

# Empirical Evidence Suggest A Need For A Different Gravitational Theory

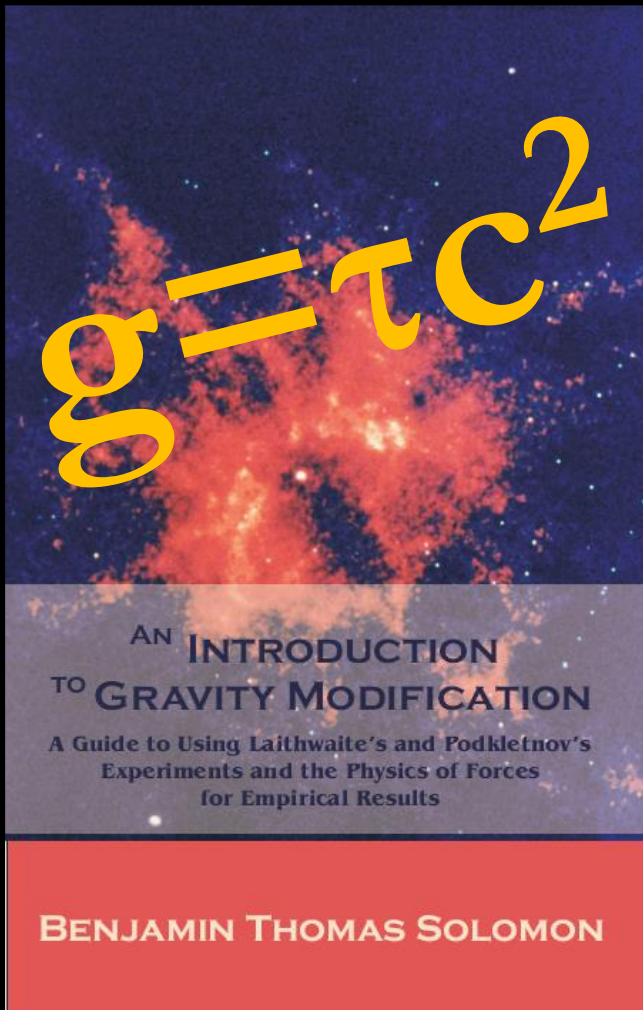
Benjamin Thomas Solomon

iSETI LLC

[www.iseti.us](http://www.iseti.us)

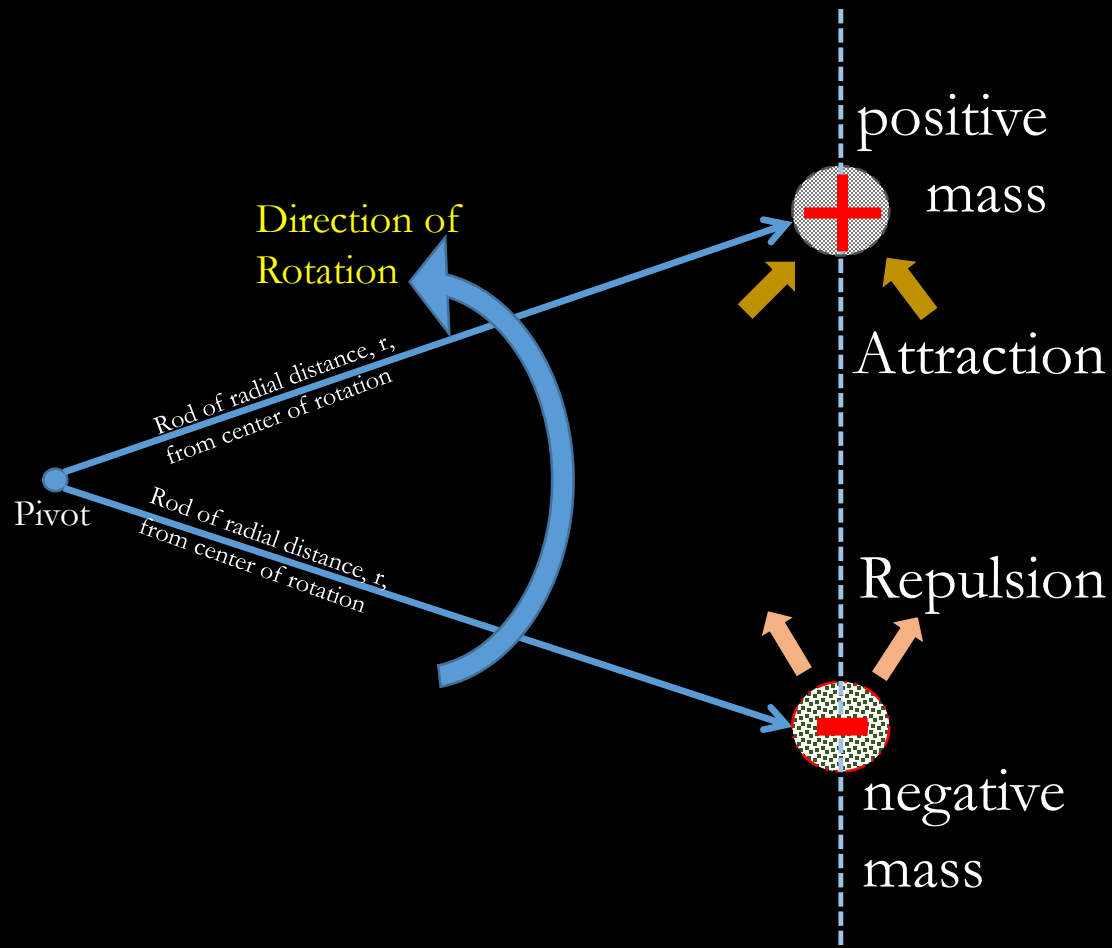
[benjamin.t.solomon@iseti.us](mailto:benjamin.t.solomon@iseti.us)

