

# The Entity of Energy /2018

## INTRODUCTION:

It is observed that currently, there is a big misunderstanding with a complication about ENERGY and **ENERGY MATTER**.

ENERGY is the term to denote 'Capability to Work'. (ex: kinetic energy, potential energy, thermal energy, gravitational energy, nuclear energy, electrical energy, etc.). Energy is just a **mechanical property** incorporated with the **dynamic state** of objects of Matter.

**ENERGY MATTER** is substantial and fundamentally a separate **Family** (or in other words a **Category**) to be realized by the Scientists of the century behalf of advancement of Physics.

If it is questioned 'What are the fundamental category of Matter?' a student of junior secondary level would answer as; 'Solids, Liquids and Gases'. But I dare say all that belonged to a single category and 'solid liquid & gas' are only the three states of the same category of matter named as **ATOMIC MATTER**.

If not, what are then Electrons, Light, Heat, Vacuum, Solar Wind etc.? Are they not **Matter**?

There are only three fundamental categories (families) of Matter in the **Universe** to be recognized as;

1. **Atomic Matter**: Matter of spherical particle **Structure**, with Interior Rotary Dynamics.
2. **Energy Matter**: Matter of spherical bubble like particle **Structure**, with Exterior Linear Dynamics.
3. **Medium Matter**(Vacuum): Matter of spherical bubble like particle **Structure**, with neither Interior nor Exterior Dynamics.

I would prefer to address only **ENERGY MATTER** under this particular technical monograph because the other two categories of Matter had been explained in the previous paper 'Theory of Scalar Consistency of Matter'.

(Pl ref. at <http://www.cyrilhtgamage.com/images/pdf/0034.pdf> )

## DESCRIPTION:

### 01. What are Light and Heat?

Though there are plenty of definitions for 'Light' in the background Physics, the entity of 'Heat' has not been addressed adequately enough as observed.

Is there any realistic definition upon the 'Structure' of 'Heat' from the 20<sup>th</sup> century?

No... 'Heat' is just **Energy** for them without a **Structure**. Some says Heat is an electromagnetic wave of no mass while in some definitions it is of half particle and half wave.

It is accepted that the **physical properties** of the energy source has been well addressed by the laws of **thermodynamics** and they are practically applicable in Engineering.

But it is my ultimate observation that, **Energy Matter** as a whole, has not been explained realistically in the so far developed background science of Physics.

### 02. What is the Source?

**Electron** is the prime source for both 'Light' and 'Heat' as well and they are projected out as **Rays** when Electrons happen to move against a **Frictional Medium**. But as yet there is no clear definition in the background Science, to explain how **Light & Heat** particles are emitted from the skin of a moving **Electron**.

The mechanism how skin particles of the Electron are projected out as rays of Light and Heat is described by the theory of 'Skin Diffusion of Electron'.

