

# The Tron Theory

## A novel concept for the Ether and Matter

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The Tron Theory is proposed for unifying physical science. It presents a new fundamental particle called the tron. Trons are much smaller than electrons. Trons are simple spherical-like structures. They are composed of a variable number of smaller particles called rons. Rons have the same structure as trons. Rons are composed of even smaller particles called Ons. The average diameter of a tron depends on the number of rons it contains. Adjacent trons are premised to attract each other with an elemental force that is neutral of charge. This force is inversely proportional to the distance between tron centers. The composition and dynamic properties of the tron and ron are set forth in seven axioms forming the Tron Postulate. The Tron Theory is derived from the Tron Postulate. The Tron Theory claims: There is an ether (herein to be referred to as the tronons). It is composed of tenuous arrays of contiguous trons. The tronons has a variable density that depends on the local electric or gravitational potential. Highly compressed arrays of trons cohere to form the fundamental particles. The phenomena of Quantum Mechanics arise from interaction of the fundamental particles with the tronons in a completely deterministic and causal manner.

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### 1. Introduction

Despite its comprehensive scope the Tron Theory requires relatively few theorems; it is not highly mathematical; it is essentially mechanistic. It presents a physical basis for matter, for gravitation, for electromagnetic fields, for nuclear binding, and chemical bonding. The phenomena of Special and General Theory of Relativity are shown to have alternative explanations. The concept that the universe has three dimensions and absolute universal time is restored.

The tron theory presents a new basis for the physical fields as rarified mediums that are orderly tron assemblies. There is a distinctive tron-array for each respective type of field, including gravitational space. All radiant energy is shown to be wave trains propagated through the tenuous medium.

The Tron theory presents a way of describing the physical world that is comprehensive and consistent. It enables one to visualize particles and fields and their interactions. The electric, electromagnetic, and the gravitational fields of space are interrelated through their common tron basis. The properties of the ether derived from the Tron Theory are very different from other ether concepts. We assert that this new ether concept overcomes the objections that led to its banishment. We give it a new name: tronons.

The unification of the macro and micro worlds is also achieved. Duality between waves and particles is dispelled. The wave nature of micro-particles is revealed to

be a harmonic perturbation of the average velocity of a free micro-particle or the size of a bound micro-particle. The particle-like properties of electromagnetic radiation are shown to arise from pulses of electromagnetic radiation. This insight is derived from the Tron Postulate and is the basis for explaining and deriving the phenomena of Quantum Mechanics. It provides a view of micro-particle behavior that is mechanistic, causal, and deterministic.

### 2. The Tron Postulate

The tron is presented as the as a universal dynamic particle. Myriads of them are shown to construct the atoms, bind them into observable matter, and also form the imponderable physical fields. Trons are premised as inherently contiguous, filling up the cosmos. The tron concept could possibly present the primordial material that underlies physical Nature. The Tron Theory provides significant correlations of known physical phenomena and data. Elemental physical processes can now be visualized through the dynamic tron constructs. The tron theory views physical Nature as a completely causal and deterministic. It will be shown to evolve from the fundamentals in common sense ways.

The Tron Theory of the physical world is constructed from the following Seven Axioms forming the Tron Postulate for the unseeable trons and rons. It is developed therefrom in congruence with established phenomena and data:

Axiom-1. Trons are particles that are very tiny, far tinier than electrons. Each tron is constructed in the same

manner, with a miniscule mass-core that is embedded in a pliant cloud. Trons have minute mass and are neutral of charge.

Axiom-2. The tron's cloud is an array of numerous rons. Rons are particles similar to trons, but much minuter in size. The tron's core is formed of compressed rons. Rons thus underlie and support the trons. The rons in turn are similarly supported by even tinier ons.

Axiom-3. Rons are arranged around a tron core as a cloud of successive shells generally spherical in shape. The size of each ron is proportional to its distance from the tron's center. Each full ron-layer about a tron is made up of the same number of rons regardless of radial position. A tron's size or diameter is determined by the number of its ron-layers.

Axiom-4. An intrinsic characteristic of each tron is its continual potential to attract rons onto itself, and make its ron cloud bigger. Such ron attraction potential by each tron is inversely proportional to the radial position of its outer rons. Rons attract ons onto themselves in a similar manner.

Axiom-5. The size and shape of a tron stabilizes when its peripheral rons are the same size as the boundary rons of trons that surround it; and similarly for a ron as to contiguous ons.

