

To address or understand the problem of  
**Absolute Objective Time**

it is necessary to investigate the problem of  
cause and effect.

Cause and effect are fundamental to the operating  
of the universe. All of physics is essentially  
investigation of the role of cause and effect.

And, inherent in the principle of cause and effect  
is that the cause must precede the effect in the  
sense that the cause must be extant before the  
initiation of the effect.

Therefore investigation of cause and effect  
necessitates investigation of **Time**.

## PRIME OBJECTIVE TIME

### SECTION 7

## *Absolute Objective Time*

*Just as “Invariance” of all physical laws and their constants depends on a single prime frame in which everything is and operates,*

*so*

*“Reliability” of cause and effect requires a single prime time in which everything, all events, occur.*

### THE ABSOLUTE STANDARD OF TIME

The first issue with regard to the subject of absolute objective time is, “Where is it ?” or, more precisely, “What or where is the arbiter, the incontestable standard, the point of reference for objective absolute time.”

In sections 2 and 3 it was developed that the fundamental particles, protons and anti-protons, are oscillations at a frequency,  $f_{wve}$ , derived from the Big Bang [Equation 3-6]. Specifically the proton and anti-proton oscillations are at the naturally occurring arbitrarily determined frequency of the original oscillation [the wave] that was the beginning of the universe [Equation 2-16].

Even that frequency of oscillation is not always stable in that it varies with variation in the oscillating proton’s absolute velocity relative to “at rest”, the prime frame of reference as developed in section 4, “Motion and Relativity” [Equation 4-2].

However, all of the universe’s protons [the most abundant ubiquitous particle of the universe] when at rest [at zero velocity relative to the prime frame] oscillate at the most fundamental frequency in the universe,  $f_{wve}$ , the original oscillation frequency by means of which the material universe began, a frequency that cannot vary except by motion of the proton and which motion is always relative to the fixed, standard prime “at rest” frame of reference.

And that at rest frequency,  $f_{wve}$ , the frequency of the proton “at rest”, or rather its inverse, the time measured by the period of that oscillation, is a completely stable standard of TIME.

“Time” is the occurring of events in sequence, a sequential order resulting from cause and effect, the dependence of the effect on its cause.

RELATIVE PERCEIVED TIME

The Lorentz Contractions, [Section 4 and Equation 4-9] describe that the time experienced in a frame of reference varies with the velocity of that frame. The Lorentz transformations are coordinate transformations between two inertial frames. More precisely, for frame “A” at velocity “v” as seen by frame “B” relative to frame “B”, then observed time periods in frame “A” are lengthened relative to those in frame “B” so that in frame “A” time passes more slowly than time in frame “B”.

But, how can that happen ? What is going on ? In Section 4, Equation 4-2, it was shown that the effect of velocity on the *Spherical-Center-of-Oscillation* is to force its frequency of oscillation to decrease and its wavelength to correspondingly increase. That is a result of the essential principle of “Invariance”, that the laws of physics and their fundamental constants are the same every where in the universe in every frame of reference. The Equation 4-2 expression for the wavelength increasing is identical in form and constants to the Equation 4-9 expression for the Lorentz Contraction of time. Of course, the “wavelength” of Equation 4-2 is the period of the oscillation in time and that of the Lorentz Contraction.

“How that can happen” and “What is going on” is that the Lorentz Contraction slowing of time is the actual decreasing of every *Spherical-Center-of-Oscillation’s* frequency and the corresponding lengthening of its wavelength, the lengthening of its time period, the slowing of the flow of time all forced by its motion, its velocity.

The *Spherical-Center-of-Oscillation’s* oscillation produces the stream of pulses of *Propagated Outward Flow* by means of which all Coulomb, gravitational, and magnetic effects take place. The decreasing of its frequency, the time rate at which those pulses occur, is a slowing of the various processes mediated by the Coulomb, gravitational and magnetic action of those pulses, causing those actions to take longer, an apparent slowing of time.

A consequence of the Lorentz variability of time, and of that the rate at which time flows is dependent on the velocity of the frame of reference involved, was the 20<sup>th</sup> Century denial of absolute objective time. In their lacking the concept of an objective prime frame and of the proton oscillation and its role as the standard of prime objective time the 20<sup>th</sup> Century scientists’ denial of absolute time was wrong but not unreasonable.

In 20<sup>th</sup> century physics, the relativity of simultaneity is the concept that whether two spatially separated events occur at the same time is not absolute, but depends on the observer's reference frame. That allows variability in time and timing and undermines the fundamental requirement of the physical functioning of the universe, namely that every effect has a precedent cause, that cause and effect always operate, that they are essential and underlie all of physics. The relativity of simultaneity undermines that because it opens to question the fundamental requirement that a cause be extant before the initiation of the effect.

