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Generalization of all Fundamental Forces Exist in Universe

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***Abstract*: In this particular article I intend to explain some former terminologies which were started in my three former papers "On the Configuration of EM Waves and Bosons", "Generalization of Different Type of Bodies Exist in Universe" and "Formation and Stability of Various Type of Central Systems Exist in Universe". From the first article I have started a terminology about various type of distortions in different kind of bodies, in this particular article I tend to explain how these distortions affect the dynamics of various bodies and central systems exist in universe and which type of distortions are fundamental in Universe. So, in this particular article I am to explain about the fundamental things which are responsible for governing the dynamics of different bodies and broken parts.**

***Keywords*: Co-Bodies, Odd and Even Ages of Universe, Perfection Quantity, Quantity of Motion, Quantity of Broken Parts, Universal Distortion.**

1. Introduction

I will start from geometrical representation of various bodies with their scalar fields then obtain some mathematics behind these fundamental interactions. After generalization of all fundamental interactions I tend to explain the unification of these fundamental interactions by variations of the parameters like perfection constant (η), universal scale (*a*), universal scalar field (Φ_u) etc. in universal frame of reference. I will also explain how these distortions led to change in perfection and the dynamics of universe and evolution or formation of new bodies and central systems in universe.

2. Some Geometrical Representations and their connection with various kinds of distortions

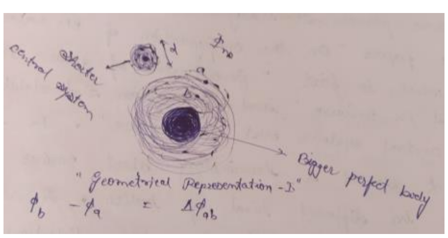

Fig. 1. Representation of Entrance of a Perfect body in Imperfect Scalar Field

I am starting with a body which have perfection ($\eta \rightarrow 1$) and explaining the deformation in a shorter central system by approaching the particular body from normal scalar field (Φ_{no}), as-

$$\phi_b - \phi_a = \Delta\phi_{ab}$$

∵Bigger perfect body also contains many shorter central systems.

When ab=d {here d is diameter of shorter central system}, then-

$$\phi_b - \phi_a = \Delta\phi_{ab} = \Delta\phi_d = \phi_b - \Phi_{no}$$
$$\{\because \phi_a = \Phi_{no}\}$$

∵shorter central systems have (Φ_s^c) scalar field which is also have variations symmetrically at both ends. When shorter body enters between points a and b then-

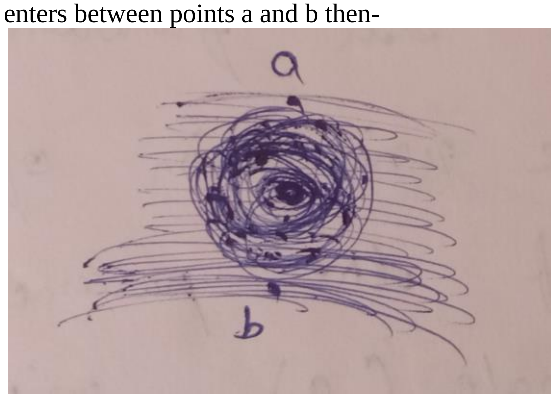

Fig. 2. Critical Points of Entrance

{If Φ_{no} is same at every point around the system, then in Φ_{no} , $\Delta(\Phi_s^c)_{r_1 r_2} = 0$ and here $r_1 = r_2 = r$ but at different ends}

So, at point a and b-

$$(\Phi_s^c)_a + \Phi_{no} = (\Phi_s^c)_b + \phi_b$$
$$(\Phi_s^c)_a - (\Phi_s^c)_b = \Delta\phi_d$$
$$\boxed{\Delta(\Phi_s^c)_{ba} = \Delta\phi_d} \quad (1)$$

{∵a and b are at same distance from the midpoint of shorter central system}

Now from equation (11) of my first paper-

$$\delta_d = \frac{\Delta F}{\Delta\phi}$$

{Here F=quantity of motion and δ_d= distortion}

So, distortion in the motion of central system by the above formula-

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$$\delta_d = \frac{\Delta F_s}{\Delta(\Phi_s^c)_{ba}}$$

{ΔF_s=change into quantity of motion of shorter central system by variation in scalar field}

$$\boxed{\Delta F_s = \delta_d^s . \Delta(\Phi_s^c)_{ba}} \quad (2)$$

So, motion of a system is affected by variation in scalar field. Motion is also affected by the coupling depth in scalar field of a body.

