.— Yes, we had a "Big Bang" but that **expansion ended eons ago.**

But it's **phase symmetry** that puts an end to this "Expanding Universe" because we know the attractive forces are not increasing and since they are equal to the repulsive forces (space) then space cannot be increasing. Space is being produced by out of phase forces that are not increasing: Therefore space is not increasing.

**Einstein was right:** Field theory has blinded us.

It was the blind leading the blind that gave us this "expanding universe" belief.

I have never believed it, nor has Milo Wolff. It is nothing but absolute nonsense.

Therefore we are not in an expanding universe: **We are really in a steady state universe** exactly as that well known British astronomer Fred Hoyle claimed we had, all of his entire life.

Well it's back to that word EQUALIZE again: **Phase symmetry** is all about spin frequencies where the **in phase** and out of phase repulsive forces **are equal** — but only "within limits" because attractions are always impedance matched, resonant bonds whereas repulsions are not. But without these impedance matched bonds of strong attraction, this universe could not be built.

So it is "within these limits" that this universe is built:

Quarks can not be so big that their internal binding puts them beyond "these limits". Electrons are limited to one size within "these limits". Stars can not be so massive that their internal binding is beyond "these limits". Galaxies, clusters of galaxies and super clusters of these too must remain within "these limits".

Therefore, **phase symmetry** is telling us, in no uncertain terms, that both attractive and repulsive forces are always equalized and balanced and so **there can be no expanding universe over such an extended period of time, as is being claimed.**

On a distant star is a spin up electron that has a momentary binding with a spin down electron in your eye. Why? Because both spin planes were exactly aligned. But, because of their opposite spins, a **very tiny portion** of their "closest sides" are "**in phase**":

That **in phase** "very tiny portion", of electron mass, was the quantum of energy transferred to your eye because in **phase symmetry** all bindings are impedance matched bonds. The fact that they are impedance matched bonds is the reason energy can not be created or destroyed and is delivered only via impedance matched binding in quantum units.

As stated previously, **phase symmetry** shows us why we have Einstein's tensor math curved space. Ampere showed you that both space and repulsion are being produced by things being "out of phase":

By abandoning this field concept and moving to this new **phase symmetry** concept of space, we certainly see Einstein's non-uniform space a lot better than even Einstein saw it.

Also remember, in **phase symmetry**:

ALL inertial mass is derived via impedance matched bonds with the surrounding stars.

ALL energy is binding energy derived via impedance matched bonds that have switched from bonding with the

surrounding stars to local bonding.

**Phase symmetry** also states that space-time differs in different spin-orbit frequency space-time realms:

This is why we do not see space in either the quark (QCD) realm or space in the electron (QED) realm but we do see the equating forces as binding or repelling in our space-time realm.

The transition of QCD and QED from gauge theory to a precise spin frequency space-time realm concept will be absolutely necessary before a viable Theory of Everything is possible where mathematical unification of the forces is finally accomplished.

Look at the stars surrounding us. Even the ancients saw them as "fixed stars" and not moving their respective positions in the sky: In some respects they can be viewed this way both in **phase symmetry** and general relativity. But in other respects, especially in **phase symmetry**, there is important translational motion involved which is responsible for both energy and inertial mass. This is solid proof of Ernst Mach's inertial beliefs.

**Phase symmetry** tells us that this is a frequency universe and space is increased the more things are out of phase. This is simple to understand.



**Phase symmetry** also tells us that space decreases between **in phase** items. This should be understandable and if you have read all about **phase symmetry** you will understand exactly why.

If you understand all this, and that this is a phase universe, then you are ready to read more of the story of this frequency space-time continuum that we find ourselves in: This paper is too short to tell you the whole story or even a big part. I'm only "throwing a bit of light", herein, on how things **really** work.

Let's take this earth, for example, it's moving. We all know that.

But so is everything else. And the further we look out, we first see stars then galaxies then clusters of galaxies and then super clusters. And each of these is spinning at a lower and lower frequency the further we look out.

And each of these is more and more out of phase with us the further we look out.

So you are looking at things in lower and lower frequency space-time realms, the further out you look. And if someone out there looks back at you then they will see Earth the same way.

Thus both of you see this "**red shift**" — *from these lower and lower space-time*

*realms* — which is now seen, *as Hubble warned against seeing*, as an expansion that is happening at **all locations**.

It's wrong and Hubble's warning was right.

AGAIN, The repulsive force space between the various galaxies and stars is not quite as strong as in a black hole where no light at all can escape: The out of phase repulsive force between the galaxies and stars only slows down time enough to give the "red shift".