Axiom-6. Tron displacements are communicated swiftly by corresponding displacements of the rons that are thereby peeled off the trons. The ron displacements are along paths of contiguous trons. The ron displacements are similarly telegraphed ahead by displacements ons along ron paths. In the density of tron space adjacent to the earth's surface the speed of ron transmission is the electro-magnetic  $c$ . This speed is lower through regions of higher tron density, and vice versa.

Axiom-7. The Universe is filled with myriads of trons. All trons are contiguous with other trons, throughout. Rons fill the interstices between contiguous trons. Ons fill the interstices between contiguous rons.

### 3. Discussion

Trons are represented in tron diagrams as small circles with a dot in the center. Their diameters indicate their relative "size". A larger tron has more ron layers and is thereby "softer" at its peripheral region than a smaller diameter tron. The ron is composed of successive on-layers, in similar relation. Fig 1 shows a cross section of a spherical tron. Its ron diameters increase with their radial position. There are innumerable ron-layers. The same number of rons are in each ron shell. The actual tron is tiny, with a most minute tron core (tc). The core (tc) is formed of compressed rons. The cloud (rc) of successive ron-layers is of generally spherical shape, as is the tron. See Axioms 1, 2, and 3.

Note, the concentric circles are only meant to represent ron layers and are not really part of a tron's struc-

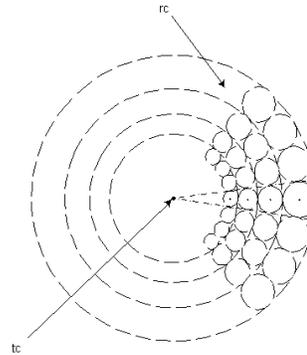


Fig 1.

**Figure 1.** Cross Section of a Tron

ture. Also note that the outer boundary of a tron is not fixed. It is effectively the radius where the rons in a ron layer reach a maximum diameter. Beyond that point the rons begin to decrease in diameter as they are associated with the core of adjacent trons.

Trons will be seen to be very adaptable. The Tron Postulate sets each tron as attracting rons onto itself, onto its ron cloud (rc). This force of ron attraction increases as the diameter of the tron's cloud (rc) decreases, and vice versa. It is a mechanical force, neutral of charge (Axiom-4). The tron attraction of rons is a characteristic of fundamental importance. It is the elemental force that trons exert to cohere with adjacent trons. Figure 2 is a plane view of cohering trons (ta). Figure 3 is a denser tron group (tb); its trons are smaller and have fewer of ron layers. A tron array is formable into a physical field. The electromagnetic and gravitational fields of space are diverse tron arrays, termed trons.

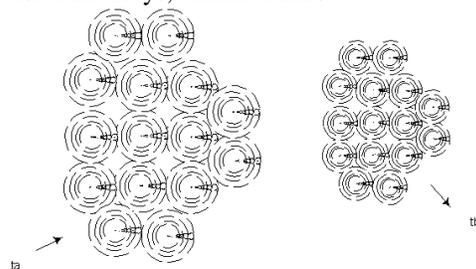


Fig. 2

Fig. 3

When a group of trons are pressed together more compactly as from (ta) of Figure 2 to smaller trons in Figure 3, rons are released. The diameters of the ron-clouds (rc) of the trons (ta) reduce and rons flow out as ron-flux (rf) as indicated in Figure 4. The released rons are directly acquired by the adjacent outer trons

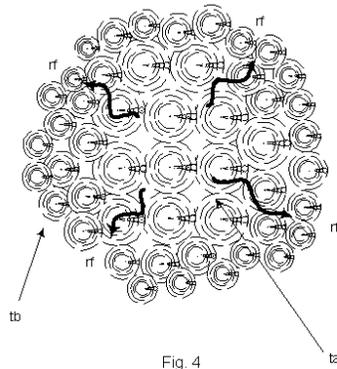


Fig. 4

**Figure 2.** Ron flux from central trons to outer trons

(tb). Such ron absorption reduces the tron density of the outer tronos (tb), as the density of inner trons (ta) increases. Such displacement process or ron-flux (rf) and tron density change is significant. It results in the generation and propagation of radiant waves through the tronos.

