



Shedding a bit of light on

WHY General Relativity works

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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.

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 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.

If you start running an early jet aircraft vertical gyro, at noon time, because it initially levels itself, it's rotor axis will be pointing straight up, pointing at the sun. Then you can observe its "Earth rate" rotation: At 5pm it will

no longer be pointing straight up, but it will still 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 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 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.

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 inertial force linkage to the surrounding "fixed stars" is only one small part of "Mach's principle."

Present science merely gives "Mach's principle" lip service and fails to see half of our invisible forces. Not

only that but most have forgotten what Einstein told them.

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.*"

Einstein, back then, 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 quantum bound pairs and the **Milo Wolff limit** (*Hubble limit for the electron*).

The Milo Wolff limit is needed with all these impedance matched 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. In fact this is why we have quantum theory!

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.

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. Where field theory limits the quark strong force, *(strong force containment)* **phase symmetry** doesn't have to because it is this quark spin along with impedance matched 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.

Frequencies, like numbers, can both increase or decrease forever: This makes us wonder how many

more of these spinning entities there are, on this universe piano keyboard, that we don't know about.

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** higher than the next slowest spinning entity and that could be the case all the way along the keyboard of this universe.

Stars, galaxies, galactic clusters and superclusters are all separate entities: Nothing in the macrocosm resembles molecular structure.

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 bonding pairs* —

Attraction comes only with **in phase** impedance matched 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."

No photons! These bonds are via Minkowski geodesics in the surrounding space-time.

Phase symmetry eliminates fields and all the force carrying particles of those fields.

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 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 this electron binds with an electron in the star it gains a quantum of inertial mass. When it shifts back to closer binding, this inertial mass (*higher orbit*) is converted into a quantum of light energy.

But that was only an electron binding momentarily. Quarks can bind momentarily long distances too and also shift their binding back to closer binding. However, not all quarks are able to do this and their position inside the neutron has to be exactly right for them to do this: But when they do it, they gain inertial mass with distant binding and this returns as energy as they re-bind back as in the following bicycle wheel explanation.

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 then what are you doing to 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? you are forcing — *via translational motion* — a certain portion of the sides of those quarks, that are already spinning close to the speed of light, **even faster up the speed of light asymptote curve.**

Thus, the faster your wheels turn, the stronger the bonding with the surrounding stars.

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

There are strong bonds of force between the surrounding stars and your bicycle wheels: Those stars up there are the things that are holding you up on your bicycle.

Theoretical physicists all agree that we cannot analyze a quantum force via field theory: That's why we have quantum theory.

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. This was something I learned abruptly in 1966 while solving a problem in the avionics section of Pan American Airlines.

I learned then that in both field theory and quantum theory (modern science) we are only looking at half of the existing invisible forces.

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

What is so amazing is that so few listened to what Einstein said back then in 1954. It took me 12 years after Einstein died to see, perhaps, even a bit more about this misconception of fields than he saw. I then published my first book that explained how these quantum forces were being created: There was a full page devoted entirely to that first book of mine on page 29 of the June 18, 1967 New York Times, in the Sunday Book Review section.

Even with Einstein's words, "... **physics cannot be based on the field principle**," scientists are still using that old field concept today to try to figure out what

really is going on in this universe of ours over 50 years after Einstein emphatically warned them about using modern science that embodied this concept of fields.

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. And what I'm going to be describing next — *even though I call it spin* — are spin frequencies:

We all know the **magnetic force** emanates from the **electron's spin** — or spin frequency. But the following shows us something even more important:

We need an entirely new concept that will work in both micro and macro worlds and that, I found out after years of diligently looking, is **phase symmetry** below:

ALL attractive forces are **in phase** impedance matched, spin frequency, bindings.

— *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.

You see this space as uniform but it is definitely not: These are individual repulsive forces between everything that YOU SEE AS SPACE. Einstein saw part of this non-uniform space with his general relativity but **phase symmetry** shows us even more:

It shows us that where there are no repulsive forces — there is NO SPACE!

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 keeps 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 there can never be an overabundance of either **in phase** attractive forces or "out of phase" repulsive forces: Thus we get this universe of EQUALIZATION.

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.

Even Dr. Milo Wolff had trouble believing this **entire universe** began then: Milo said, *(copied from an e-mail)* " 'Inflation' and the present theory of the Big Bang - starting from nothing but pure energy - have little scientific basis. They are part of Fantasyland.">>Milo Wolff

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 a 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 precessing.

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.

By "patterning" these new magnets can 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.

There are no such things as fields of negative charge around these electrons. If there were, 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 dig in and 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 type of **"in phase"** attraction is helping elements and molecules hold 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.

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 the pi bond turns out to be weaker than the sigma bond, that only has a tiny portion of the closest sides of

both electrons "in phase".