## 1.0 Benjamin T Solomon



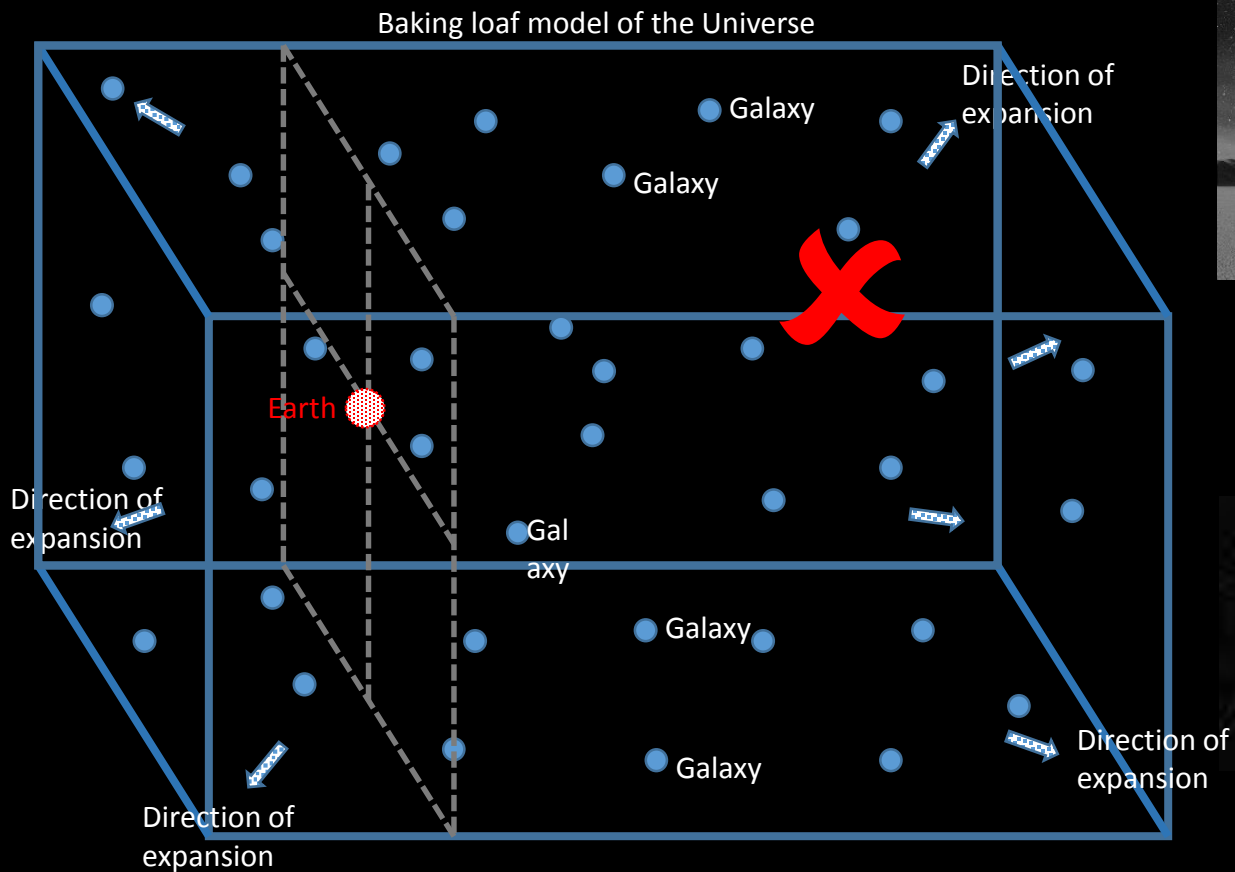
- Discoveries
  - $g = \tau c^2$  no mass in gravitational acceleration.
  - **Ni Field** unifies gravity & electromagnetism.
  - **Spatial probability** eliminates non-locality.
  - **Unified** shielding, transmission & invisibility.
- Numerous papers published, Physics Essays, SPESIF conferences.
- Published the 12-year study:  
**An Introduction to Gravity Modification.**

## 2.1. Exotic matter cannot exist in Nature



- Exotic Matter **cannot exists.** ✓
- Positive/Negative mass demonstrates **perpetual motion machine.** ✗
- Bondi (1957) . . . “the positive body will attract the negative one while the negative body will repel the positive body . . . the pair to move off with uniform acceleration”.

## 2.2. The baking bread model of the Universe is incorrect.

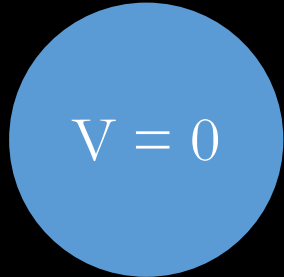


- Milky Way falsifies “Near the Edge” requirement.

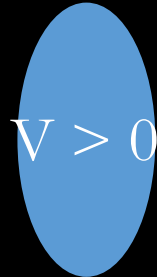


- Galaxies in Hubble Deep Field in **any** direction.