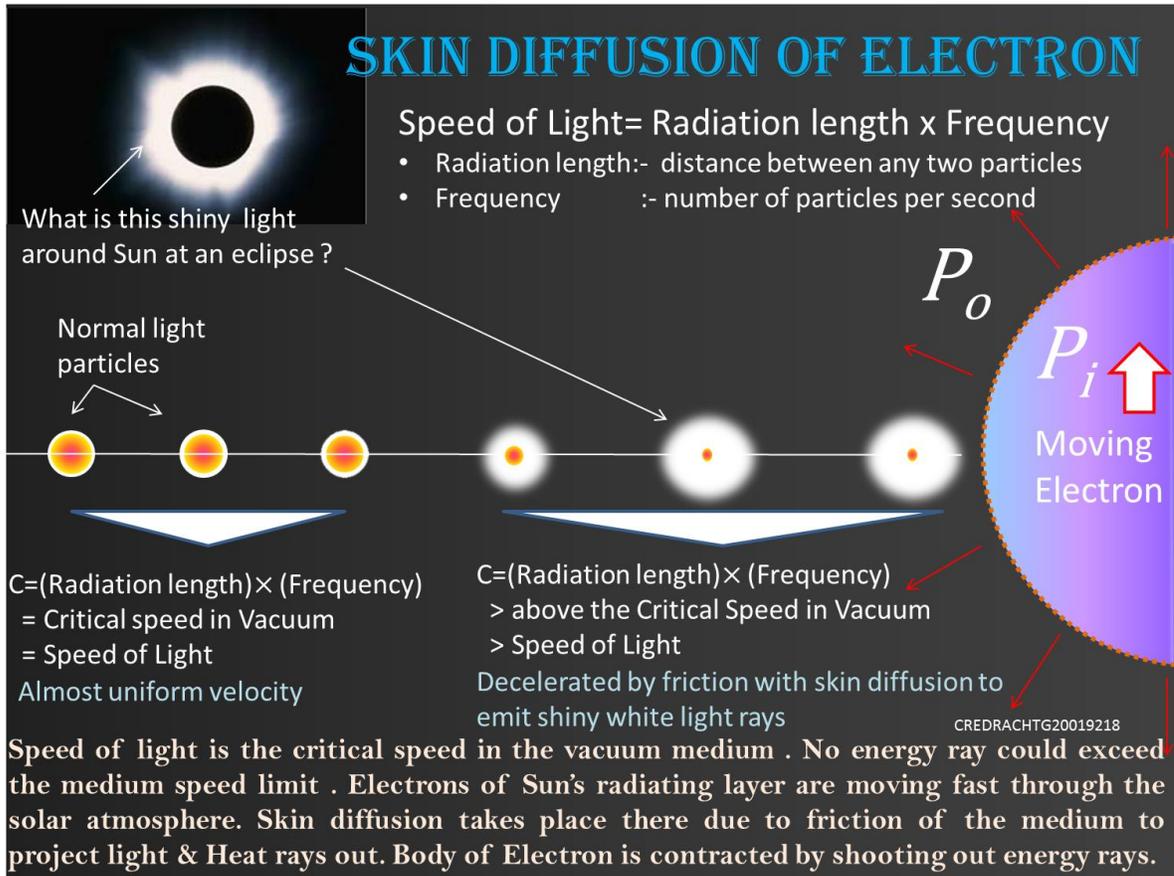
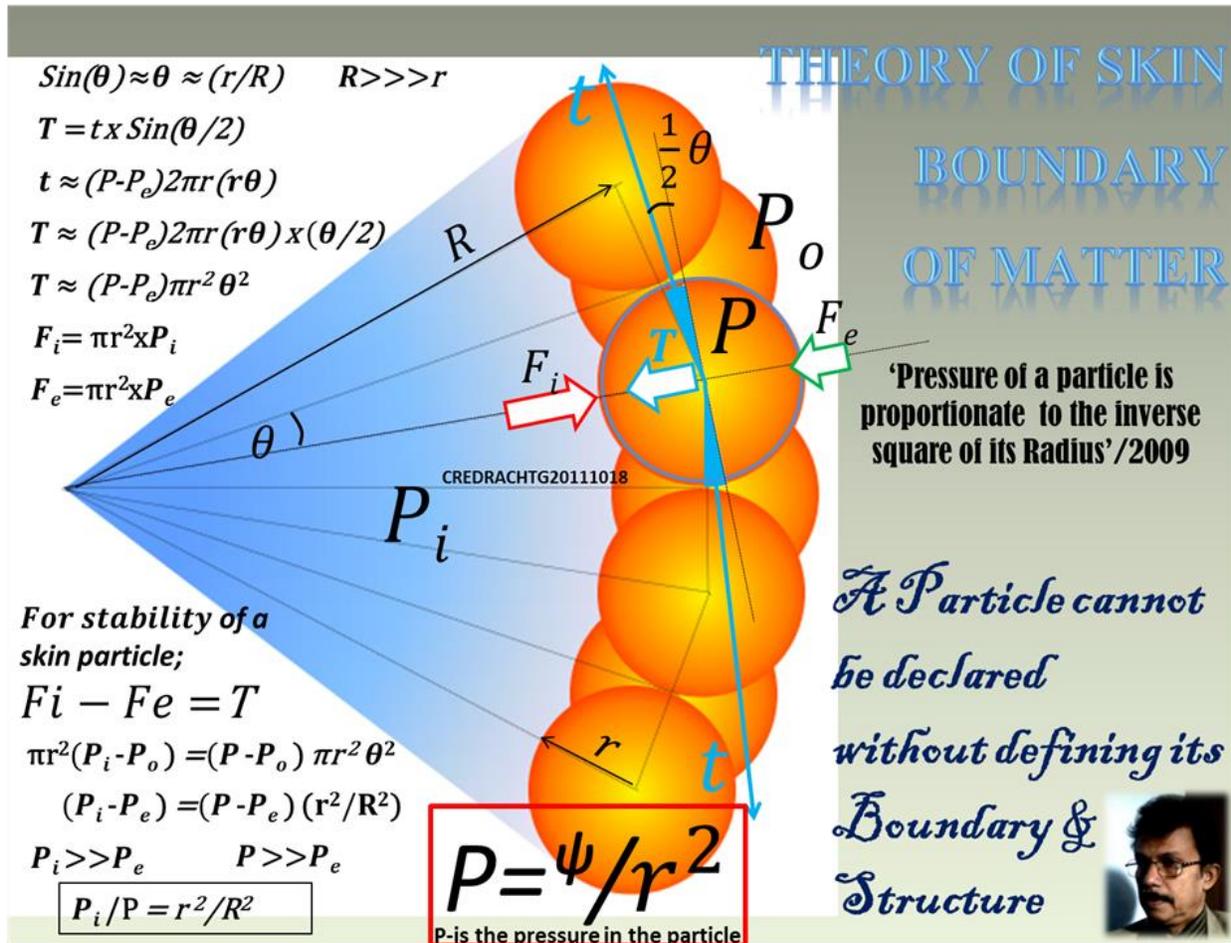


FIGURE-01 (Light & Heat rays by Skin Diffusion of Electron)

### 03. What is the Mechanism?

Fluid dynamics explains simply that, pressure is dropped whereas the **surface** is moving against a **frictional medium**. (ex: Your paper is blown out at once when you open the shutter of the moving train due to drop of pressure outside of the train). Therefore the **pressure gap** between in and out of the particle is increased, being proportionate to the **speed**. Theory of 'Skin

**Boundary of Matter'** explains how then the Skin particles are shot out as **Light** and **Heat**.



**FIGURE-02** (Demonstration of the Particle Relation)

The particle relation gives the message of importance that, “Pressure decides the Size” of energy particle.

