On Particle Movement within the Field of Universal Matter

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1 Framework Review

In the Hypothesis of Universal Matter, herein the Framework, the described processes were characterized as interactions between members of the set of all particles of universal matter. The set is denoted as {f} and constitutes a field of matter. The set of universal matter and the field of universal matter will be interchangeably referred to as {f}. Particles X and Y are members of the set {f}, such that X is in motion and may collide Y. The collision produces a simple and a complex result.

The complex result has two possible outcomes:

- One is that, due to the irregular shapes of the particles X and Y, the two particles may collide with each other and remain together, and form a single composite particle, made up of the two particles. The collision of X with Y may introduce rotation in the resulting composite particle; or
- The two particles X and Y may collide, separate, and so remain two discreet particles of {f}.

In either of these two outcomes, there is one additional, simple result of the collision:

- The collision may cause small pieces of either X and Y, or both, to break off from their parent particles. They become separate, individual pieces of X and/or Y and, as such, the pieces may be labeled as 'sub-f' particles. Some of the energy of their parent particle is transferred to the sub-f particle as a result of the collision.
  - As newly formed sub-f particles of {f} are created, they become member particle(s) in the set {f} and as such, fill-in the spaces in and around their parenting particles forming a localized influence on neighboring particles and other sub-f particles.

2 Distribution of Matter Within the Field

2.1 Basis in the Framework

In the Framework it is given that two particle members of {f} might collide and that as such produce a simple and a complex result. We can work backwards in time from this premise and conclude that the original state of the field {f} was one of separate, individual particles. This original state represents a Standard Distribution in the field. We can also work forwards in time and conclude that the field will include more and more composite particles. This later state represents Composite Distribution in the field.

2.2 Standard Distribution

The field of {f} varies in its state of standard distribution but is largely homogeneous. There are slight differences: In some areas there is little variation in distances between any member of the field and its neighbors. However, in other areas, one might find a small amount of composite particle joining.

Let's place a three dimensional axis, that is x, y, z, at any such location in such a distribution of field matter. Upon these axis, we might find individual particles of {f} field matter on or near them. We will pick representational areas of each of the axis and, for each particle, determine the distance to its nearest axis. Then we will average the measurements. In areas of standard distribution, the average of the measures is roughly equal to any such individual measurement.

2.3 Composite Distribution

Composite particle joining behavior among members of the field of {f} is detailed in the Framework. In some areas, composite joining continues at large, forming vast areas of composite particles. Large quantities of simple atoms and molecules form. These are particles may be gathered into much larger compositions, ranging from space dust to asteroids, from small planets to large gas giants. Even then to stars and galaxies.

Again, let's place a three dimensional axis, that is x, y, z, at some location in this composite distribution of field matter. But now the location matters: As composite objects gather is size and mass they converge towards a central area. Now when we will pick representational areas of each of the axis and, for each particle, determine the distance to its nearest axis, measurements vary in magnitude. In areas of composite distribution, when in the center of the gathered objects, there is but small distances between particles on any axis. However, when moving away from the central area, the distances start increasing. At greater distances the measured distances become close to that of standard distribution. The average of any and all distances are far different from any such individual measurements.

2.4 Combined Distributions

In these local spaces, for example the area around a star, the distribution of the field of {f} is anisotropic. But look across the universe and even these large composite distribution areas will appear isotropic.

The Framework leads us to conclude that {f} field particles and regular astronomical objects are directly related. Our visible universe is composed from universal matter. The relationship of quantity is direct: Areas with greater quantities of regular astronomical objects are contained in areas with a greater amount of universal matter.

Note that even the building of a star system does not deplete the field members found in the original area of standard {f} distribution. Main areas of composition, say a planet such as ours, has a dense, but far from solid, concentration of universal matter at its core. But, as one moves outward away from the planet center, the concentration of field matter drops to levels found in (or at least closer to) areas of standard distribution. The gradient distribution of field matter from the center of the large areas of composite distribution to distant areas of standard distribution is a key component of field distribution. It also provides a key aspect of particle movement within the field.

These two distributive models form one of two required concepts when discussing particle movement in the field. The second concept follows from a premise that any particle of {f} or composition of {f} will remain at rest unless acted upon by a 'force': Energy. What is, and how does, energy work within the Framework?

2.5 Energy

The Framework holds several examples of energy in it's dimensions of conductance and rotation:

- As sub-f particles of {f}: As small bits of a particle break-off during joining activity it remains spinning and in motion holding on to the momentum imparted from the collision of its parent {f} particles;
- As additional particles of {f} join in CP Level I compositions[1], the additional collisions impart rotational energy to the developing particle;
- As subsequent levels of joining collision energy is transferred to rotation;
- As Framework series joins transfer rotational energy to conductive energy. This energy is then later used in joining between effective and ineffective Prime Particles; and
- As Framework quantitative joins transfer energy to the small particles used in the join such that some remains with the larger particle in a gathering cloud of particles.