## 2.3. Tensile particles cannot exist in Nature



$$V = 0$$

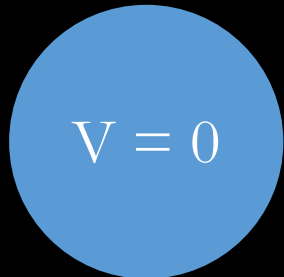


$$V > 0$$

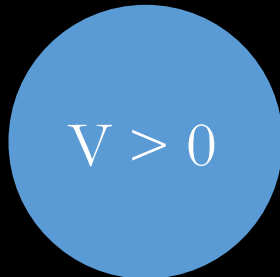


### Compressive Particles

- Lorentz-Fitzgerald Transformation (LFT).
- New fundamental discovery  $g=\tau c^2$ .



$$V = 0$$

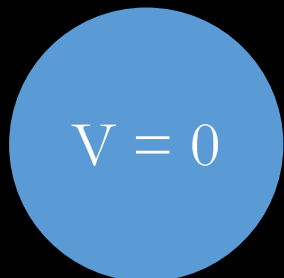


$$V > 0$$

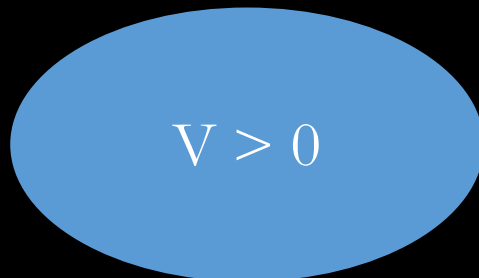


### Inelastic Particles

- No change with velocity.
- Don't exist in Nature.
- Quantum theory



$$V = 0$$



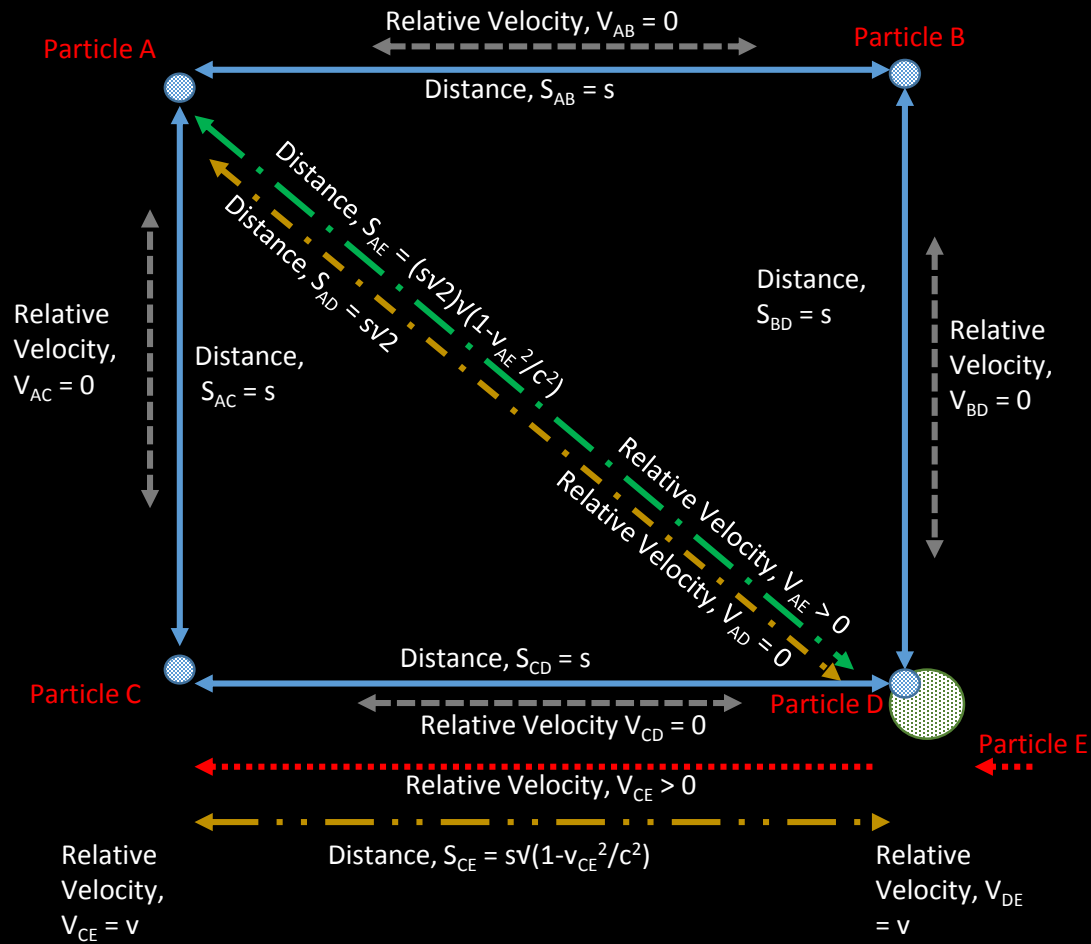
$$V > 0$$



### Tensile Particles

- Elongates with velocity. Contradicts LFT.
- $10^{500}$  variations in String Theories.
- No falsifiable fundamental discoveries.

## 2.4. Spacetime cannot be a continuum, it is much more sophisticated



- Spacetime **cannot** be a **continuum**.
- 4 Particles A, B, C & D are at rest relative to each other.
- Particle E approaches ABCD.
- Distances  $S_{AD} \neq S_{AE}$  even if  $D = E$ . ✓