The ron-flux slows and then reverses when the inner tron group (ta) reaches its maximum density (minimum tron diameter) and the outer group (tb) reaches its minimum density (maximum tron diameter). The result is Figure 5. The inner trons of group (ta) exert their increased ron attraction potential on the surrounding larger diameter tron group (tb). Rons flow from the outer layers of the larger diameter trons (tb) to the outer layers of the smaller diameter trons (ta) in the center. The trons of inner tron group ta become larger in diameter and less dense while the trons of outer tron group tb become smaller in diameter and more dense until we return to the configuration of Figure 4. This dynamic cyclic interaction continues: the array of Fig 4 alternates with Fig 5. The amplitude of this exchange slowly decreases over time. Eventually an equilibrium is reached where the effective tron density is substantially uniform within the region; see Axiom-5. It is to be understood that these two dimensional tron diagrams actually represent three-dimensional entities and tron actions. The circles and lines of the diagrams are illustrative purposes and are not real.

In the Tron Theory basic phenomena are interrelated through their common tron heritage. Atoms have compressed trons as their cores and individual tron-surrounds about the cores. Matter is immersed in ambient tron-fields, termed tronos. Micro-particles are shown to interact continually with tronos in causal activity. Electric and gravitational fields are gradients of the density of trons in the tronos. Magnetic force arises from the displacement of trons. Radiant energy is generated by

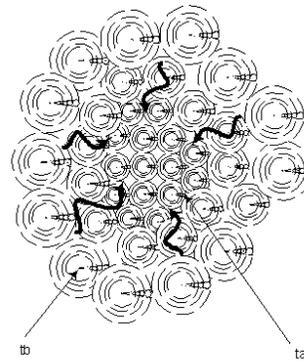


Fig. 5

**Figure 3.** Ron flux from outer trons to central trons

surging particles that create corresponding waves in their tronos, and propagate with transverse components. Physical processes and phenomena of the universe are presented as arising from the Tron Postulate that applies in common from the nucleus to the galaxies; and applies to the electric, magnetic, and gravitational tronos. The tron-universe is the sum of its tron-constructed parts; see Axiom-7.

#### 4. New insights into Relativistic and Quantum Phenomena

The Tron Theory reintroduces the concept of an ether. Electromagnetic fields have a material basis. It is asserted that the Tron Theory can account for the phenomena of classical as well as contemporary physics.

The diameter of a tron is that of its surrounding ron cloud, and is readily physically changeable. The size of a tron is influenced by the number of trons in its immediate region; namely by the tron density thereat. Nuclear binding energy is the enhanced force among tron groups that are highly compressed together at the core.

The interface of a parfield with its tronos field is shown to continually fluctuate, resulting in the incessant harmonic oscillation of the particle as a whole in the tronos. The causal continuous surges of microparticles can be analytically tracked. Such cyclic movements of microparticles generate corresponding electromagnetic waves in their ambient tronos field, at the particle frequencies. Spectral radiation involves photons that are interrupted continuous wave trains, such as 10 million waves long, and even longer. Such trains result from shifts of electrons in orbit about their nuclei. Continuous spectra result from the superposition of the EM radiation generated by a group of particles with a distribution of kinetic energies like a black body. Each particle emits EM radiation at a frequency proportional to its kinetic energy ( $E = hf$ ).

The Tron Theory provides fresh insights into atomic and sub-atomic processes: atoms in closer focus; micro-particles in causal movement; the generation, propagation and transfer of radiant energy in determinate display. The versatility of the Tron Theory unfolds as it is applied to physical disciplines.

The forces of nature, including nuclear binding force, emerge from the simple postulated characteristics of the trons and the rons. Matter does not appear or disappear from the universe. In a fusion reaction trons belonging to the nucleons are squeezed out from where the nucleons join. They become disassociated from the nucleons and become part of the local tronons. A part of the potential energy of the released trons is transferred to the tronons - the local tron density (which is proportional to its potential energy) is increased. The other part of the potential energy is converted into kinetic energy - the motion of trons in the tronons (including electromagnetic waves) and the motion of the micro-particles involved in the fusion reaction.

1. The fundamental particles (electrons and nucleons) are derived elementally out of a tronon by the concentration of trons from the tronons into structured cores for the particles. Trons thereupon directly surround each core in successive tron layers, forming a relatively less dense parfield to complete each particle.

2. The radius of the parfield inherently oscillates harmonically in its ambient tronons. This causes the velocity (and therefore instantaneous kinetic energy) of a free micro-particle to vary harmonically about its average observed velocity. The wavelength of these oscillations is the De Broglie wavelength. We can now calculate a particle's exact position and momentum simultaneously all times.

5. The particle oscillations generate radiant waves in the tronons, ahead of their movement. The frequencies of these waves are the same as the concurrent frequencies of their associated particles ( $f = E/h$ ).

