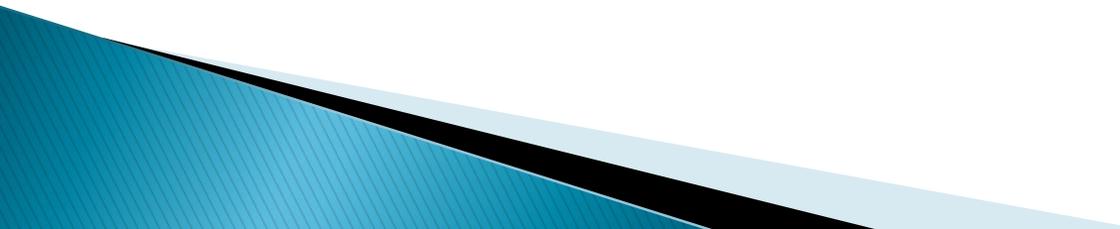


The Particle Theory of Light And Gravity Too?

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Facts about Visible Light

- ▶ Frequency
 - ▶ Speed
 - ▶ Colors (Retina: Red, Green and Blue Cones)
 - ▶ White light
 - ▶ Reflection
 - ▶ Refraction (Bending)
 - ▶ Wave/Particle Duality

 - ▶ But we don't know what it is!
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Sine Wave

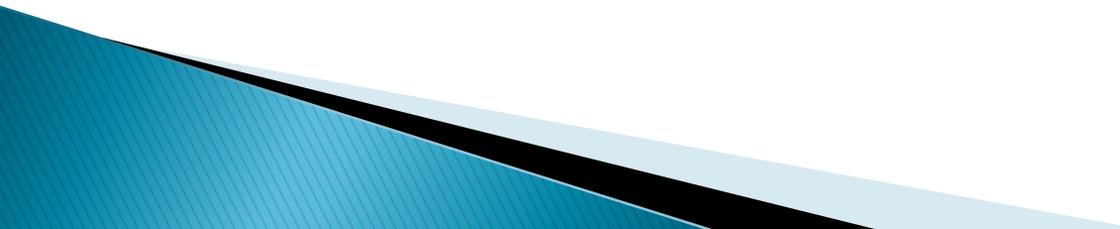
- ▶ Mathematical Model

- $a_t = A \sin 2\pi f t$
- $f = v_w / \lambda$

- ▶ The mathematics is continuous!

- How does nature generate a continuous wave?
- In three dimensions?
- Mixing all sources and different frequencies.