Now I tend to explain another type of interaction based on same type of bodies. "If any distortion occurs in the scalar field of a system then the motion of connected bodies (Bodies which have coupling with particular scalar field) will be affected by the same". Now I am representing the above fact geometrically-

Fig. 3. Change in Motion of n-bodies Coupled with Same Scalar Field

$$\delta_d . \Delta\Phi_s = \Delta F_1(\psi_1, \phi_1, \alpha_1) + \Delta F_2(\psi_2, \phi_2, \alpha_2) + \dots\dots\dots + \Delta F_i(\psi_i, \phi_i, \alpha_i)$$

$\because$ If $\alpha_i \neq 0$ only then the above mathematical representation holds-

$$\boxed{\delta_d . \Delta\Phi_s = \alpha_1 . \Delta F_1 + \alpha_2 . \Delta F_2 + \dots\dots\dots + \alpha_i . \Delta F_i} \quad (3)$$

The above lemma also holds for universal scalar field (Φ_u). "If any distortion comes into occurrence in universal scalar field then all quantities of universe will be affected by the distortion."

So, the equation becomes-

$$\delta_u^D . \Delta\Phi_u = \sum_{n\in\mathbb{R}} \alpha_n . \Delta F_n \quad (4)$$

{Here δ_u^D=Universal Distortion}

Here F_n can be different in different systems and bodies. If we divide by $\Delta\Phi_u$ both sides in equation (4), then-

$$\delta_u^D = \sum_{n\in\mathbb{R}} \alpha_n . \frac{\Delta F_n}{\Delta\Phi_u}$$

$\because$ Each and every quantity is small enough in universal distortion. So-

$$\boxed{\delta_u^D = \sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial\Phi_u}} \quad (5)$$

If there is a very small change in motion of quantities exist in universe then the level of distortion at universal level is so high.

$$\{\because \partial\Phi_u = \frac{1}{\alpha_u} . \partial\Psi_u\}$$

$$\delta_u^D = \sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial\Psi_u} . \alpha_u$$

So the equation (5) can be written as-

$$\boxed{\delta_u^D = \sum_{n\in\mathbb{R}} \alpha_n . \alpha_u . \frac{\partial F_n}{\partial\Psi_u}} \quad (6)$$

As we know from my former paper-

$$\eta_{a\to b} = \int_{\tau_1(a_1)}^{\tau_2(a_2)} \delta_D(\tau) . d\tau \quad (2)$$

We can define universal perfection constant between two universal epochs a and b as-

$$(\eta_{a\to b})_u = \int_{\tau_1(a_1)}^{\tau_2(a_2)} \sum_{n\in\mathbb{R}} \alpha_n . \alpha_u . \frac{\partial F_n}{\partial\Psi_u} . d\tau \quad (7)$$

Or-

$$(\eta_{a_2 a_1})_u = \int_{a_1}^{a_2} \delta_u^D . da$$

Now I tend to explain another type of interac

Or by putting the value of δ_u^D in above integral we get-

$$(\eta_{a_2 a_1})_u = \int_{a_1}^{a_2} \sum_{n\in\mathbb{R}} \alpha_n . \alpha_u . \frac{\partial F_n}{\partial\Psi_u} . da$$

We can also write it as if the conversion constants are not functions of epochs-

$$\boxed{(\eta_{a_2 a_1})_u = \sum_{n\in\mathbb{R}} (\alpha_n . \alpha_u \int_{a_1}^{a_2} \frac{\partial F_n}{\partial\Psi_u} . da)} \quad (8)$$

$$\{\because \sum_{n\in\mathbb{R}} \alpha_n \int_{a_1}^{a_2} \frac{\partial F_n}{\partial\Psi_u} . da = G(a)\}$$

$G(a) = 0$ If $(\eta_{a_2 a_1})_u \to 0$ then there is less change in motion of bodies or the perfection is very less in universe. So, bodies are less coupled with universal scalar field between some epochs.