6. Radiant phenomena are shown to be a mechanistic process involving the generation of continuous waves as well as truncated trains (i.e. pulses) of continuous waves. Such waves propagate through the tronons at electromagnetic speed. They are equivalent to what are today called photons.

The density of the tronons is proportional to its potential energy. It is inversely proportional to its distance from a center of mass and is proportional to the magnitude of the mass:

$$d = kM/r$$

d = tronon density (trons/cm<sup>3</sup>), M is the magnitude of the mass center, r is the distance, and k is a constant (to be determined).

It is asserted that the minute mass of individual trons in the interstellar tronon is the explanation of the nature dark matter. The reason why experiments haven't been able

to detect dark matter particles or observe radiation from dark matter is that dark matter is actually the mass of the tronons; it is the medium that transmits EM radiation. Note that the distribution of dark matter calculated from measuring the orbital velocity of the stars in a galaxy is approximately  $1/r$ . This corresponds to the gravitational potential function ( $U = km/r$ ) and therefore to the mass density of the tronons.

Also note, the velocity of electromagnetic waves is inversely proportional to the density of the tronons. This accounts for the bending of light by a star.

One also finds a calmer cosmology: The red shift is seen to result from an imperceptible but nonetheless continual energy loss occurring in stellar radiant waves as they propagate through the intergalactic tronons. It does not arise from the expansion of the universe or Doppler shift of receding galaxies.

The energetic cauldron found at the cores of galaxies provides the extreme conditions where trons are condensed into electrons and nucleons.

## 5. Conclusion

Is it not reasonable to surmise that matter, fields, and the basic forces of Nature all derive from a common underlying tiny entity? And that multitudes of such entities would be involved in the formation of electrons and nucleons. Each such entity would be much smaller than the electron and have a very minute mass. Myriads of such particles would form into arrays as the respective physical fields. These particles would possess a generic form of attraction that would constitute electric, nuclear and gravitational force. Such an underlying entity is shown to be the tron; its involvement in Nature is the Tron Theory.

The Tron Theory is built from the Tron Postulate. It asserts that everything physical is made up of trons and that Nature's fields, forces, and interactions involve trons. The tiny tron could well be the primordial material. The tron theory reveals insights that expand one's knowledge and perspective of physical Nature.

One may ask: why should we consider a radical new approach to the structure and operation of Nature? One cannot alter the facts and factors of physical phenomena. However, let us consider: A new theory may better penetrate the micro-world, or view the cosmos with more meaning. The tron theory does both, and much more. With the seven-axiom Tron Postulate, a unified approach for matter, the fields, and the forces and energies of Nature is developed. It provides a firm basis for radiant energy generation and its propagation; for electrical, magnetic and chemical phenomena, and atom formation.

It will be shown that the fountainhead of the basic energies, as well as the ultimate source of the basic forces including nuclear binding energy, derive from trons and their physical characteristics. Its elemental phenomena

and matter are developed in three-dimension form, and in causal relationship.

It does not require the doctrines of Special or General Relativity, Indeterminacy, Complementarity, or Duality. It proposes a Universe that is fundamentally rational and causal.

The Tron Theory accomplishes these physical insights and correlations:

(a) It provides a consistent basis that unifies matter, the fields, and the fundamental forces of Nature, with a common underlying substance—trons. (b) It resolves the duality of radiant waves versus photons and particle mass versus particle waves. (c) It formulates quantum phenomena in causal format with continuous parameters for the dynamic actions of particles. Micro-particle action can be analyzed deterministically. (d) It presents the essence of Nature's phenomena and processes in a way that can be clearly visualized. It is congruent with real observations and determinations.

With the Tron Theory one may view the universe with its physical parts interrelated on a tron basis. The theory starts with trons and proceeds from the infinitesimal to the galactic cluster. When one formulates Nature's basic entities and processes in their tron settings, a three-dimensional universe is realized.

## 6. Appendix

This paper has presented the fundamental description of the tron, and the Tron Postulate. Future papers will explore the topics presented here in detail.

It should be noted that the author conceived the concept of the wave nature of particles being a harmonic oscillation in the velocity of the particle in the early 1960's. He called it the Vibra Theory. An almost identical concept was derived independently by Petr Beckmann's in his book, "Einstein Plus Two" [1]. He deserves credit for the concept; he derives it directly from E/M theory with the of a local entrained ether.

## REFERENCES

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