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Discovery of a Solution to the Heisenberg Uncertainty Principle Conflict Between Relativistic Intrinsic Spin and Classical Mechanics

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Abstract: The quantum relationship between classical mechanics and quantum strangeness has evaded mankind's understanding. The nature of spin alone defies classical comprehension. It is said that intrinsic spin can not be logically explained and or graphically represented. This paper will present both the mechanical explanation and the graphical representation of Intrinsic Spin. Revealing this simplistic discovery in and of itself should remove the shadow of mystery cast upon quantum level understanding presented by the Heisenberg Uncertainty Principle. It has also been said intrinsic spin must have to do with relativity but its connection is not entirely understood [1]. This paper will show that spin is directly related to relativistic relativity and has a solid foundation behind its existence. The measurements found for particle spin will no longer be in conflict with classical calculation and prediction based on this single discovery.

Keywords: discovery, solution, intrinsic, spin, classical mechanics, uncertainty, dilation.

Reference Frames

Relativity should not be approached from a shear classical approach but rather it should be examined from the realm it is describing. That realm is relativity. When talking about spinning reference frames we must consider more than just the base frame, B_0 , of which we are presently working in. A spinning reference frame once in motion starts to change as it moves and is no longer the prime base B_0 it started from. As the velocity continues to increase in the direction of relativistic speeds, the base B_0 starts to shift and change into a new reference frame of B_1 . By saying this we have just defined our new reference frame B_1 . What we have described and defined by the change (Δ) in reference frames is my discovery and claim. Our new reference frame B_1 is none other than "Dilation". The fine line of where our now two reference frames overlap will allow a window of operation for coupling between the two worlds (frames of reference). Through this window electromagnetic coupling can and does occur. This is why and how we are able to detect the rotation of an electron as being twice the ratio of our base reference frame B_0 . Our measurements of spin found are not in error as first thought. The measurements turn out to instead actually exist as measured. The electron has $\frac{1}{2}$ spin (720 degrees) for our physical spin 1 (360 degrees). Yet this strangeness can not be! Man can not justify these findings because relativity has been treated strictly from the B_0 reference frame only.

All of our actual measurements plus Dirac and Pauli equation/matrices tell us that other reference frames can and do exist. When dealing with moving objects that approach relativistic speeds, we must consider new frames of reference. These frames are frames under "Dilation" as long as we are observing them from our B_0 base reference, our

present here and now, frame. If we could jump straight to B_1 reference frame with no transit time in between as our electron does in its tunneling process, once we got there, our B_1 frame would now become our new B_0 reference frame and so on. This means we can have many reference (Time) frames within a single frame of reference. This is what we actually find when we measure the intrinsic spin of a particle. To keep the illustration simple we will use the Bohr atom example of the hydrogen atom in this paper for clarity of demonstration only.

Orbital and Spinning Reference Frames Under Dilation

Figure 1 below represents our single electron of both rotation/spinning and orbital motion at near relativistic speeds. The spinning electron must be well below relativistic or near relativistic speeds for us only to consider ΔB_0 . We know however the electron is moving in orbit (cloud) around our proton (nucleus) of the hydrogen atom at anything but less than near relativistic speeds. Man always observes the object under motion from his B_0 reference frame. The object, our electron, however is moving at high speeds and is in a new reference frame of its own ΔB_1 .