If $\eta_{a_1} = 0$ and $\eta_{a_2} = 1$ so $(\eta_{a_2 a_1})_u = -1$ then-

$$(\eta_{a_2 a_1})_u = \sum_{n\in\mathbb{R}} \alpha_n . \alpha_u \int_{\tau_1(a_1)}^{\tau_2(a_2)} \frac{\partial F_n}{\partial\Psi_u} . d\tau$$

$$\because (\eta_{a_2 a_1})_u \Big|_{\tau_1}^{\tau_2} = -1$$

Then $\tau_2 - \tau_1 = (\Delta\tau_u)_{k_1}$, we can clearly see the effect in universal diagram-

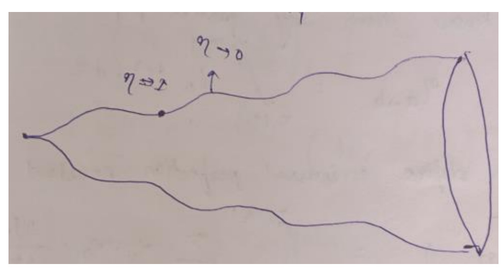

Fig. 4. Perfection Constant Value Representation in n-time Inflationary Model

If we sum over this procedure to different kind of bodies in n-central systems, then-

$(\eta_u)_i = -1$ For i[th] inflation of universe

$$\sum_{1\le i\le n} (\eta_u)_i = -n$$

Now by putting value of η_u from equation (7) and making all parameters independent of time, we get-

$$-n = \sum_{1\le i\le n} \sum_{k\in\mathbb{R}} (\alpha_k.\alpha_u.\frac{\partial F_k}{\partial \Psi_u})_i.\int_{\tau_i}^{\tau_{i+1}} \mathrm{d}\tau$$

Or

$$\because \sum_{1\le i\le n} \int_{\tau_i}^{\tau_{i+1}} \mathrm{d}\tau = \sum_{\substack{k_i \text{ is odd} \\ 1\le k_i \le 2n}} \tau_{k_i}$$

So we can separate above equation as-

$$-n = \sum_{i=1}^{n} \sum_{k\in\mathbb{R}} (\alpha_k.\alpha_u.\frac{\partial F_k}{\partial \Psi_u})_i.\sum_{i=1}^{n}\int_{\tau_i}^{\tau_{i+1}} \mathrm{d}\tau$$

Now by replacing the value of $\int_{\tau_i}^{\tau_{i+1}} \mathrm{d}\tau$ in above case we get-

$$\boxed{\sum_{\substack{k_i \text{ is odd} \\ 1\le k_i \le 2n}} \tau_{k_i} = \left|\frac{-n}{\sum_{i=1}^{n}\sum_{k\in\mathbb{R}} (\alpha_k.\alpha_u.\frac{\partial F_k}{\partial \Psi_u})_i}\right|} \tag{7}$$

So, we can calculate the odd ages of universe by variation in motion of various bodies. So, the total age of universe from my former paper on central systems is-

$$\tau_u = \sum_{\substack{k_1 \text{ is odd} \\ k_1 \le 2n}} \tau_{k_1} + \sum_{\substack{k_2 \text{ is even} \\ k_2 \le 2n}} \tau_{k_2}$$

Know by putting the even and odd age values in this equation, the total age of universe becomes-

$$\tau_u = \left|\frac{-n}{\sum_{i=1}^{n}\sum_{k\in\mathbb{R}} (\alpha_k.\alpha_u.\frac{\partial F_k}{\partial \Psi_u})_i}\right| + \sum_{j=1}^{n}\frac{1}{t_j}\sum_{i=1}^{t_j}\frac{k_i}{\zeta_i}[\delta\beta_i - \delta\gamma_i] \tag{8}$$

Here n is the number of inflations. Now I am pretty much excited to explain about which type of functions Ψ_u and Φ_u will be in terms of some basic functions (ψ, ϕ) but I am not explaining here nature of these function.