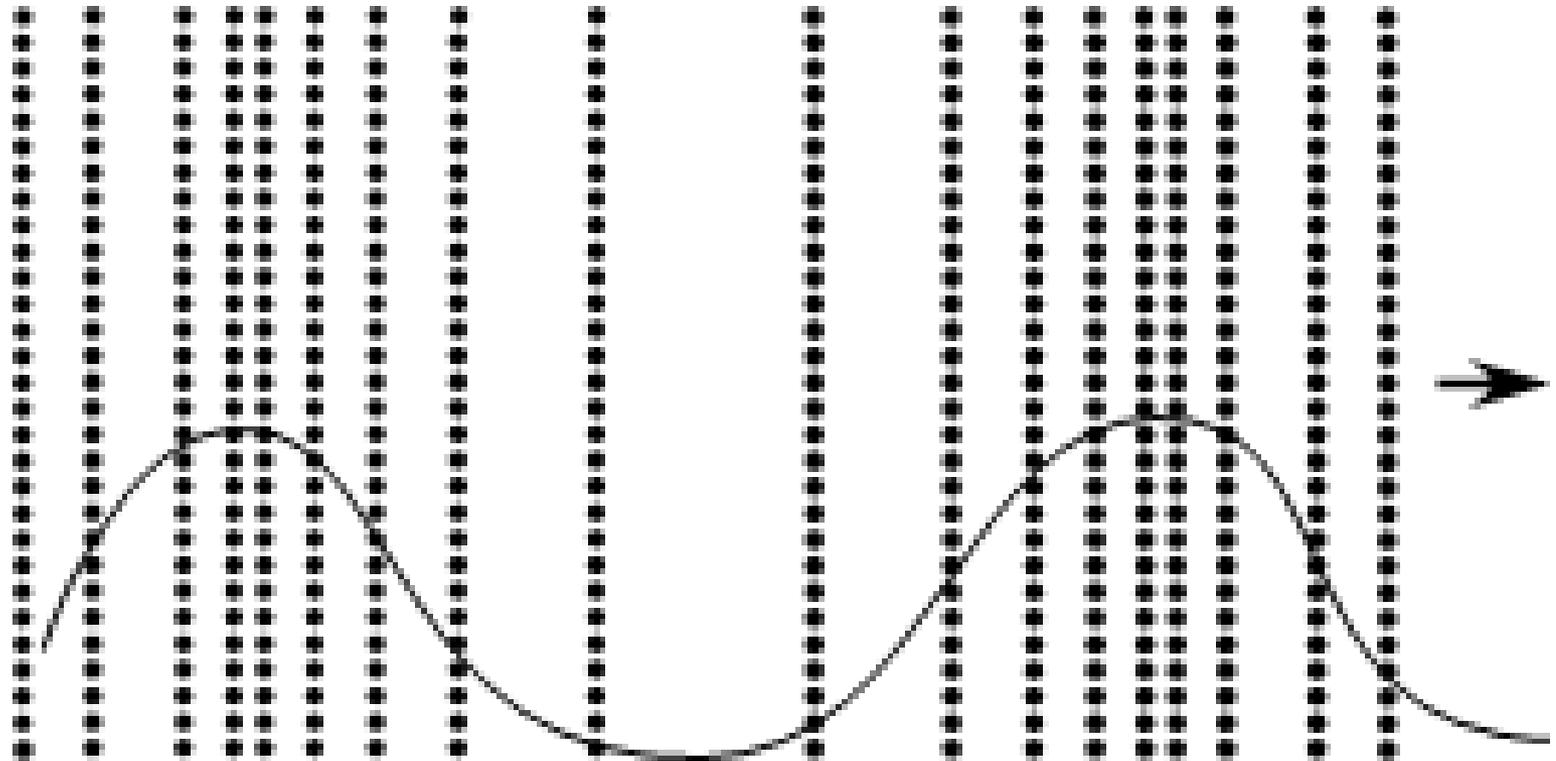
- ▶ No Physical Description



Particle Wave

- ▶ A series of particles that are distributed in a simple or complex pattern.
- ▶ Here is a possible sequence:
 - (55, 60, 70, 60, 55, 45, 40, 30, 40, 45)
 - Each number represents the number of particles in 0.1 seconds
- ▶ Particles move in a straight line.
 - At velocity 'c'.
 - High density is a positive peak.
 - Low density is a negative peak.

Physical Drawing



Math for the Particle wave

- ▶ Particle Wave

- (55, 60, 70, 60, 55, 45, 40, 30, 40, 45)

- ▶ Amplitude

- $A = (D_{Max} - D_{min})/2 = 20$

- ▶ Velocity – c

- ▶ Frequency

- $f_w = v_p/\lambda_w$
- One cycle per second.

Planck's Constant

- ▶ It was Max Planck [2] that defined the energy of a charged atomic oscillator as being proportional to the frequency of a wave. This is Planck's equation:
- ▶ $E = hf$
- ▶ Although this equation appears continuous, the energy levels are reported as quantized. 'h' is defined as Planck's constant.

Intensity

- ▶ The particle theory of gravity indicates that the number of particles per wave could be interpreted as intensity.