EXPRESSION-1

THE PARTICLE RELATION  $P = \varphi / r^2$  SHOWS THAT PRESSURE IN A PARTICLE IS ALSO A MEASURE OF THE PARTICLE SIZE.

Observation of the child's soap bubble pipe tells us the story that; bubbles are small just at the projection from the mouth end. But they become bigger in size gradually when speed is lost. Similarly Light particles are a bit smaller than heat particles in origin because they are **faster** than Heat.

Then what happens if light particles are projected somehow at a higher speed faster than the **speed of light**?

**Speed of light** is not a property belonged to **Light** at all, but a property of the **Vacuum Medium**. Generally **Energy Matter** cannot exceed the medium limit of speed because the particle skin is fired against **friction** or in other words, skin particles are projected out as **Energy Rays**. That is what we could observe as shiny white glittering around Sun at an eclipse (figure-1).

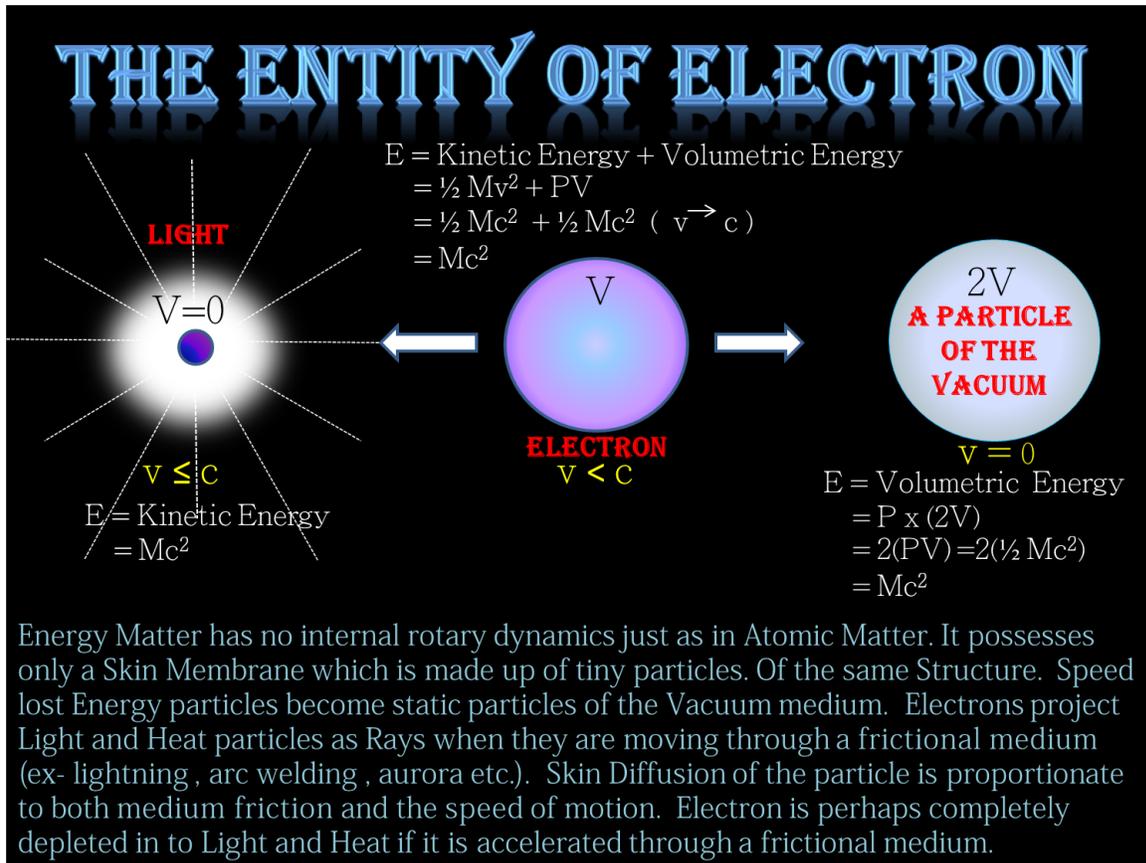


Light particle (photon) too is undergone to the same phenomenon and it is fired against the medium friction at the initiation of the shooting from Sun's radiating layer. At the initial speed faster than **known speed of light**, Photons too emit finer particles, as rays from the skin, to be observed as shiny glittering light.

Another important secret of **Matter** (a rule of **Nature**) is revealed therein as 'Scalar Consistency of Matter'. It explains that the so far accepted **Elementary Particles** such as Electrons and Photons too are made up of another set of tiniest elementary particles of the **dropped scale**. (pl ref. <http://www.cyrilhtgamage.com/images/pdf/0034.pdf>).

**04. What is the End of it?**

Energy Matter is recognized by their **Structure** and **Dynamics** as explained above. Then what could happen when **speed** of their **linear motion** is lost? Then **Dynamics** is almost lost but **Structure** remains. As we know, Matter in the Universe cannot be **annihilated** at all but could be transferred in to other forms



**FIGURE-03**(demonstration of end entities of Energy Matter)

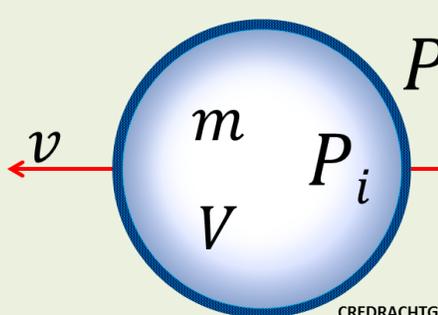
We know speed lowered **Light** becomes **Heat** with a little bit of hulking of the particle size too as explained above. But **Heat** cannot be the ultimate end entity of **Light** and then what happens to heat?