Now by putting $\Delta\tau_s = k(\Delta\Phi_s^c)$ in equation (2)-

$$\delta_d^s = k\frac{\Delta F_s}{\Delta \tau_s}$$

$$\left\{\because \frac{\Delta\tau_s}{\Delta\Phi_s^c} = k = \frac{1}{\rho}\right\}$$

Or in normal form-

$$\boxed{\delta_d = k\frac{\Delta F}{\Delta \tau}} \tag{9}$$

Then $\rho = \frac{\Delta\Phi_s^c}{\Delta\tau_s}$ or for small measurements-

$$\boxed{\rho = \frac{\partial \Phi}{\partial \tau} = \frac{1}{k}} \tag{10}$$

Equation (10) is the relation between time and scalar field. Now by not going in further mathematical discussion I tend to explain some geometrical representations on other type of distortions or basic interactions those exist in basic structures of universe. First by the lemma-

"All type of forces exist in universe are depend upon the coupling of various scalar fields and quantities and their spin."

Now if the change in scalar field is more or after certain limit the change in motion of shorter central systems will be more-

$$\because \Delta F_s = \delta_d.(\Delta\phi_d)$$

If $\Delta\phi_d$ is very high (like in minor singularities) then the motion of moving bodies around a central system will not be stable in orbit. So, motion of electrons around nucleus will be affected by the change in scalar field of earth, but for earth the scalar field variation for an atomic scale is very less. But if we observe near a minor singularity (like black hole) where scalar field density variation is very high on very few scale, shorter central systems do not exist because change in motion will be very high.

$$\Delta F_s = \delta_d.(\Delta\phi_d)_{limit}$$

$\{(\Delta\phi_d)_{limit}$ is the limit after that a particular central system don't exist in bigger central body$\}$ $(\Delta\phi_d)_{limit}$ can be different for different central systems.

$$if \begin{cases}\Delta\phi_{obsereved} < (\Delta\phi_d)_{limit} \;\exists\; shorter\ central\ systems \\ \Delta\phi_{obsereved} > (\Delta\phi_d)_{limit} \;\nexists\; shorter\ central\ systems\end{cases}$$

$(\Delta\phi_d)_{limit}$ is calculated for the last perfect body which is moving nearest to the imperfect center.

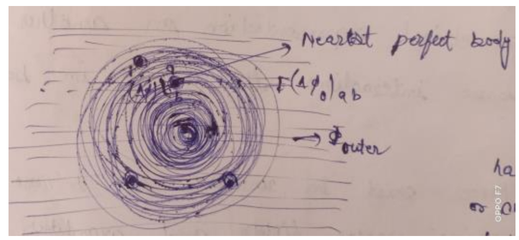

Fig. 5. Critical Points with Spin in Central System of Single Body

Here α_0 is the conversion or coupling constant of nearest body from r to outer scalar field and α_s is vice versa.

Condition (1):- if $\alpha_0(\phi_0)_{ab} > \alpha_s(\phi_{system})_{ab}$, then $(\Delta F_p)_0 > (\Delta F_p)_s$ for same distortion. So, the body will not be in orbit.

Condition (2):- if $\alpha_0(\phi_0)_{ab} < \alpha_s(\phi_{system})_{ab}$, then $(\Delta F_p)_0 < (\Delta F_p)_s$ for same distortion and the motion of body will be affect from its former motion but still move around imperfect center.