- ▶ $I \propto N_p / \lambda_w$

- ▶ Using $f_w = v_p / \lambda_w$, we get:

- ▶ $I \propto \frac{N_p}{v_p} f_w$

If this is True...

- ▶ $I \propto \frac{N_p}{v_p} f_w$
- ▶ Then Intensity is quantized because N_p is an integer. And....
- ▶ Planck's constant is not constant!
 - It is inversely proportional to the particle velocity.

Applying the Theory

- ▶ Frequency
 - ▶ Speed
 - ▶ Colors (Retina: Red, Green and Blue Cones)
 - ▶ White light
 - ▶ Reflection
 - ▶ Refraction (Bending)
 - ▶ Wave/Particle Duality

 - ▶ There is work to do!
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The Particle Theory of Gravity

- ▶ Fatio and Le Sage led the way.
- ▶ The theory has been totally discredited.
- ▶ I have been working this discredited theory for ten years. Here is my very first equation:
- ▶
$$F = \sum_0^{359} N_p (1 - A_b Z) \cos a$$

Le Sage Theory

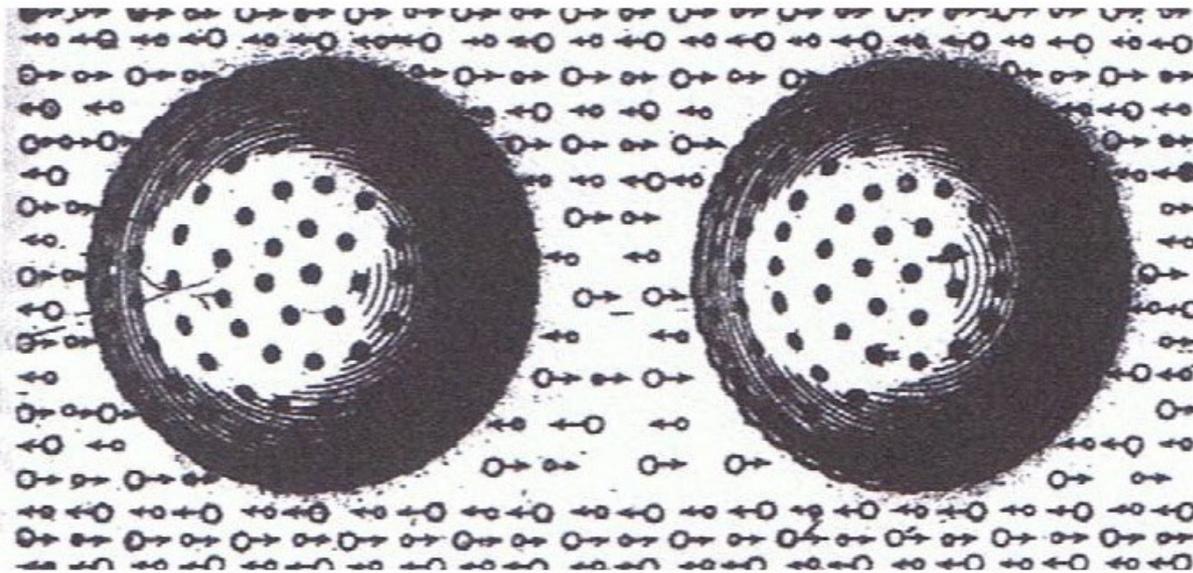


Fig. 2. Pairs of macroscopic bodies traversed by currents of ultramundane corpuscles. From Le Sage's *Essai de chymie mécanique*. Photo courtesy of the Library of the Royal Society, London.

A Low Frequency Wave?