*“ENERGY MATTER COULD BE ACCELERATED TOWARDS HIGH DYNAMIC STATE AND IT SHALL BE DEPLETED ULTIMATELY BY SCATTERING OFF ITS ENTIRE MASS IN TO ENERGY RAYS OF FINER SCALAR CONSISTENCY. IN CONTRARY, DECELERATION BRINGS THE ENERGY MATTER IN TO THE REST OF BEING THE ‘MEDIUM MATTER- VACUUM’ OF HULKED STATIC SCALAR CONSISTENCY”.*

## THE ENTITY OF ENERGY MATTER

There are two possible end entities for an Electron;

1. When it is highly accelerated through a frictional medium it is completely depleted in to Light and Heat energy by projecting the skin particles off.
2. Speed lost Electron becomes a Vacuum particle being expanded.



*A Particle cannot be declared without defining its Structure & Dynamics*

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### Energy of Energy Matter

*E = kinetic Energy + Volumetric Energy*

$$mc^2 = \frac{1}{2} mv^2 + (P_i - P_o)V \quad (\text{say pressure gap } P = P_i - P_o)$$

$$mc^2 = \frac{1}{2} mc^2 + PV \quad (\text{when the particle is moving at } v=c)$$

$$P = \frac{1}{2} (m/V) c^2$$

$P = \frac{1}{2} \rho c^2$   
P-is the pressure gap



Electrons, Heat and Light particles of exterior linear dynamics are belonged to the fundamental category of 'Energy Matter'

**FIGURE-04** (Relation of Energy Dynamics)

The above demonstration shows that, **Energy Matter** is contracted by increasing of the **Density** whereas, the external pressure drops (Pressure gap 'P' is increased when external pressure is dropped). **Contraction** in the

**Structure** is the mechanical reason behind how the particle is diffused in to rays of finer energy particles.

### 05. What is the Mass of Energy?:

Energy is massless according to the famous theories from the 20<sup>th</sup> century formed upon the faulty basis of 'Energy Waves'. They had not clearly understood the difference between **Energy** and **Energy Matter**.

**Energy** can be mechanical, chemical, electrical, electromagnetic or any other forms which could also be transmitted through **Medium Waves**. But **Energy Matter** such as Light, Heat, Electrons and Solar Wind etc are linear projections of particles of **Mass** and frequency is the number of particles per second.

Therefore the Scientists of the 21<sup>st</sup> century have got to understand basically the difference between a **Ray** and a **Wave**.

## MASS OF LIGHT

Light is not a wave but a ray of line projection of particles. It is a material of Mass and Heat is the bit slowed down phase of Light.

**Students can prove that by a laboratory experimentation of low cost.**

Increased volume due to the energy input  $= \Delta V = \frac{4}{3} \pi (R^3 - r^3)$

Work done by the balloon against external atmospheric pressure  $= P_a X (\Delta V)$

**Energy input = Work done**

$mc^2 = P_a X (\Delta V)$

(Say increased volume  $\Delta V = 100 \text{ cm}^3$  and atmospheric pressure  $P_a = 1.013 \times 10^6 \text{ dynes/cm}^2$ )

Mass of light energy input  $= m = P_a X (\Delta V) / c^2 = (1.013 \times 10^6)(100)/(2.998 \times 10^{10})^2$

$m = 1.12 \times 10^{-13} \text{ g}$

**FIGURE-05** (Typical exhibition for Mass of Light)

[Einstein's relation of '**Conservation of Energy**'  $E=mc^2$  is used for the mass analysis done in the demonstration shown in the figure-05. But it doesn't mean that his famous theory '**Relativity**' is accepted at all herein.

Isaac Newton(17<sup>th</sup> century) had reached **half way** almost near to the **Reality** by defining **Kinetic Energy** of Matter as  $\frac{1}{2}mv^2$  where 'v' is the velocity. If he could have addressed the ultimate dynamic state of Matter by substituting 'v=c' in his expression it could have ended up with  $E= \frac{1}{2} mc^2$  but then where is the other half?

However Einstein should receive the entire credit for the great finding of the 20<sup>th</sup> century renowned as '**Conservation of Energy**  $E=mc^2$ ' which is worth to be addressed as the **Universal Reality**.

Then what is the missing half in Isaac Newton's expression for Energy? It is nothing else but '**Volumetric Energy**' which is explained as; 'Energy required for **Particles** to possess a **Volume** in a pressure medium' ( $E=PV$  where P is the pressure and V is the volume).

More realistically then, **Matter** is comprised with both '**Kinetic Energy**' and '**Volumetric Energy**'. Kinetic Energy of Matter is not because of the external speed of the object but due to the '**Interior Rotary Dynamics**' within the particle **Structure**.