Or we can write-

$$\Delta F_p = (\Delta F_p)_0 + (\Delta F_p)_s$$

$$\delta_d.\alpha.(\Delta\phi_p)_{ab} = \alpha_0(\phi_0)_{ab}\delta_{d_1} + \alpha_s(\phi_{system})_{ab}\delta_{d_2}$$

$$\boxed{(\Delta\phi_p)_{ab} = \frac{\alpha_0}{\alpha}\frac{\delta_{d_1}}{\delta_d}(\phi_0)_{ab} + \frac{\alpha_s}{\alpha}\frac{\delta_{d_2}}{\delta_d}(\phi_{system})_{ab}} \tag{11}$$

If we measure a quantity of a particular body, then-

$$\boxed{\psi = \psi_p + \alpha\Delta\phi} \tag{12}$$

$$\begin{cases}\psi = total\ quantity\ of\ a\ body \\ \psi_p = quantity\ which\ is\ perfect \\ \alpha\Delta\phi = converged\ quantity\ of\ a\ body\end{cases}$$

$$\because \delta_d = \frac{\Delta F}{\Delta \phi}$$

$$\Delta F = \delta_d.\Delta\phi$$

Now by putting value of $\Delta\phi$ from equation (12)-

$$\Delta F = \delta_d.\alpha'(\psi - \psi_p)$$

Now by $\alpha.\alpha' = 1$ and by some manipulation in above equation, we get-

$$\boxed{\delta_d = \alpha.\frac{\Delta F}{(\psi - \psi_p)}}$$

$$\because \delta_u^D = \sum_{n\in\mathbb{R}} \alpha_n.\alpha_u.\frac{\partial F_n}{\partial \Psi_u} \tag{13}$$

From equation (6) and (13) we get $\{\partial\Psi_u = \psi_u - (\psi_p)_u\}$

Now by equation (12), we get-

$$\boxed{\alpha = \frac{(\psi - \psi_p)}{\Delta\phi}} \tag{14}$$

Now by differentiating equation (12) with respect to universal time-

$$\frac{\partial\psi}{\partial\tau} = \frac{\partial\,\psi_p}{\partial\tau} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha\frac{\partial(\Delta\phi)}{\partial\tau}$$

Last term can be written as-

$$\left\{\because \Delta\phi = \frac{\Delta F}{\delta_d}\right\}$$

$$\frac{\partial\psi}{\partial\tau} = \frac{\partial\,\psi_p}{\partial\tau} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha\frac{\partial\left({}^{\Delta F}/_{\delta_d}\right)}{\partial\tau}$$

Or by solving this equation-

$$\frac{\partial\psi}{\partial\tau} = \frac{\partial\,\psi_p}{\partial\tau} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha\left\{\frac{\frac{\partial(\Delta F)}{\partial\tau}.\delta_d - \frac{\partial\delta_d}{\partial\tau}.\Delta F}{(\delta_d)^2}\right\}$$

$$\because \frac{\partial\left({}^{f(x)}/_{g(x)}\right)}{\partial x} = \frac{\frac{\partial(f(x))}{\partial x}.g(x) - \frac{\partial g(x)}{\partial x}.f(x)}{(g(x))^2}$$

Now by multiplying both sides of the above equation by $(\delta_d)^2$, we get-

$${\delta_d}^2\frac{\partial\psi}{\partial\tau} = {\delta_d}^2\frac{\partial\,\psi_p}{\partial\tau} + {\delta_d}^2\frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha.\delta_d\frac{\partial(\Delta F)}{\partial\tau} - \alpha.\Delta F\frac{\partial\delta_d}{\partial\tau}$$

$$\{\because \Delta\phi.\delta_d = \Delta F\}$$

So, the above equation can be written as-

$${\delta_d}^2\frac{\partial\psi}{\partial\tau} = {\delta_d}^2\frac{\partial\,\psi_p}{\partial\tau} + \delta_d.\Delta F\frac{\partial\alpha}{\partial\tau} + \alpha.\delta_d\frac{\partial(\Delta F)}{\partial\tau} - \alpha.\Delta F\frac{\partial\delta_d}{\partial\tau}$$