## 2.5. Mass is a Proxy for Matter. Experimental Falsifiable?

$$g=GM/r^2$$

Or


$$g=G'.f(Q)/r^2$$

where  $f(Q)$  = function of quark interaction

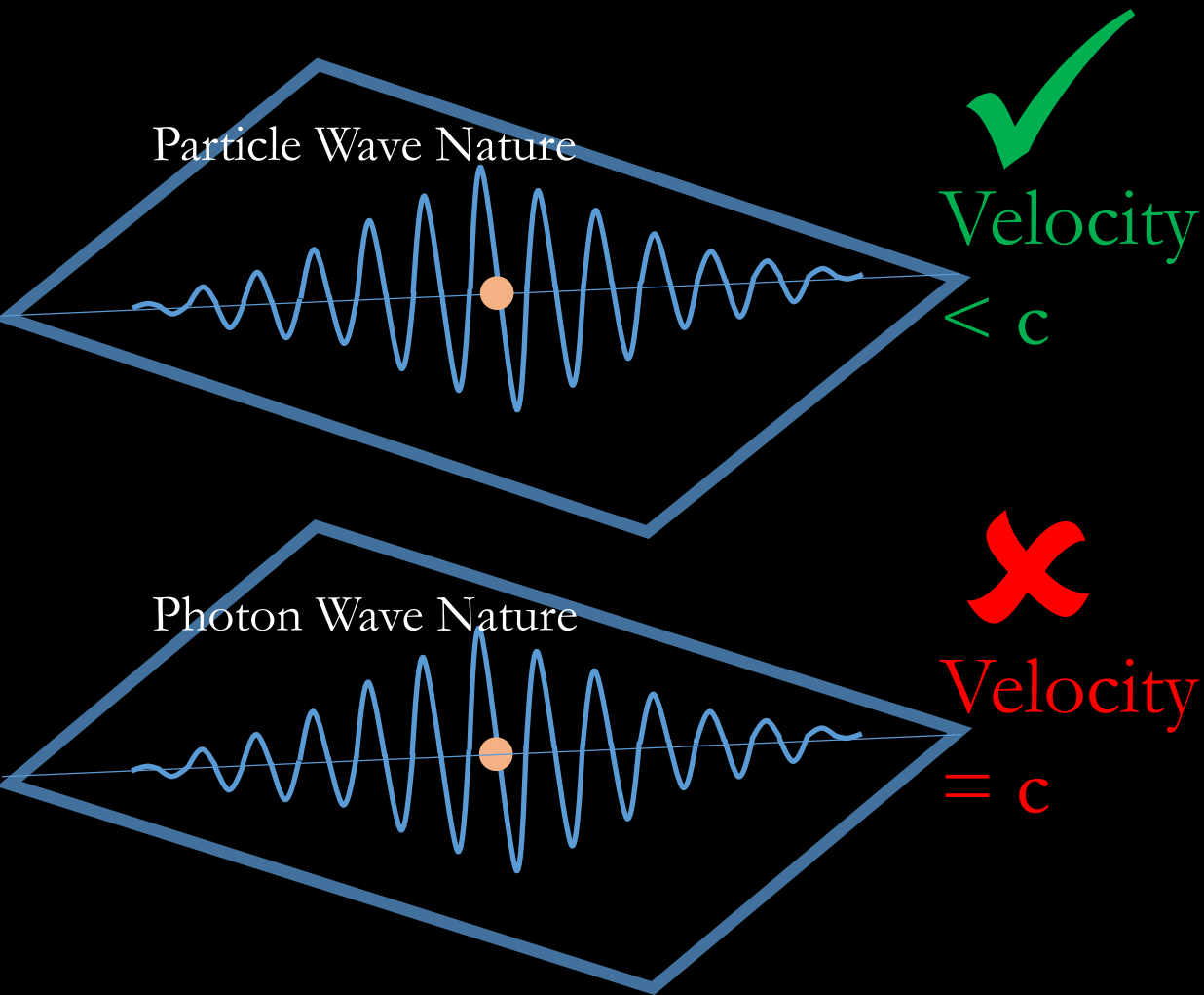
$$g=G''.f(em)/r^2$$

where  $f(em)$  = function of electromagnetic interactions that cause Ni Fields

- Mass is a measure of the amount of matter. 

- It does not reveal which part of matter that causes the gravitational fields. 

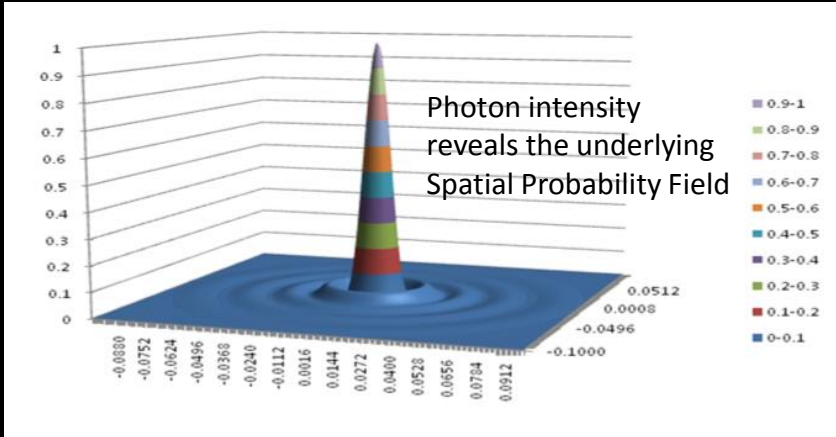
## 2.6. The wave function is not consistent. Does not have Velocity.



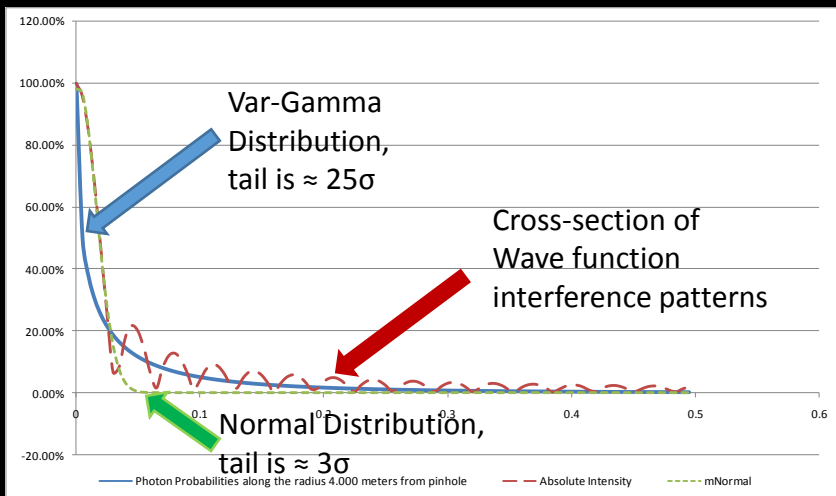
- Lorentz-Fitzgerald requires that the photon's wave function be of **zero thickness**.
- Solution:
  - Photon's disturbance of spacetime is observed as the wave nature.
  - Therefore **wave nature is not moving** and consistent with Lorentz-Fitzgerald.
  - Like a garden rake moving under a carpet.
- Particles cause ripples in spacetime which we observe as its wave nature.