**Mass** is then the measure of **Energy Density** of **Matter** and what is '**Heavy**' means the high **Kinetic Energy Stock** in a particle. In contrary, what is '**Light Weight?**' means high **Volumetric Energy Stock** in the particle.

Therefore more realistically, a **PARTICLE** cannot be explained without defining its **STRUCTURE** and **DYNAMICS**.

But it is observed that, Matter has been misinterpreted by the famous theory builders of the late century by their conceptual models addressing of neither **Structure** nor **Dynamics** of Matter.

$$\text{Mass} = \frac{\text{Particle consisted kinetic energy}}{\text{Particle consisted volumetric energy}} = \frac{\frac{1}{2} M_m c^2}{\frac{1}{2} M_v c^2} = \frac{M_m}{M_v}$$

$$\text{Mass} = \frac{\text{Particle consisted Mass}(M_m)}{\text{Mass of Particle consisted Volume}(M_v)}$$

**MASS IS THE  
SPECIFIC  
ENERGY DENSITY  
OF MATTER**

**Volumetric Energy:**  
*Energy in particle expanding*  
 = (Pressure gap) × (Surface area × dr)  
 =  $P \int_0^r 4\pi r^2 dr$   
 =  $P \frac{4}{3} \pi r^3$   
 $E_v = PV$

**KINETIC ENERGY :**  
 A force is required to move a mass 'M', from the stillness to speed 'v' and the impulsive force 'F<sub>i</sub>' is defined as the change of Momentum per time 't'.  
 $F_i = [(\text{Final Momentum}) - (\text{Initial Momentum})] / \text{time}$   
 $F_i = [(Mv) - (0)] / t = Mv/t$   
 If the distance traveled by the mass to get that velocity is d, then  $d = v \times t$ .  
 Work done = applied mean force × distance  
 =  $(F_i/2) \times d = \frac{1}{2} M v^2$  = kinetic energy gained by the mass  
 Kinetic Energy =  $\frac{1}{2} M v^2$

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**FIGURE-06 (Mas of Matter-as abstracted from 'Scalar Consistency of Matter')**

As a matter of fact, the captured extend of **Exploration** under this technical paper, is beyond the linear limits of laboratory experimentation and hence let us try upon the deductive approach by means of available observations.

**06. Observations and Deductions:**

**Observation-01:-**

1. Light particles are not remaining at the Object and disappear instantly by reflecting. (ex: at once you switch off the bulb, there is nothing to remain rather than the darkness)
2. But Heat particles remain with the Object for a long duration, even though the source is removed

### Deduction:-

There could not be a big difference in size of the particles of **Light** and **Heat** because the source to be the same **Skin Materials** of the **Electron**. Then the lack of **speed** must be the reason behind why **Heat** particles didn't reflected back so swiftly as **Light**. (A highly filled football is more swiftly bumped to reflect than a low filled ball at a collision against a wall. Similarly particle size of **Light** is a bit smaller but higher in **pressure** than **Heat**)

Besides that, there is an ever existing demand for **Light & Heat** radiations in the **Nucleus** of an **Atom** .

**Elements** absorb energy radiations, through certain duration, and emit **Electrons** (beta decay).

**Atom** of Isotope element absorbs energy and emits a Helium nucleus and two Electrons (alpha decay).

**Atom** of Radioactive element absorbs energy from the surrounding for a long duration and emits a Neutron (gamma decay)

Besides that commonly Atom of any element absorbs energy from the surrounding. Metals are naturally cooler than other materials because there is a high demand for energy in them.

[Note:-In every aforesaid cases the time duration for decaying could be numerically calculated when the availability of **Energy** input and exact energy quantity required for a **Proton** to be a **Neutron** is known].

Black surfaces are known to absorb heat energy more quickly than other colors. Color is not a property of Matter but the **Crystalized Nano Texture** of the **Skin** of the Object. That's why black surfaces absorb much Light and Heat but reflecting less. In that case Light particles too lose speed and become Heat. Hence almost only **Heat** could be radiated out ultimately from a black surface.

[Heat particles are more coherent to **Atoms** when they **touch** in contact because **Protons** in the nucleus attracts not only Electrons but **Heat** also in a weaker strength of **Electrification**].

#### Observation-02:-

- 1) Let's keep some pieces of different materials in a cool room for some time and then touch them to feel temperature. It is observed that denser materials are cooler.
- 2) Cellular structure of our body cannot sustain at very low temperature conditions.

#### Deduction-02:-

- 1) **Denser** materials are **faster** in heat absorption from the surrounding. Denser materials are richer of heavy **Atoms**. It indicates that **Nucleus** of the atomic structure requires **heat energy** to keep up functioning of the interior **Rotary Dynamics** in the Dynamic Model of Atom.
- 2) **Atoms** in the **cellular structure** absorb **heat energy** from the cell and unless a sufficient **heat quantity** is produced by the cell or supplied from the surrounding environment, then the living cells could be failed.

#### Observation-03:-

- 1) There is a limit that **Atom** could absorb energy radiations from the surrounding and thereafter it tends to radiate back the same.
- 2) Atoms of a highly heated Object can **accelerate** projecting out heat particles as **Light**. (ex: a red hot metal starts radiating out Light particles)

#### Deduction:-

It is explained in the paper 'Dynamic Model of Atom' that the **Nucleus** too is spinning by absorption of energy from the surrounding. (pl ref.