Now by putting ΔF part together in above equation, we get-

$${\delta_d}^2\frac{\partial\psi}{\partial\tau} = {\delta_d}^2\frac{\partial\,\psi_p}{\partial\tau} + \Delta F\left(\delta_d\frac{\partial\alpha}{\partial\tau} - \alpha\frac{\partial\delta_d}{\partial\tau}\right) + \alpha.\delta_d\frac{\partial(\Delta F)}{\partial\tau}$$

Or we can write it as-

$$\boxed{{\delta_d}^2\frac{\partial(\psi - \psi_p)}{\partial\tau} = \Delta F.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \alpha.\delta_d\frac{\partial(\Delta F)}{\partial\tau}} \tag{15}$$

$$\{\because \psi - \psi_p = \alpha\Delta\phi\}$$

$${\delta_d}^2\frac{\partial(\alpha\Delta\phi)}{\partial\tau} = \Delta F.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \alpha.\delta_d\frac{\partial(\Delta F)}{\partial\tau}$$

Or we can write as-

$${\delta_d}^2\frac{\partial(\alpha\Delta\phi)}{\partial\tau} = \frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau}$$

Or this can be written as-

$$\boxed{\frac{\partial(\alpha\Delta\phi)}{\partial\tau} - \frac{1}{{\delta_d}^2}\frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau} = 0} \tag{16}$$

From equation (15) and $\frac{\partial\psi}{\partial\tau} + \alpha\frac{\partial\phi}{\partial\tau} + \phi\frac{\partial\alpha}{\partial\tau} = 0$, we get-

$${\delta_d}^2\left(-\alpha\frac{\partial\phi}{\partial\tau} - \phi\frac{\partial\alpha}{\partial\tau}\right) = {\delta_d}^2\frac{\partial\,\psi_p}{\partial\tau} + \frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau} \tag{17}$$

Or by another type of bodies $\frac{\partial\psi}{\partial\tau} - \alpha\frac{\partial\phi}{\partial\tau} - \phi\frac{\partial\alpha}{\partial\tau} = 0$, we get-

$${\delta_d}^2\left(\alpha\frac{\partial\phi}{\partial\tau} + \phi\frac{\partial\alpha}{\partial\tau}\right) = {\delta_d}^2\frac{\partial\,\psi_p}{\partial\tau} + \frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau} \tag{18}$$

So, there exist two types of equations for a body going to perfection or a new forming body-

$$\begin{cases} {\delta_d}^2\left(\frac{\partial\,\psi_p}{\partial\tau} + \alpha\frac{\partial\phi}{\partial\tau} + \phi\frac{\partial\alpha}{\partial\tau}\right) + \frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau} = 0 & (19) \\ {\delta_d}^2\left(\frac{\partial\,\psi_p}{\partial\tau} - \alpha\frac{\partial\phi}{\partial\tau} - \phi\frac{\partial\alpha}{\partial\tau}\right) + \frac{\partial(\alpha.\delta_d.\Delta F)}{\partial\tau} = 0 & (20) \end{cases}$$

These both equations are having similar quantities but equation (19) is for a body which is going to perfection and equation (20) is for a new forming body. Now if we use equation (5) for universal functions in both equations (19) and (20), then we get-

$${\delta_d}^2\left(\frac{\partial\,(\psi_p)_u}{\partial\tau} + \alpha_u\frac{\partial\Phi_u}{\partial\tau} + \Phi_u\frac{\partial\alpha_u}{\partial\tau}\right) + \frac{\partial}{\partial\tau}\left(\alpha_u.\delta_u^D.\sum_{n\in\mathbb{R}}\Delta F_n\right) = 0$$

$$\{\because \delta_u^D = \sum_{n\in\mathbb{R}} \alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\}$$