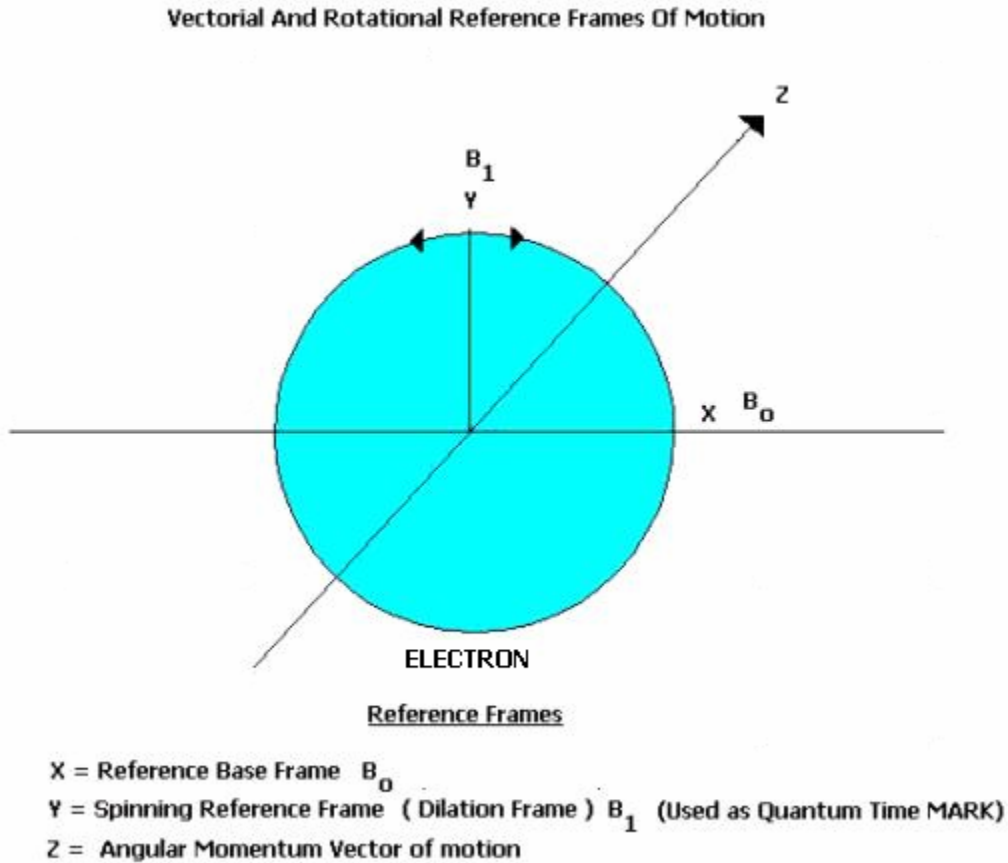


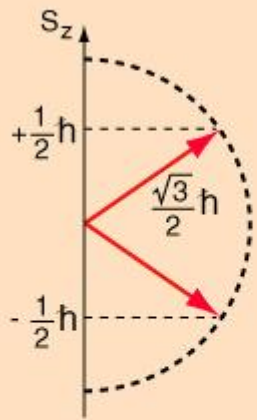
Figure 1. Vectorial and Rotational Reference Frames of Motion Graphic

The Discovery of Particle Spin being Actual Dilation

“Although the Pauli and Dirac matrices undoubtedly show the spin existence, there is some mystery as to the physical origins of and in the visualization of the spin.”[1] This is the bases of my natural discovery. The origin of this dilemma is due to the reference frame of the orbiting electron for the hydrogen atom being B_1 and observed/measured from B_0 reference frame. Reference frame B_1 is the reference frame under “Dilation”. B_0 reference frame, our measuring and observation reference frame, is not under dilation. In addition to this discovery of “Dilation” for B_1 , of the orbital and near relativistic speed electron, I have found there is a fine line or what is called “The Window of Operation“ in which electromagnetic coupling from B_1 to B_0 can and does take place. This is how we detect the dilation reference frame, B_1 , as being spin $\frac{1}{2}$. This window of operation in our reference frame graphic above is our present time frame orientation (polarization) for the “X” axis. This is where the B_{0+n} frames of reference synch to allow coupling. This is also what is called background noise in the electromagnetic part of the spectrum. As a side thought this “FIND” gives a whole new foundation for anything but the existence of a Big Bang Theory as the starting point of everything.

New considerations take new paths of thought. As I speak WMAP – NASA deep Satellite is finding just such a factor and that the universe is an open universe not closed as some think. We have no evidence of a vector to the starting point of a Big Bang. We do have properties that indicate the window of operation is real with established measurements known as particle spin. This is the starting point to working with real hands on warp technology. This is why this discovery is so important to consider. In a 1979 CIA Memorandum on Dr. Jack Sarfatti [2] it was written in regards to FTL or Superluminal communication that “ the absence of evidence for superluminal communications ... seems to argue strongly against the likelihood of its existence...” Not true! This existence lies in the same realm as our window of operation. There are phenomena that will argue in favor of FTL (Faster-Than-Light) communications. See EVP [3] (Electronic Voice Phenomena) and “ ParaSETI-Contact via Subtle Energies” [4].