<http://www.cyrilhtgamage.com/index.php/87-space-dynamic/175-the-dynamic-model-of-atom> )

When energy input is increased then the **spinning speed** too is increased. Then the orbital rotation of the Electron clouds alone could not balance the **angular momentum** of the system. As a result, the whole atomic body with the **Skin** too tends to rotate in the same direction of the **nucleus polarization**.

(Only **metallic elements** have the ability to organize the crystalized texture to facilitate the **individual spinning of Atoms**. That's why they could exhibit a **magnetic behavior**.)

Whence **Atoms** of a **red hot element** are spinning, the slowed down Heat particles (that gathered within the crystals) too are dragged and accelerated to throw out again as **Light**. (that is similar to how mud particles are thrown out by rotating wheels of your car)

Nonmetallic elements cannot facilitate **individual spinning** of Atoms within the molecular crystalized texture and hence '**Light**' doesn't come out of them even if they are highly heated to be burnt. Then heat only could be radiated out being proportionate to the '**heat intensity**' in the body. Therefore it is worth to declare as; ***'Temperature' is the measure of 'Heat Intensity' in Matter'***

### Observation-03:

- a) Touch a high heated body and it could burn your skin but how?
- b) Touch a high cooled body and it also burns your skin and how?

### Deduction:

Burning of our skin is nothing else but damaging to the **Structure** of the living cells. Then how could the cell structure be failed by Heat?

High heat intensity within the **Cellular Structure** means the rising of **medium pressure** around cells. Increased outer pressure **decreases** the **Pressure Gap-‘P’** in and out of the cell structure. Then the living cells are exploded by **expanding**.

The fundamental relation of the Particle Structure;  $P = \varphi / r^2$  shows us how the structure is **expanded** when pressure gap ‘P’ is decreased. Animal or plant cellular structure is hence **expanded to be failed** by the high **Heat Intensity**. Naturally it is irritating for us when our skin cells are damaged by **expanding** because of Heat.

The particle relation also explains us how the cell structure could be failed by rapid cooling. When a highly cooled body is in touch to our skin, **Heat Intensity** at the locality is suddenly dropped. Then the **pressure gap** between in and out of the cell is highly **increased** and the cell structure is damaged by **contraction**.

Hence generally, Flora and Fauna body cells cannot either **expand** or **contract** without damaging to the **skin membrane** of the cellular structure.

#### **Observation-04:**

- Heat is not observed to the human eye
- Light is observed to the human eye

#### **Deduction:**

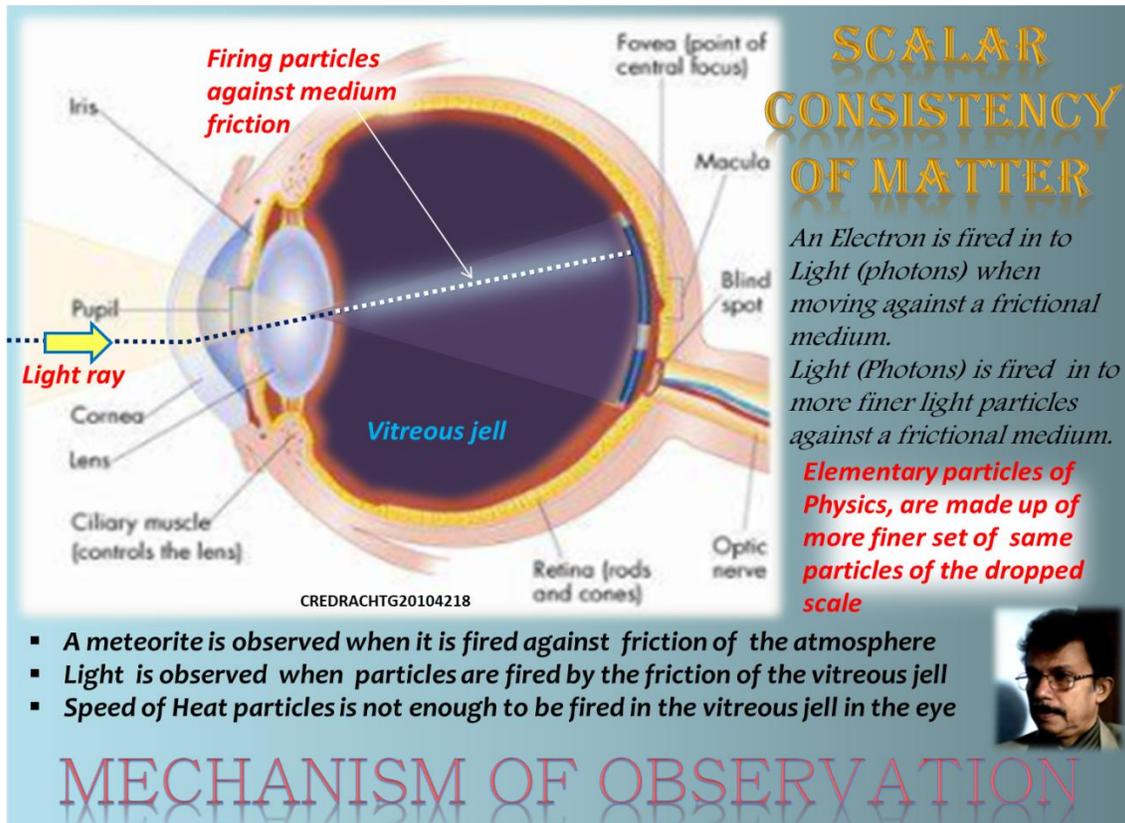
#### **What can be observed?**

Only **Light Sources** and **Light Reflectors** are observed to the human eye.