Now by putting the value of δ_u^D in equation-

$$\left(\sum_{n\in\mathbb{R}} \alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\right)^2\left(\frac{\partial\,(\psi_p)_u}{\partial\tau} + \alpha_u\frac{\partial\Phi_u}{\partial\tau} + \Phi_u\frac{\partial\alpha_u}{\partial\tau}\right) + \frac{\partial}{\partial\tau}\left(\alpha_u.\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}.\sum_{n\in\mathbb{R}}\Delta F_n\right) = 0$$

And by same process in (20) we get both equations as-

$$\begin{cases} \left(\sum_{n\in\mathbb{R}} \alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\right)^2\left(\frac{\partial\,(\psi_p)_u}{\partial\tau} + \alpha_u\frac{\partial\Phi_u}{\partial\tau} + \Phi_u\frac{\partial\alpha_u}{\partial\tau}\right) + \frac{\partial}{\partial\tau}\left(\alpha_u.\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}.\sum_{n\in\mathbb{R}}\Delta F_n\right) = 0 & (21) \\ \left(\sum_{n\in\mathbb{R}} \alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\right)^2\left(\frac{\partial\,(\psi_p)_u}{\partial\tau} - \alpha_u\frac{\partial\Phi_u}{\partial\tau} - \Phi_u\frac{\partial\alpha_u}{\partial\tau}\right) + \frac{\partial}{\partial\tau}\left(\alpha_u.\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}.\sum_{n\in\mathbb{R}}\Delta F_n\right) = 0 & (22) \end{cases}$$

$$\{\because (\psi_p)_u = \psi_u - \alpha_u\Delta\Phi_u\}$$

Now by putting the value of $(\psi_p)_u$ in both equations (21) and (22)-

$$\left(\sum_{n\in\mathbb{R}} \alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\right)^2\left(\frac{\partial\psi_u}{\partial\tau} - \alpha_u\frac{\partial\Delta\Phi_u}{\partial\tau} - \Delta\Phi_u\frac{\partial\alpha_u}{\partial\tau} + \alpha_u\frac{\partial\Phi_u}{\partial\tau} + \Phi_u\frac{\partial\alpha_u}{\partial\tau}\right) + \frac{\partial}{\partial\tau}\left(\alpha_u.\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}.\sum_{n\in\mathbb{R}}\Delta F_n\right) = 0$$

$$\because \frac{\partial\psi_u}{\partial\tau} + \alpha_u\frac{\partial\Phi_u}{\partial\tau} + \Phi_u\frac{\partial\alpha_u}{\partial\tau} = 0$$

So, the equation becomes-

$$\left(\sum_{n\in\mathbb{R}} \alpha_u \alpha_n . \frac{\partial F_n}{\partial \Phi_u}\right)^2 \left(-\alpha_u \frac{\partial \Delta\Phi_u}{\partial \tau} - \Delta\Phi_u \frac{\partial \alpha_u}{\partial \tau}\right) + \frac{\partial}{\partial \tau}\left(\alpha_u . \sum_{n\in\mathbb{R}} \alpha_u \alpha_n . \frac{\partial F_n}{\partial \Phi_u} . \sum_{n\in\mathbb{R}} \Delta F_n\right) = 0$$

Or we can write it as-

$$\left(\sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u}\right)^2 \left(-{\alpha_u}^2 \frac{\partial(\alpha_u \Delta\Phi_u)}{\partial \tau}\right) + \frac{\partial}{\partial \tau}\left({\alpha_u}^2 . \sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u} . \sum_{n\in\mathbb{R}} \Delta F_n\right) = 0$$

Now by simplification, we get-

$$\left(\sum_{n\in\mathbb{R}} \alpha_u . \alpha_n . \frac{\partial F_n}{\partial \Phi_u}\right)^2 \left(\frac{\partial(\alpha_u \Delta\Phi_u)}{\partial \tau}\right) = \frac{\partial}{\partial \tau}\left(\alpha_u . \sum_{n\in\mathbb{R}} \alpha_u . \alpha_n . \frac{\partial F_n}{\partial \Phi_u} . \sum_{n\in\mathbb{R}} \Delta F_n\right) \quad (23)$$