[1]See the Framework for the definition of this type of particle

From this we see that compositional particles gather, store, and use energy gathered from the collisions that cause and build them. In the Framework, energy is held in rotation or in the transfer of rotational energy due to conductance. Let's consider a general definition: Energy is field particles held in rotation around a particle. For example we'll consider two particles: one will play the role of a predecessor particle (P_p) and the other the role of a successor particle (P_s). The predecessor particle is already in motion, let's examine its properties.

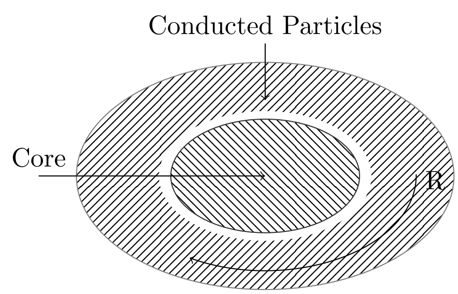

Figure 1: Particle with Conducted Shell

As above, particle P_p is a Level II Prime as defined within the Framework. Figure 1 illustrates its core (C) and its conducted, rotating outer particles (CP). The direction of rotation R in the conducted particle layer is arbitrary.

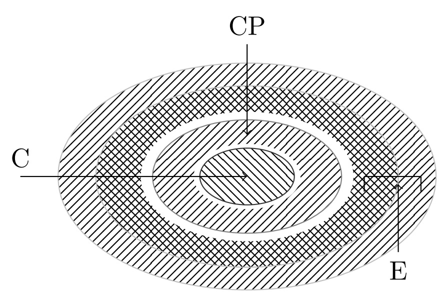

Figure 2: Adding the Energy Shell

Figure 2 adds the energy particle layers, labeled E, to P_p and it rotates in the same direction R as is found in Figure 1. The energy layer has an inner and outer section with the inner layer is closest to the CP layer of P_p. The rotational velocity of the inner energy layer best matches the velocity of CP. The outer, slower layer acts as an intermediary between P_p and the (unmoving) field {f}. The amount of added particles held in two bands of E is proportional to the amount of energy held by P_p.

3 Movement

Imagine that a predecessor particle P_p causes movement to a successor particle, P_s, a Level 3 Prime particle that was motionless at some location in the field of universal matter. P_s then accelerates at some rate and time in direction D. During acceleration and afterwards, P_s interacts with other field particles encountered in its path. The field, too, interacts with P. How does P_p cause motion in P_s?

3.1 An Energy Wave

Figure 2 represents the current configuration of P_p. Figure 3 represents P_p encountering P_s.

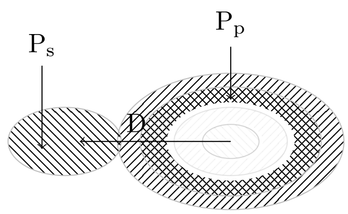

Figure 3: P_p Encounters P_s

The encounter begins as quantitative join[2] of P_p over P_s with P_p moving in direction D. The rotational direction of P_s is indeterminate and P_p is rotating clockwise. Conducted matter from P_p and P_s begins to build at the 4pm and 8pm clock locations respective to each particle. The outer energy shell of P_p quickly builds up underneath P_s forming the a wave-face as they collide. The quantitative join continues and the energy shells of P_p then envelop P_s from below and above. The collision continues and forms an indentation into both the outer and inner shells of P_p. The compressing energy shells of P_p act as a spring inevitably throwing P_s outward in direction D.

The collision and interaction between the two particles leaves P_p weaker due to a loss of energy. The energy transfer to P_s is not perfect with some of the energy of P_p is lost to the field. As P_s accerates away from P_p, it brings its new inner shell up to speed with its conducted shell (at a loss of energy) and, given enough transferred energy from P_p, begins collecting energy by adding inner and outer shells from the field. We are now ready to discuss how P_s moves through the field of {f}.

[2]As described in the Framework

3.2 The Interface

As it moves forward in direct D, P_s presents some area of itself, that is an interface, to the field: The rotation of the outer energy shell moves field particles[3] out of the path of P_s and cause them to flow around the particle and stream out behind it. But the field also interfaces with the rotation energy shell interface of P_s. This interface-to-interface relationship between P_s and the field is material: The particles-to-particles interfaces determine the path of P_s.

P_s will stay in motion in direction D unless acted upon by an outside force. The mechanism for this action is the interface of P_s with the field. P_s interfaces with field particles on the X and Y axes, and the path of P_s is in direction D is on the Z axis. The following examples considers the interface interactions between any two field particles in either interface at some position on either axis as we move inwards or outwards from the center.

P_s is in motion within the field. Let's then consider the distance of any such particle in the interface of P_s with a particle in the field F_f directly in front of or as close to 'in front of' as possible to P_s. The critical distance (CD) is the distance between P_s and the field particle F_f directly in front of it.