How can a Light particle be observed in to the naked eye? The moving light particles through the eye structure must be fired due to friction of the **vitreous jell**.

The glittering of the frequent firing particles is **sensed** and brought as **pulses** through the **optic nerves** towards the **brain** for identification. This is just same

as how a meteorite is observed only when it is burning due to the frictional firing after entering in to the **atmosphere**.



**FIGURE-7** (Demonstration of the mechanism of Observation)

Why then Heat is not observed to human eye?

**Heat** is the similar natural phenomenon as **Light**, even though it had been badly overlooked by the famous theory builders of the 20<sup>th</sup> century.

According to the **alternative deductions** from the 21<sup>st</sup> century, **Heat** too possesses the same **origin** and same **structural properties** as **Light** but moving slower than the **speed of light**.

That's why it is not fired in the vitreous jell in the human eye. But there are some animals in whom eye; even heat rays are fired to see through in the dark night.

#### Observation-05:

- a. **Electrons** are attracted by basically **Protons** and also by the positively charged terminals (Anodes).
- b. Electrons are not attracted by **Gravity**.

#### Deduction:

- a) **Negative & Positive** are just terms of reference of the **mechanical force induced between Matters of different Dynamic States.**

Energy particles are very light in **mass** and soft in the soap bubble like **Structure**. Hence they are easily moved by the impulsive movements occur in the **Medium**.

Impulsive movements in a **Medium** are generated by **Waves**.

- Amplitude Modulated (**AM**) waves move medium mass perpendicular to the propagating direction.
- Frequency Modulated (**FM**) waves move medium mass along the propagating direction.

**Electricity** is born by an AM wave generated within the **Atomic Structure** due to spinning of the **Nucleus**. (pl. ref. 'Dynamic Model of Atom' <http://www.cyrilhtgamage.com/index.php/87-space-dynamic/175-the-dynamic-model-of-atom> ).

The **Electrification Wave** is not spread out from the atomic structure unless another atom is **touched** in close contact.

But now what we want to clarify is; How the **Nucleus** is spinning?  
According to the deductions, the Nucleus is spinning because of **Protons** in it.

A **Neutron** is as same as a non-spinning **Planet** while; **Proton** is similar to a polarized spinning **Planet** with an **Atmosphere**. The inner atomic space which is bounded by a soap bubble like **Skin Membrane**, is the atmosphere of a Proton. Therefore heavy atoms with lots of Protons in the Nucleus possess a strong atmosphere of **high pressure**.

Hence a **Proton** is recognized as a spinning object suspected to create the **Electrifying Wave** in the inner atomic space. The AM wave is not spread out from the atomic structure unless another atom is closely touched in contact. The way how Electrons are attracted by the **Electrifying Waves** emitted by a **Proton** is explained in the technical paper 'Dynamic Model of Atom'/2017.

b) Why Electrons are not attracted by Gravity?

Gravity is born due to a high frequent FM wave through the Vacuum. Only the particles of interior rotary dynamics (Atoms) could be excited by the FM wave to induce an **attraction** within the body.

Not only the Electron but as a whole all the members belonged to the particular family of '**Energy Matter**'; such as Light, Heat, Electrons, Solar Wind, Galactic Wind etc., doesn't respond for **Gravity** because they don't possess **Internal Rotary Dynamics** in the particles.

### 07. What is Dark Energy?:

Most naturally intelligence in Man aroused by the 20<sup>th</sup> century to comprehend that '**Experimental exercise of Science**' alone would never explore the WORLDS realistically enough. Hence **Cosmology** was born right at where there is a need to explain the WORLDS beyond the reach of the Laboratory Experimentation.

However the particular extreme end disciplinary extends of Science could not be produced by the **Conceptual Models** unless; otherwise a lot of CONSTANTS are introduced.

Too much of CONSTANTS in an expression, indicates that the Founder himself is ignorant of how properties of the PHENOMENON are varied.

The **Matter** beyond the linear domain of what **Light** shows us, is always DARK for our observatory faculties and hence addressed as **Dark Matter**.