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 overlapping orbits: The reason that you need two sigma bonds before you can have a pi bond is *they define the overlapping orbit planes*. The **in phase** pi polar bonding only happens when both these electrons overlap *exactly* pole to pole.

Phase symmetry is telling us that Niels Bohr was right after all: These are not orbitals. These are **real orbits!** The fact that we have both sigma and pi bonding **prove** they are real orbits.

That's not all you can learn with **phase symmetry**, here's some more:

Phase symmetry shows us why we have Einstein's

tensor math curved space. You will soon see that **Ampere** was the first person to show us how both space and repulsion are produced by things being "out of phase".

I have shown in my various papers — *and earlier in this paper* — the rest of the story: And this is where spin frequencies that are "in phase" are not only responsible for all the attractive forces we know about but also can produce even NO SPACE, through space-time, via a Minkowski geodesic. And that's why your eye gets a quantum of light from a distant star:

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!

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" that is pulling the iron element apart that is of **supreme** importance.

These quark forces in elements and molecules that are binding with the surrounding stars and trying to pull all these things apart, we notice as inertial mass.

These quark forces in elements and molecules — *same as above* — 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.

Presently, most scientists see little of this and call these

fictitious forces. **Phase symmetry** shows us they are real quark forces.

Scientists are only witness to the binding power of the electron that binds elements and molecules together at a speed of 3×10^8 meters per second. Quark to quark — *strong force* — binding is at 9×10^{16} meters per second.

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.

Back to iron:

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 really important:

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

Lighter elements than iron, have less quark ***internal*** binding and more quark ***external*** binding with the surrounding stars: Internal binding increases proportionally over external binding as each element

gets closer to iron. So by atomic fusion internal binding is proportionally **increased** and there is, after fusion, a gain of energy and a loss of inertial mass.

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

As we move to the right of iron, on the energy curve, these elements are gaining proportionally more mass, which is quark **external** binding with the surrounding stars. So we gain energy and lose inertial mass by dividing these elements via atomic fission

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Therefore *phase symmetry* shows us, that **atomic energy evolves** when the **new element** proportionally loses quark binding with the stars and gains quark internal binding. It also obtains **better** EQUALIZATION **or balancing of internal 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 is shifted back to *internal* binding then mass becomes energy as per $E=MC^2$: It's as simple as that.

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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.

Once you get a good grasp of what **phase symmetry** is showing you, you'll be light years ahead of that affenstahl mob that still believes in field theory.

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.**

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. Neither have most British astronomers. 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 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.**

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".

I have shown in my various papers — *and earlier in this paper* — the rest of the story: And this is where spin frequencies that are "in phase" are not only responsible for all the attractive forces we know about but also can produce, in an area devoid of repulsive forces (a geodesic), even NO SPACE. And that's why your eye gets a quantum of light from a distant star:

On that 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":

Therefore according to **phase symmetry's** concept of space — even though many light years of distance separated the electron in your eye from the electron on that distant star, there was NO SPACE between those tiny portions of those two electrons that were exactly "in 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.

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:

It's really "binding pairs" that cannot be created or destroyed. Binding can, however, be switched from close binding to distant binding or vice versa.

Space in **phase symmetry** only exists between "out of phase" entities. If none of these entities block a path where two entities can make an attractive **in phase** match (*a geodesic*), then there is NO SPACE between them.

No force carrying particles are needed, utilizing this revised type space: ALL force carrying particles are now **"gone with the wind"**!

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.

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.

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. Ernst Mach would have loved **phase symmetry** because it's an elaboration and solid proof of his 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.

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 all 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.

All attractions in **phase symmetry** must be impedance matched bonds whereas out of phase repulsions are not. The strength of these attractive impedance matched bonds — *Extremely Important* — **does not diminish with distance** — **why your eye gets a full quantum of light energy from a distant star** — but the distance these in phase bonds can attract each other does have a limit: For any electron to distant electron action this limit is the Hubble limit. This was Milo Wolff's discovery. While the strength of this binding does not vary with distance — *Extremely Important* — the number of these binding pairs varies as the square of the distance thus giving us our *faulty view of this being a field*.

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..

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 those quarks spin at the square of the electron's frequency.

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.

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.

November 18th 2014 [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](#)



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Fitzpatrick's website is at <http://www.amperefitz.com>

Another older website carrying Fitzpatrick's works FREE is:
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Thank you, [World Scientist Database](#) — — Daniel P. Fitzpatrick Jr.

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<http://www.amperefitz.com/45years.htm> 45 Years of Putting this Jigsaw Puzzle together — of unifying Gravity with all the other forces.

<http://www.amperefitz.com/question.htm> "Ampere's Long Wire Law is a fact!"

<http://www.amperefitz.com/why.general.relativity.htm> Why we have General Relativity or why mass increases with speed."