Electron Spin



An electron spin $s = 1/2$ is an intrinsic property of electrons. Electrons have intrinsic angular momentum characterized by quantum number $1/2$. In the pattern of other quantized angular momenta, this gives total angular momentum

$$S = \sqrt{\frac{1}{2}(\frac{1}{2} + 1)} \hbar = \frac{\sqrt{3}}{2} \hbar$$

The resulting fine structure which is observed corresponds to two possibilities for the z-component of the angular momentum.

$$S_z = \pm \frac{1}{2} \hbar$$

Spin "up" and "down"

allows two electrons for

each set of spatial quantum numbers.

$$n, \ell, m_\ell$$

This causes an energy splitting because of the magnetic moment of the electron

$$\mu_s = -\frac{e}{2m} g S$$

Figure 2. Particle Spin for the Electron [5]

Spin UP vs. Spin Down of particle under Dilation

What we are looking at here has to do with the "what" and "how" quantum Time is measured. Quantum Time is not as our physical Time where Point A is measured in duration over distance to Point B. Quantum Time is measured as degrees [6] of Pi of the quantized angular momenta for the Z axis in reference to the base reference B_0 not under dilation-(our present reference point). From our B_0 reference frame a complete cycle in B_1 reference frame will be measured as 720 degrees. This is why we get a spin $1/2$ (720 degrees) for the electron instead of a spin 1 (360 degrees) as one might think. We also know one can not get 720 degrees of rotation (spin) out or 360 degrees rotation and yet we do for the electron measures to have intrinsic spin $1/2$ (720 degrees). Spin Up or Down is an increment of the quantum time cycle itself. (Quanta positioning-jumps) Remember actual position can not be plotted without destruction of the process. It can however with this discovery be quanta positioned virtually as degrees of Pi which gives us Spin UP or Spin Down for our electron. So now we have a solution to how and why we can and do get 720 degrees (B_1) out of 360 degrees (B_0). It also answers how and why we can get either a spin UP or a Spin Down for our electron which we also find. Time is omnipresent at the quanta level. Here we have our first glimpse into real hands on warp technology starting point. The new field of study is called "spintronics". The breakthrough "FIND" once again is that "Dilation" is taking place at the atomic and quantum levels of B_1 . The measurement can not be disputed, only my solution to the "why" and "how" by my claim is open for dispute. Sometimes the simplest of things are

right in front of us. We just have to stand back from time to time to see the complete picture. The search for dilation has been right under our nose all the time at the atomic and quantum levels instead of only being found in the deep space ballpark as red shifted objects moving away from each other at relativistic speeds. Sometimes looking inward is better than looking outward as man has been doing. This makes the physicist and other related scientist important tools in unraveling nature's most well kept secrets. Instruments alone can not do the job without proper direction and interpretation.