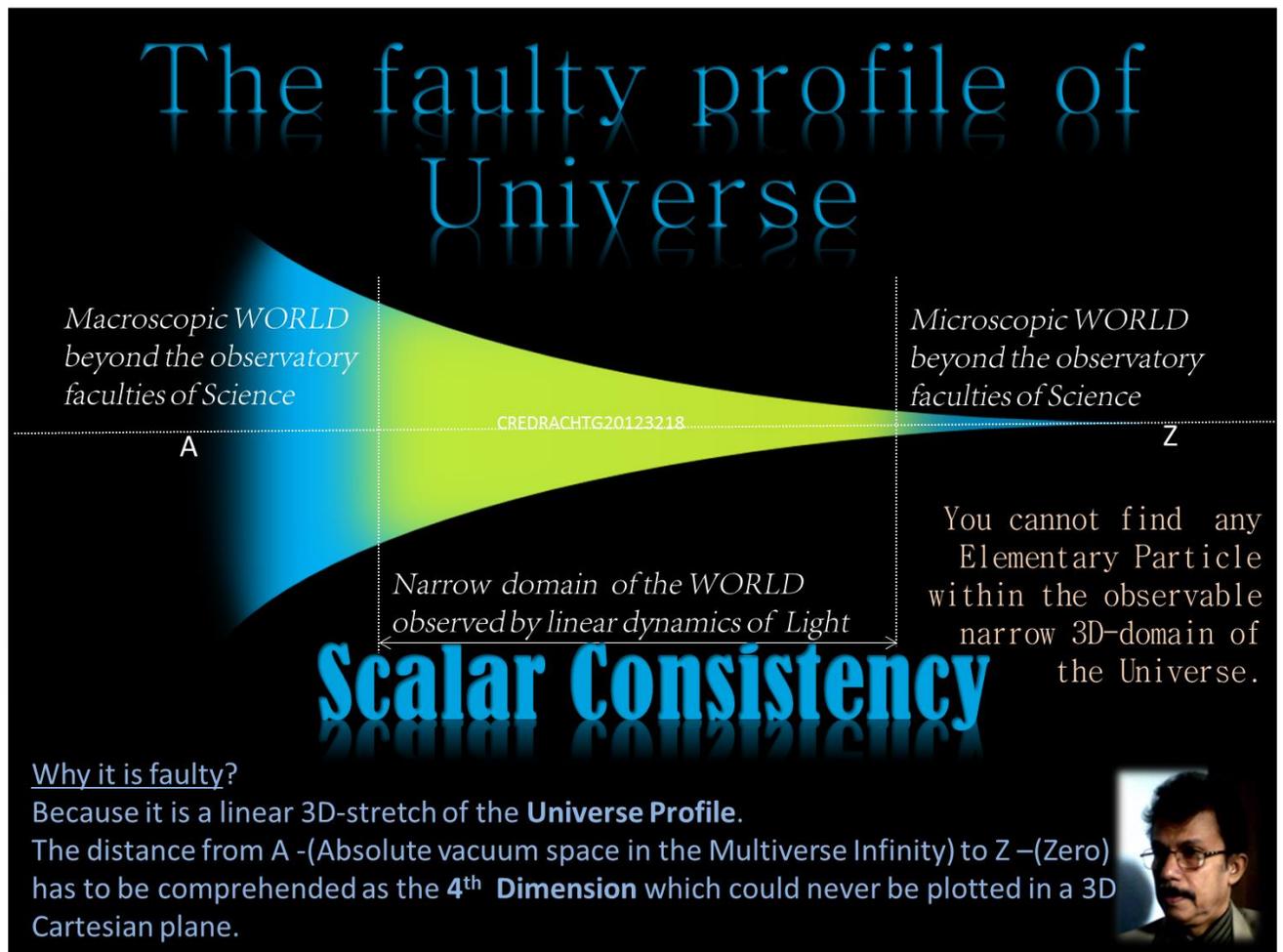


FIGURE-08(the faulty 3D-stretch of the Universe)

Can a Man think out beyond the capacity of all the Languages that he knows? (**Mathematics** too is considered as a **Language of Quantifying**.)

No. we are born relative to the linear 3D- frame and hence all our languages too are formed upon the faulty basis.

**Origin** and **End** are the most essential **Destinations** required by our inherited **Linear Thinking** relative to the 3-D frame. Hence there was a Big Vacancy in our minds for a BIG BANG.

It is very difficult to break through the system boundary of the 3D-frame to strike upon the REALITY of the WORLD which exists varying dynamically in a **4D-Spacial Frame**.

**Singularity** is a null hypothesis in NATURE and nothing could be proven rather than UNCERTAINTY by the famous theories from the 20<sup>th</sup> century by the faulty adoption of 'Time' as the 4<sup>th</sup> dimension.

Hence to sum up, the 'Things' beyond the narrow 3D-frame are naturally **DARK** for Man.

## CONCLUSION:

1. **Heat** and **Light** are born as rays (line projection of particles) by **Skin diffusion** of **Electron**, whence the particle happens to move through a **frictional** medium.
2. 'Energy' is the term used just to indicate 'working ability', a mechanical property, incorporated with **Matter**. But 'Energy Matter' possesses a **Mass**, a **Structure** and **Dynamics**, being belonged to a fundamental category of **Matter** in the Universe.
3. There are only three fundamental categories of **Matter** in the **Universe** to be comprehended and declared by the 21<sup>st</sup> century such as; 1)-**Atomic Matter** (particles with interior **Rotary** dynamics), 2)-**Energy Matter** (particles of exterior **Linear** dynamics) and

3)-**Medium Matter** (particles of neither interior nor exterior dynamics).

4. **Negative & Positive** are just terms of reference of the mechanical force induced between Matters of different **Dynamic States**. Hence electron is not a negative substance at all.

5. Finally, Electron is not an **Elementary Particle** at all, because Light & Heat particles too are projected out as **Energy Rays** from its own skin.

The '**Theory of Scalar Consistency of Matter**' explains that; "What we observe as the 'WORLD' is a narrow scalar domain in which no **Elementary Particle** could be found".

END

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