## 2.7. Particle probability is not Gaussian. Var-Gamma.

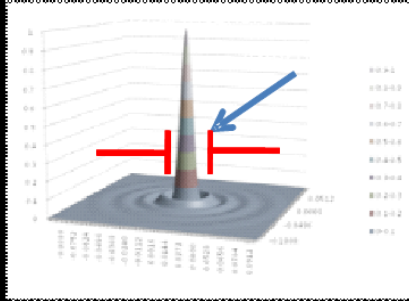


- The Spatial Probability Field provides the appearance of **Non-Locality**. ✓



- The photon is surrounded by a **spatial probability field** which is governed by the Var-Gamma probability distribution. ✓

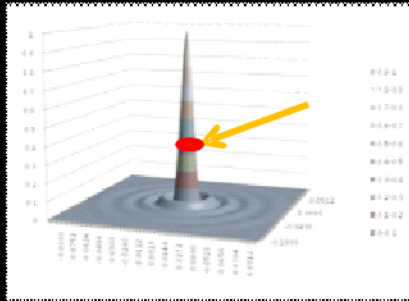
## 2.8. Spectrum Independent Photon Analytics. A Single Photon Theory.



Shielding Effectiveness,  $SE_p$ , is defined as the ability to stop photon propagation through holes of radius  $r$  in the material. Or ratio of probability outside the hole to the total.

$$SE_p = 10\log_{10}\left[\frac{P_{\infty}}{P_{\leq r}}\right] = 10\log_{10}\left[\frac{1}{P_{\leq r}}\right]$$

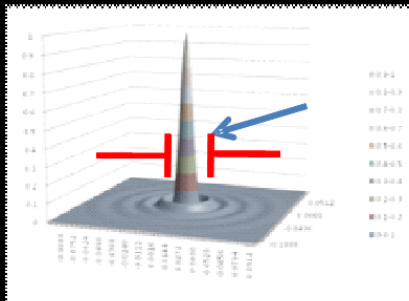
- Shielding, Cloaking / Transmission & Invisibility **unified**. ✓



Cloaking Effectiveness,  $CE_p$ , is defined as the ratio of the distribution that is present outside the obstruction of radius  $r$  to the total, i.e. the probability distribution that 'escapes' around the disc or obstruction.

$$CE_p = 10\log_{10}\left[\frac{P_{\infty}}{P_{\geq r}}\right] = 10\log_{10}\left[\frac{1}{P_{\geq r}}\right]$$

- Spectrum independent photonics:
  - Properties are a function of ratio of wavelength to geometry.
  - $I = Af(P) + B$



Invisibility Effectiveness,  $IE_p$ , is defined as the ability to pass through the spaces between atoms and molecules of radius  $r$  without interacting with the material. The ratio of the distribution that pass through the molecular separation to the total.

$$IE_p = 10\log_{10}\left[\frac{P_{\leq r}}{P_{\infty}}\right] = 10\log_{10}[P_{\leq r}]$$

## 2.9. Consistency between $\Gamma(v)$ and $\Gamma(a)$ . Spacetime is Sophisticated.

Non Inertia Transformation:


$$V_a = \sqrt{GM/r} = v$$

$$t_a = t_\infty \quad \Gamma(a) = t_\infty / \sqrt{1 - 2GM/rc^2}$$

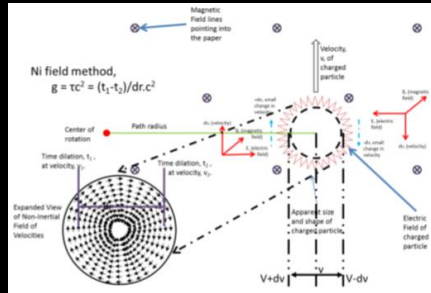
Lorentz-Fitzgerald Inertia Transformation:

$$V_v = v$$

$$t_v = t_0 \quad \Gamma(v) = t_0 / \sqrt{1 - v^2/c^2}$$

- Nature requires that
  - when  $V_a = V_v$
  - then  $t_a = t_v$
- There is a **deeper consistency** between Inertial & Non Inertia motion that physics now recognizes.
- This deeper consistency is due to the **Ni Field**.
- A **test** for theoretical versus natural gravitational fields.

## 2.10. Forces are not Transmitted by Virtual Particles.



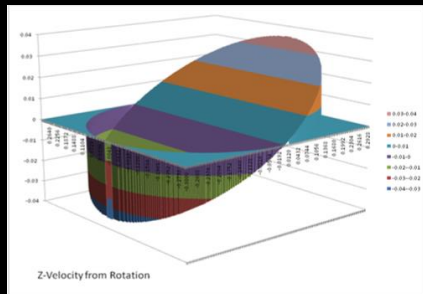
### Electromagnetism

- Ni Field explains what quantum theory cannot.



### Gravity

- Ni Fields explains:
  - Electromagnetic acceleration.
  - Gravitational acceleration.
  - Mechanical acceleration.