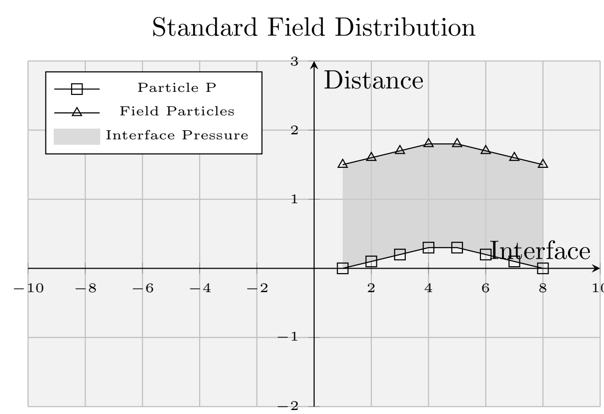

Figure 4: Standard Field Distribution

3.3 Standard Field Distribution

For simplicity let's consider examples in two-dimensions only as illustrated in Figure 4 and Figure 5 and, for the following, focus will be on the former figure. Consider particles in the interface for P_s are slightly rounded as illustrated. The distribution of particles in the field are homogeneous, illustrated as a flat, light gray background. In this scenario the average of critical distances is viewed as the darker gray fill between the plotted values for the P_s and the field. That is to say that there is equal field 'resistance'

[3]Via quantitative join attempts

along the interface for all of the compare points along the X-axis. We can extend these sample calculations for all points in the interface for P_s and the field along both X and Y axes, and conclude that the resistance on P's path in direction D is even. Equal resistance, as we will see, means the path of P_s will remain unchanged.

Composite Field Distribution

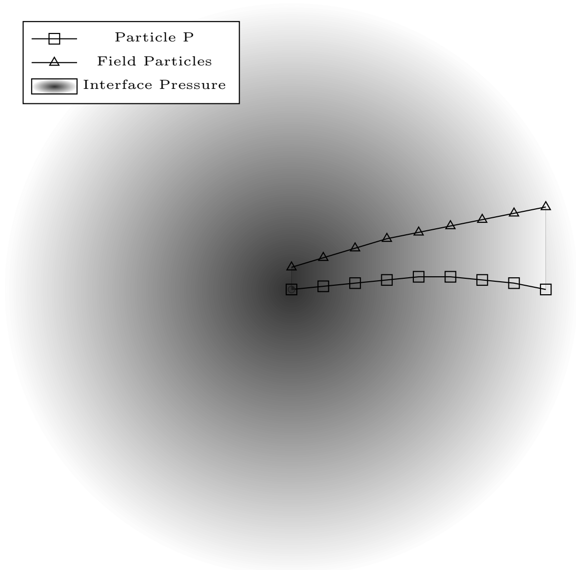

Figure 5: Composite Field Distribution

3.4 Composite Field Distribution

Figure 5 represents a particle moving through a composite distribution of field particles. This type of distribution follows from the Framework and describes massive objects such as our planet or the sun. The distribution is more dense at the center, shown as darker grays, and becomes less dense as one moves away from the object, shown as lighter grays at the edges of the circle. This correlates to particle distances on any such radial line as it moves from inward-most to outward-most reaches[4].

The plotted shades of gray between squares and diamonds represent resistance as noted in the previous subsection 3.3. The darker shades, with their higher resistance values, impede the progress of P_s towards its left side (in this instance). However, the lighter shades to the right side between squares and diamonds, and so lower resistance, indicate lowered resistance. Both the higher and lower resistance values are as compared to the midpoint of the squares and diamond range. In this example the differences in resistance on either side of the interface for P_s will act upon the particle: It will slow down on left (inner) side and speed up on the right (outer) side. There are consequences to this situation.

- The greater resistance towards the center of the composite field distribution is of benefit to P_s. Due to the ratio of closer distances between the interface of P_s and the energy used to interact with the interface for F_f, P_s profits and adds new field particles to its inner and outer energy shells.
- The lower resistance to the outer side of P_s pushes the right side over its left side causing P_s to veer slightly to the left, towards the center of the composite field distribution. This action means a loss of energy to P_s.
- But, overall, the loss verses gain for P_s is profitable.

3.5 Velocity

There is one additional property of P_s that affects its direction through the field F_f: Velocity. P_s accumulated energy during its acceleration from its interaction with P_p. The velocity of P_s did not have a material effect on traveling through the field with standard distribution as the deviation in resistance was nearly zero (see Figure 4).

The same is not true for P_s in a field with composite distribution. Here sufficient velocity can flatten the deviation in resistance and lessen the gradient effect on the direction of travel for P_s. To lessen does not necessarily mean eliminate: Though traveling at light speed, the star's light still curved around our sun in 1919[5]. Also note asteroid 2024 PT5[6] where its velocity determined results.

[4]Note: The circle and its relationship to the plotted values for the particle P and the field are grossly over exaggerated with the plotted values represented and overly large as compared with the shaded massive object

[5]Note the results of two British expeditions by Eddington, Dyson, and Davidson to observe an Eclipse and the effect of the results on Albert Einstein's career.

[6]The asteroid was slow enough to almost get caught by Earth's gravity but fast enough to not get caught, getting a gravity assist and charting a new course through our solar system.