Even more important is the fact that now you can see — *because of these lower and lower space-time realms* — why it is we cannot accurately measure things in this universe by simply using this "speed of light" measuring stick that we have been using.

So, much of this dark matter and dark energy we think we need in this universe is merely because of our "speed of light" measuring mistake.

By using the concept of a gravitational field you will never understand why a galaxy spins like a solid wheel whereas planets in this solar system orbit faster the closer they are to the sun. Using **phase symmetry** this is easily understood.

Space is not one uniform thing: It's a myriad of out of phase repulsions. Space is the mean or average of these numerous out of phase repulsions: But these are separate repulsive **spin frequencies**, between everything, **THAT YOU SEE AS**

**SPACE** and therein lies the rub: When you describe space — *not only isn't it uniform but* — which spin frequency space are you talking about? These different spin frequency spaces have entirely different space-time intervals: There is quark generated space and electron space and our space, galactic spin space, galactic cluster spin space, etc., etc..

Because of that EQUALIZATION mentioned earlier, all these various spin frequencies are producing not only attractive gravitational forces, only one of which you can even half way measure, but EQUAL repulsive force space at those various spin frequencies: It's no wonder that your present affenstahl science has severe problems with dark matter and dark energy.

Better equalization of electron space gives light, electrical or chemical energy and better equalization of quark space gives atomic energy: Atomic energy is stronger because the down quark spins at the square of the electron's frequency.

Neglect the quark spin forces and retain field theory and you remain in the present affenstahl science world; the epitome of the blind leading the blind.

You've got more reading to do, so read and learn all you can about **phase symmetry** and glance at some of my other writings. To get the true big picture of what is really going on, all you have to do is read. I have never written a page unless I had something NEW to add. You don't even have to

pay to read these books and pages of mine: Magpul Industries pays to keep all this on the internet free. And people all over the world are certainly reading them.

The biggest complaint from my readers, so far, is the fact that it's not all collated well and some feel they have to read too much to get the entire **phase symmetry** big picture. My answer to them is — most are reading and not complaining. Just remember, it took me over four and a half decades to get the big picture and by reading everything you can see the big picture in far less time than it took me to see it.

If we are equating  $c^2$  with the tenth harmonic of the electron's spin frequency then it's plain to see **our math has led us astray**. Mathematician Stephen Wolfram and Dan Fitzpatrick seem to be the first two people ever to understand "**Math can only explain simple things but a 'simple model' can explain a complicated universe**".

**All binding attractions are IN-PHASE linkages.**

**All space type repulsions are OUT-OF-PHASE linkages.**

Fitzpatrick has given you, not only the '**simple model**' **big PHASE picture**, but also a good **simple model** of all the IN-PHASE binding ENERGY *attractive force* linkages in this entire universe.

The **total energy** of all the IN-PHASE *attractive force*

binding quanta in this universe equals the **total energy** of this OUT-OF-PHASE, *repulsive force*, spacetime structure of this universe.

But it is this OUT-OF-PHASE structure that is the structure, containing Dr. Milo Wolff's spinning, standing waves, that still eludes us in perfectly explaining the cause of what we see as space and time.

Even though we now have the big picture, the exact linkage model of these out-of-phase **repulsive forces**, along with these spinning, standing waves, is somewhat yet an enigma. Exactly why we see this entire spacetime assembly as the individual components of space and time, is a mystery wrapped inside this enigma. All scientists should be working on this mystery/enigma now: few are.

Now, thanks also to Dr. Milo Wolff and Stephen Wolfram, this is the best model of our universe that anyone has so far published.

You saw, part of the picture, herein that **phase symmetry** tells us what general relativity tells us. But by reading my other books and papers, you'll see even more: **Phase symmetry** shows us why mass can be converted into energy and why energy can only be delivered in quantum sized amounts. Also **phase symmetry** shows us what inertial mass really is and how Ernst Mach was right: Surroundings are very much involved. **Phase symmetry** shows us why we have centrifugal force. It shows us why we have gyroscopic action and it does a much better job of explaining all these things than present science does,

The reader will see how discoveries by [Dr. Milo Wolff](#) and [Saul](#)

[\*Perlmutter\*](#), combined with this brand new kind of science, will produce a veritable Renaissance — a science reawakening.

This REVISED PAGE: October 3rd 2015 [\*DPFJr\*](#)

P.S.

To keep this page short I had to leave out many more interesting things, but you will have to click on the following link and spend a lot more time reading to see those.

See: [\*Phase symmetry makes quantum theory more complete. 12-02-2013\*](#)

Phase symmetry makes quantum theory more complete.  
12-02-2013 also in Adobe.pdf - [\*phase.symmetry.pdf\*](#)