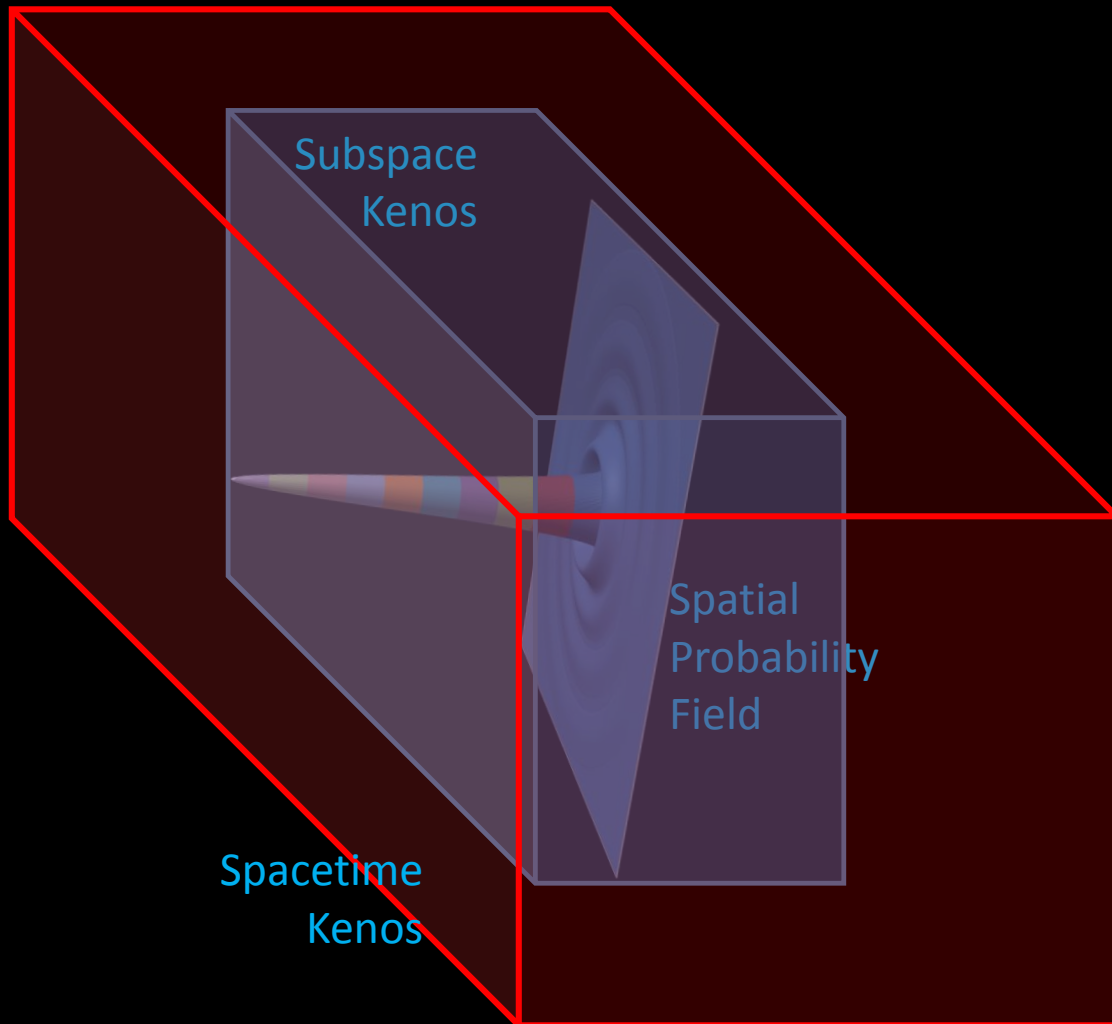


### Mechanical Forces

- Ni Fields uses a single common formula,  $g = \tau c^2$ .