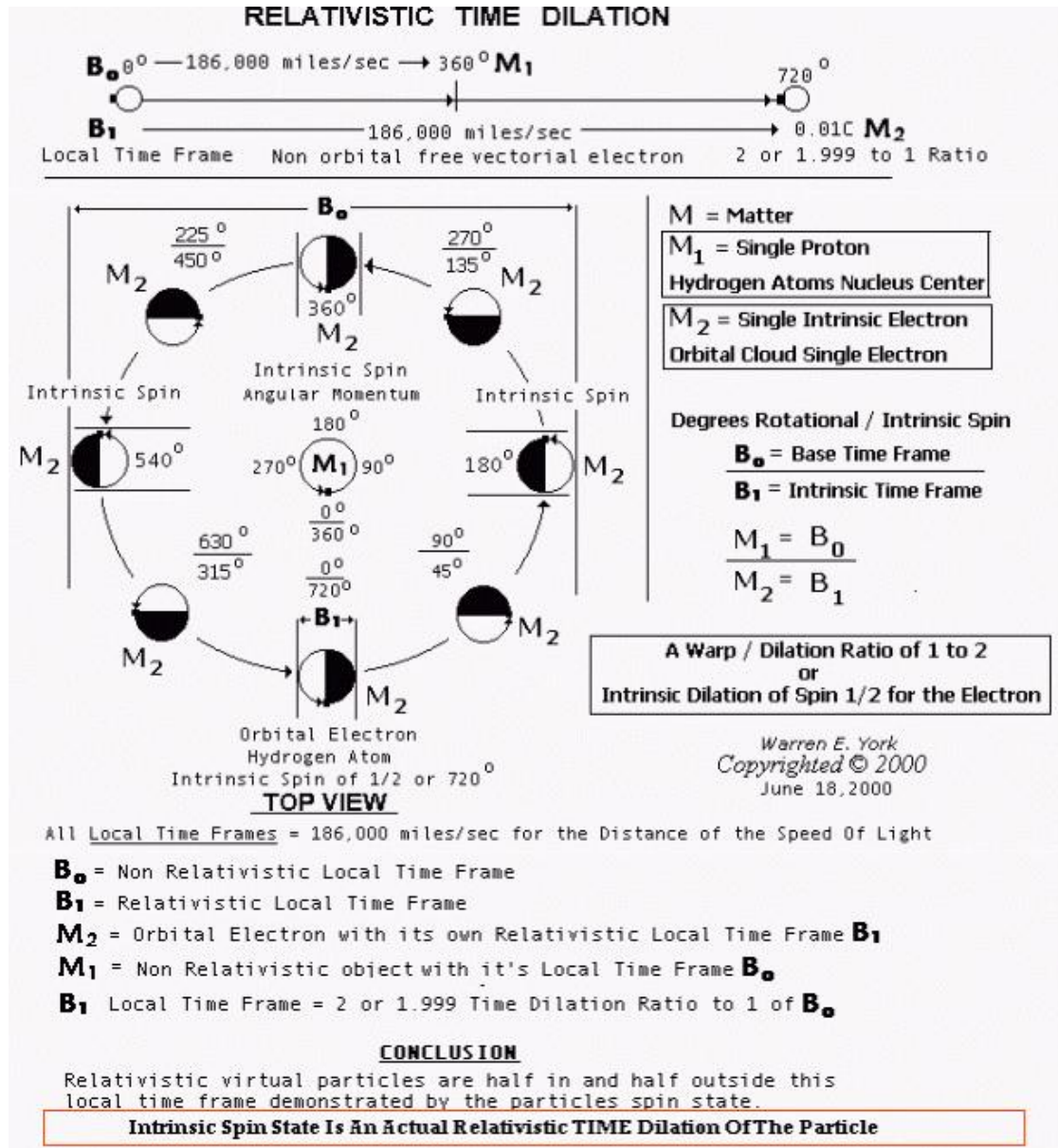


Figure 3. Relativistic Dilation Graphic [6]

Conclusion

Spinning or moving reference frames under near relativistic or relativistic motion are undergoing “Dilation”. This is the solution to quantum strangeness. Our measurements prove this. The measurements can not be disputed. The process is indeed one dealing with relativity. With this solution, intrinsic spin can now be motivated and justified in the frame of classical mechanics. True warp technology has a starting point; One that can and is being taken into the lab today for development and exploration. The final frontier is Space/TIME and not just Space by itself. The challenge is before us. What we do or do not do with it is up to the limitations we set on ourselves. The birth of hands on Warp Technology is soon to be upon us.

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Authors Note - Food For Thought: Any reference to pseudo science and phenomena has been considered taboo and off subject for most classical scientist and researchers. This is why in reference #2 above, evidence was noted and dismissed as being non existent by the CIA when in reality evidence is all around us. A true scientist will consider all possibilities of phenomena and let the science provide the correct answers. What we don't look at or explore to its fullest could hold the key to opportunity never before dreamed of. Point in question – EVP (Electronic Voice Phenomena). The author had dismissed such phenomena as nonsense but followed through with the experiment using proper scientific method anyway. The author found repeatable phenomena that has been ignored or overlooked due to its label. Until each of us take the time to explore and find out for ourselves what is or is not real, no words will convince anybody any different. Don't be blind to opportunity. Explore all possibilities to the fullest. Keep an open mind until all verdicts are in. Follow through even when you feel you are being foolish. Most anything can be resolved. The impossible or thought to be impossible just takes a little longer.

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