- ▶ Could Le Sage particle stream be a low frequency low amplitude Wave whose intensity is based on the number of particles per wave?
 - ▶ Or is it an zero frequency and zero amplitude stream of particles whose intensity is based on the number of particles per meter?
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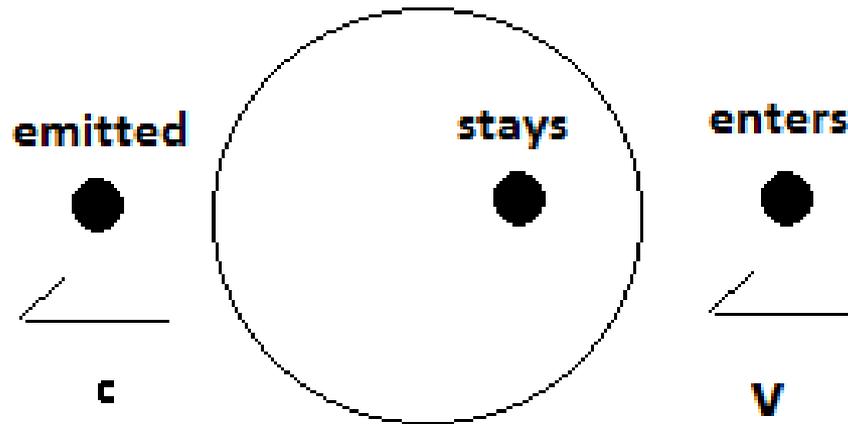
The Same Particle?

- ▶ Could gamma rays and radio waves be caused by the same particle as visible light and gravity?

Interaction Model

- ▶ I asked:
 - ▶ How can visible light have a slow speed in water and then speed up as it enters the air?
 - ▶ The Compton Effect shows gamma rays interacting with an object and emitting an electron.
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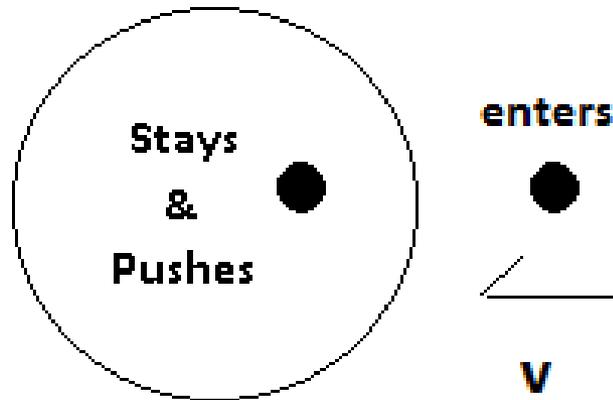
A Proposed Model



- ▶ It can stay and push the water or
- ▶ It can stay and push;
 - and then be pushed out a small time later.

Stays

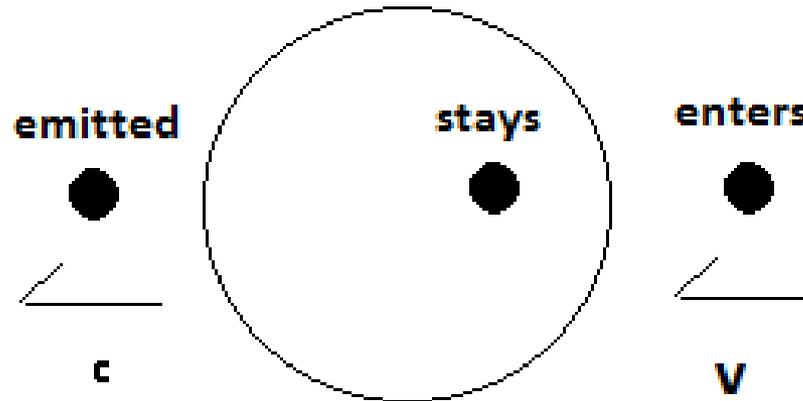
- ▶ It pushes the object



- ▶ And it adds matter to the object

Emitted

- ▶ Based on cause and effect, there is a small delay from the time it enters to the time it is emitted.



- ▶ Particle is emitted at speed c (A proposal).

Interaction Model

- ▶ This model would work for visible light and gravity.
 - ▶ Does it work for all EM frequencies?
- 