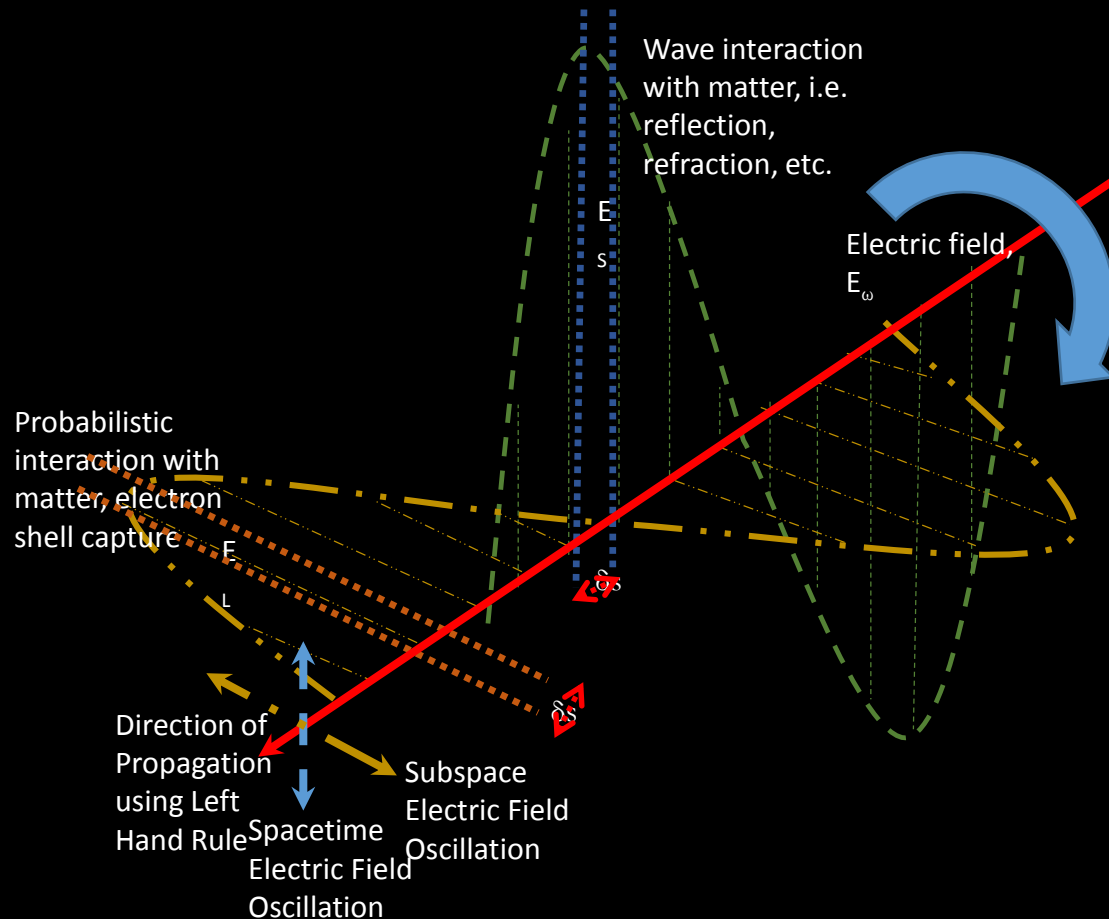


## 2.11. How are Probabilities Implemented in Nature?



- Kenos = layer of universe
- Spacetime =  $x, y, z, t$  kenos
- Subspace =  $x, y, z$  kenos
- Probability is a structure of subspace. ✓
- Subspace & spacetime overlap & coexists in the same region. ✓
- Therefore non-locality.

## 2.12 Photon Structure that is Consistent with Special Theory

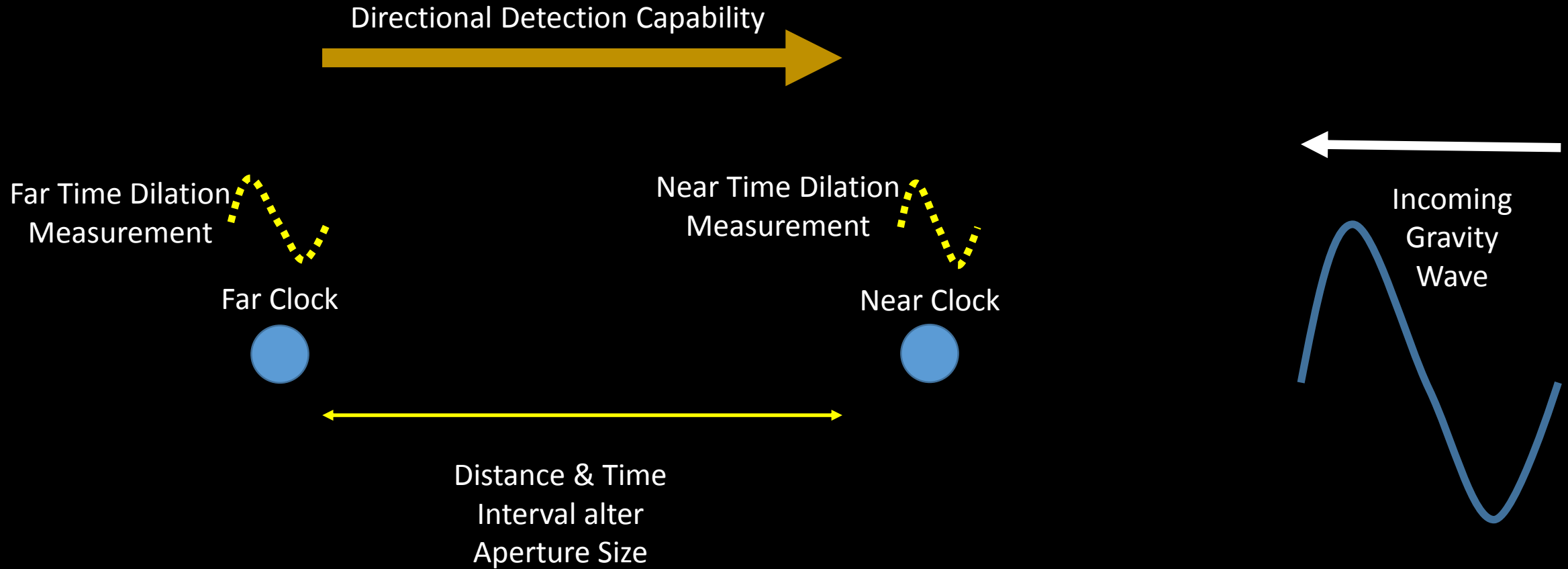


- If photon thickness,  $\delta s \approx 0$ , Special Theory is upheld but conservation of energy is not.
- Electric & Magnetic **supervectors**, that **rotate** out of phase through spacetime and subspace kenos.
- Supervectors ensure conservation of energy. ✓
- The spacetime component of the supervectors disturb spacetime to produce the wave nature. ✓