QUANTUM MECHANICS AND TIME

Quantum Mechanics does not overtly state its denial of cause and effect; however, the interpretations it puts on various effects are equivalent to denial of cause and effect at least for those effects.

One such case is the Quantum Mechanics denial of the limitation of the speed of light in contending the existence of communication or transmission over extensive distances instantaneously. That results from non-understanding of: “what determines the speed of light” and of “the effect of motion on particles”.

### What Determines The Speed of Light

Every oscillation that we know in nature exhibits, and the very theory of oscillations in the abstract requires, that the oscillation consist of two aspects of the substance which is oscillating [e.g. pendulum position and velocity or electric potential and current] storing and exchanging back and forth the energy of the oscillation. With one aspect varying in oscillatory fashion then when that aspect decreases there must be some "place" for its energy to go, a place in which it is stored until it reappears in that aspect when it increases again. It cannot completely disappear or be lost because the oscillation would die. That "place" is the oscillation's second aspect and it obviously must vary in a manner related to the first aspect's variation with its energy storage in opposite phase.

Like electric inductance and capacitance determining the speed of propagation along a transmission line,  $\mu_0$  and  $\varepsilon_0$  determine the speed of the [1 - Cosine] form oscillation propagation by setting the two aspects of the oscillation in which they are involved, the aspects between which the oscillation energy exchanges back and forth.

But, when the original oscillation came into existence at the beginning of the universe it did so in absolute nothing. There was no “free space” with  $\mu_0$  and  $\varepsilon_0$ . There was nothing but the original oscillation. And, after the immediate explosion into all of the particles of the universe, each of those particles was sending its *Propagated Outward Flow* into nothing, into emptiness.

Where did the *Propagated Outward Flow*'s  $\mu_0$  and  $\varepsilon_0$  come from? The only thing they could have come from was the original oscillation. There is no other possible source because everything else was absolute nothing, “the zero of existence”. The  $\mu_0$  and  $\varepsilon_0$  are inherent in the substance of the oscillation, which means,  $\mu_0$  and  $\varepsilon_0$  are also inherent in the outward propagation. Each particle's *Propagated Outward Flow* contains its own  $\mu_0$  and  $\varepsilon_0$ .

And that sets an absolute limit on the speed of communication by *Propagated Outward Flow*, Equation 3-18.

### The Effect of Motion On Particles

With the *Spherical-Center-of-Oscillation* moving in some direction the center's motion and its propagation conflict. In the direction of motion the velocity of the center,  $v$ , tends to add to the natural value of the speed,  $c$ , of propagation of the *Propagated Outward Flow* and in the opposite direction it tends to subtract. But, the speed of the flow is fixed; set at  $c$  by  $\mu_0$  and  $\varepsilon_0$ .

As presented in detail in Section 4, that conflict forces an adjustment of the oscillation of the *Spherical-Center-of-Oscillation*. That adjustment results in increased mass, increased resistance to acceleration, a mass and resistance that approach infinite as the velocity approaches, but never reaches, the speed of light, Equation 4-6 repeated below.

$$(4-6) \quad m_v = m_r \frac{1}{\left[1 - \frac{v^2}{c^2}\right]^{\frac{1}{2}}}$$

And that sets an absolute limit on the speed of communication by particle motion.

**SUMMARY**

At the time of the development of Lorentz’s contractions and of Einstein’s relativity they had no knowledge of the existence of the prime frame of reference, the “absolutely at rest” frame. They also had no knowledge of the Big Bang and of how it happened and of how it led to the behavior of matter today. Plus, they did have knowledge that perceived or experienced time varied with velocity.

Thus an absolute objective fixed standard of time was literally inconceivable to them. They could only conclude that time was completely relative; it was what each observer independently experienced it to be.

Also, at that time of Lorentz’s and Einstein’s research the principle of cause and effect was a fully accepted and understood axiom of physics. It was not open to question and was not in need of support.

Their denial of absolute objective time was completely natural and to be expected.

However, now that is all changed:

- There is the now established “arbiter, the incontestable standard, the point of reference for objective absolute time”, the oscillation of “at rest” protons, and
- That is the *single prime time in which everything, all events, occur*, and
- Because real objective time of all events is that of the absolute time standard the Reliability of cause and effect is assured.

Time is relative only for various different observers as perceived by them from their personal local frame of reference.

*Which means now that it is time to resolve the major problem in human society the problem that has led to world-wide war, rapine and holocausts: the destruction of objective reality and absolute truth.*

*Section 8 – The Adverse Effect of Subjective Space and Time*