<http://amperefitz.com/answers.to.mendel.htm> "Dan Fitzpatrick comments on Theoretical Physicist Mendel Sachs' Beliefs."

<http://amperefitz.com/quarkspin.htm> "While the electron spin causes magnetism, GRAVITY & INERTIA are caused by the QUARK SPIN."

<http://amperefitz.com/abstract.htm> "ABSTRACT of scalar, standing wave concept."

<http://amperefitz.com/lawrm.htm> "It all begins with this all important science law."

<http://amperefitz.com/energy.htm> "All energy is a form of binding energy." (science) e-letter by Fitzpatrick.

<http://amperefitz.com/dark.m.e> Why NASA tells us we have 72% Dark Energy, 23% Dark Matter and 4.6% Atoms.

<http://amperefitz.com/gold1.html> More wave and scalar wave questions answered by Fitzpatrick.

<http://amperefitz.com/fermbos.htm> ELECTRONS are fermions but not when paired spin up - spin down."

<http://amperefitz.com/bond.strengths.htm> "Sigma Bond strengths in the microcosm."

<http://www.amperefitz.com/acceleratingexpandinguniverse.htm> "Accelerating, expanding universe."

<http://amperefitz.com/not.quite.everything.for.a.theory.of.everything.htm> "Not Quite Everything for a Theory of Everything."

[Schrödinger's Universe](#) Schrodinger's Universe

<http://rbduncan.com/why.we.have.gravity.htm> "Why we have GRAVITY and why we have Centrifugal Force.

<http://amperefitz.com/einsteins.blunder.htm> "Einstein's Biggest Blunder — Wasn't?"

<http://amperefitz.com/plawrm.htm> "Electrons normally repel BUT . . ."

says Dan Fitzpatrick Jr.

http://www.rbduncan.com/letter_june2004.htm "And Hubble warned us this was NOT an expanding universe."

<http://www.rbduncan.com/binary.htm> Binary Stars act exactly like Electrons.

<http://rbduncan.com/TOEbyFitzpatrick.htm> A "Theory of Everything" by Daniel P. Fitzpatrick Jr.

<http://rbduncan.com/boson+.htm> Bosons?

http://www.rbduncan.com/letter_june2004.htm Newton and Einstein only gave us HALF the story.

<http://www.rbduncan.com/mybook.htm> "A New Science Tool" (science) e-book by Fitzpatrick

<http://rbduncan.com/Gspeed.htm> "Speed of Gravity is 9×10^{16} meters per second."

<http://rbduncan.com/phase.coherence.htm> Phase Coherence and the Inverse Square law.

<http://amperefitz.com/lisiimp.htm> "Why Garrett Lisi's Model is so important."

<http://amperefitz.com/ffacts.htm> "Little Known Facts about Well known science Terms" (science) e-book by Fitzpatrick.

[Mach's principle](#)

[Stephen Wolfram](#)

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"Dan Fitzpatrick comments on Theoretical Physicist Mendel Sachs' Beliefs."

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"Fitz answers some Scalar Wave questions."

<http://amperefitz.com/26nov2006.pdf>

"And Hubble warned us this was NOT an expanding universe."

<http://amperefitz.com/lj2004.pdf>

"Ampere really gave us this Relative Motion Law in 1825 for things he knew were moving in the wire (electrons)."

<http://amperefitz.com/relMlaw.pdf>

"Fitz talks about some basic problems in physics." — by Fitzpatrick.

<http://amperefitz.com/3dec2006.pdf>

"Little Known Facts about Well known science Terms" (science) e-book by Fitzpatrick:

<http://amperefitz.com/ffacts.pdf>

"Lisi's E8 model seems to show us why we get space & time!"

<http://amperefitz.com/e8.pdf>

"Why Garrett Lisi's Model is so important."

<http://amperefitz.com/lisi—important.pdf>

"What Dr. Milo Wolff says connects with what A. G. Lisi is showing."

<http://amperefitz.com/a.g.lisi.pdf>

A radioman sees us all as radios tuned in to this universe.

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<http://amperefitz.com/Gspeed.pdf>

"Einstein's Principle of Equivalence or why gravity acts like acceleration."

<http://amperefitz.com/principle.of.equivalence.pdf>

Is Saul Perlmutter explaining the reason for us having the principle of equivalence?

<http://amperefitz.com/saultony.pdf>

"It's understanding the Binding Energy Curve" says Dan Fitzpatrick Jr.

<http://amperefitz.com/b.e.curve.pdf>

"All energy is a form of binding energy." (science) e—letter by Fitzpatrick.

<http://amperefitz.com/energy.pdf>

"Shedding light on Energy Quanta."

http://amperefitz.com/letter_july2003.pdf

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Daniel P. Fitzpatrick Jr.