## 3.0 Applications for these New Results

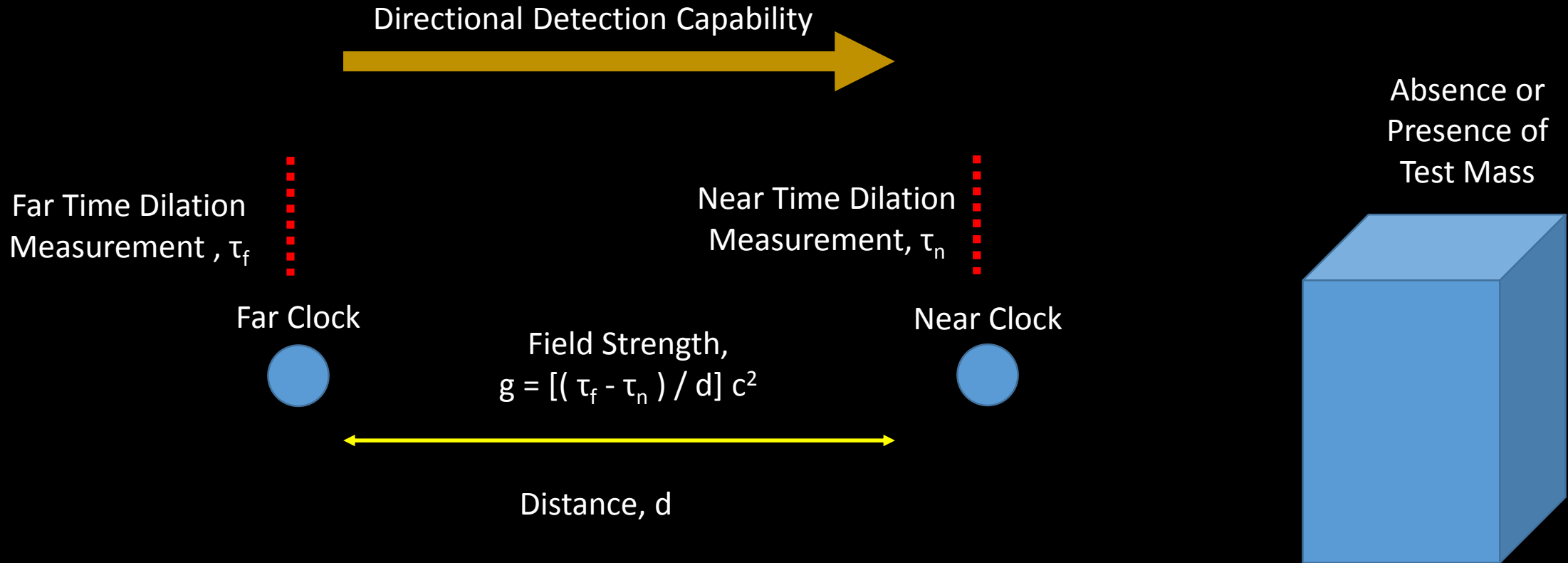
- Gravity Wave detection
  - Gravity Wave Telescope
  - Near Field Gravity probe
- Test for Subspace

## 3.1 Gravity Wave Telescope

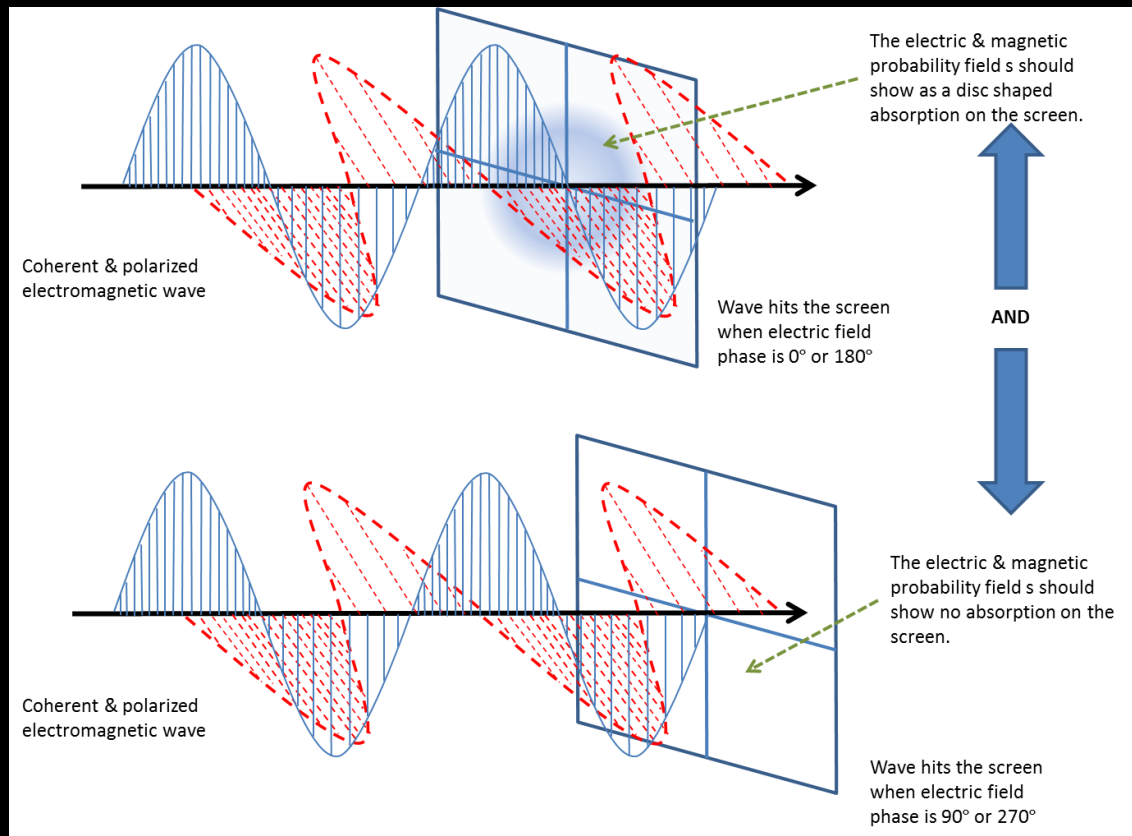




## 3.2 Near Field Gravity Probe



### 3.3 Test for Subspace



- Localization is  $90^\circ$  phase shifted with the peaks & troughs of the transverse wave.

## Conclusion

- 12 inconsistencies have been documented.
- 3 Experiments have been proposed.
- Several new properties have been proposed
  - ✓ Kenos structure of the Universe & Subspace
  - ✓ Photon Spatial Probability Field & Structure consistent with STR.
  - ✓ Ni fields that unify gravity, electromagnetism & mechanical forces.
  - ✓ Compressive particle structure consistent with Special Theory of Relativity.

## Contact

- Benjamin T Solomon
- [benjamin.t.solomon@iseti.us](mailto:benjamin.t.solomon@iseti.us)
- <http://www.iseti.us/>