Using the same manipulation technique but here-

$$\because \frac{\partial \psi_u}{\partial \tau} - \alpha_u \frac{\partial \Phi_u}{\partial \tau} - \Phi_u \frac{\partial \alpha_u}{\partial \tau} = 0$$

$$\left(\sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u}\right)^2 \left({\alpha_u}^2 \frac{\partial(\alpha_u \Delta\Phi_u)}{\partial \tau}\right) - \frac{\partial}{\partial \tau}\left({\alpha_u}^2 . \sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u} . \sum_{n\in\mathbb{R}} \Delta F_n\right) = 0 \quad (24)$$

$$\boxed{\left(\sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u}\right)^2 \left(\frac{\partial(\alpha_u \Delta\Phi_u)}{\partial \tau}\right) = \frac{1}{{\alpha_u}^2} \frac{\partial}{\partial \tau}\left({\alpha_u}^2 . \sum_{n\in\mathbb{R}} \alpha_n . \frac{\partial F_n}{\partial \Phi_u} . \sum_{n\in\mathbb{R}} \Delta F_n\right)} \quad (25)$$

"If there is a variation in scalar field of a particular type, then that will cause variation into the motion of a particular body (which is in interaction with the same scalar field)".

$$\{\because \Delta\phi . \delta_d = \Delta F\}$$

Variation in a particular scalar field caused by many processes, like-

1. Formation of a particular new body from shorter bodies causes variation around body.
2. Interaction of a similar body with a particular body will cause variation due to change in motion of body by particular interaction.
3. The universal flow of scalar field also causes variation into scalar field of a particular body.
4. Tendency to perfection of a particular body by releasing broken parts also causes variation into scalar field of a particular body.

Now I tend to explain how spin is related to the distortion of a particular body and what type of variation in scalar field caused by the spin in different kind of bodies. So, in the former trend, I am here representing a central system with spin-

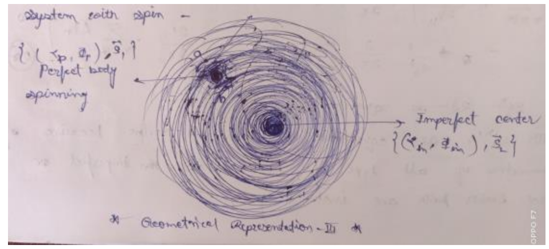

Fig. 6. Distortion in Solar System by Spin of Single Planet

Now by spin of perfect body, the flow of scalar fields on point a and b-

$(\Phi_f^a)_p + (\Phi_f^a)_{im}$ at point a and $(\Phi_f^b)_p - (\Phi_f^b)_{im}$ at point b because at point b the flow of scalar fields are opposite. This variation by spin will cause change in motion by- $\{\because \Delta\phi . \delta_d = \Delta F\}$.

So, $\{change\ into\ motion\ of\ perfect\ body \propto variation\ in\ scalar\ fields\}$. Now as we know- (23)

$$\Delta\phi_{ab} = \phi_b - \phi_a = \digamma_b(\phi_{im} - \phi_p) - \digamma_a(\phi_{im} + \phi_p)$$

$$\{\Phi_f = F(\phi)\}$$

Here Φ_f (flow of scalar field) depend upon quantity of scalar field.

Now by interchanging indices ab in above equation, we get-

$$\Delta\phi_{ba} = \digamma_a(\phi_{im} + \phi_p) - \digamma_b(\phi_{im} - \phi_p)$$

Now by putting the value of $\Delta\phi_{ba}$ in ΔF we get-

$$\boxed{\Delta F_p = \delta_d . [\digamma_a(\phi_{im} + \phi_p) - \digamma_b(\phi_{im} - \phi_p)]} \quad (26)$$

(24)

Both equations are equivalent in universal sens

For the stability of a particular central system there must exist other bodies which have opposite spin or the conservation of spin is needed because by conservation of spin the bodies (usually perfect) reduces the scalar field variation in central system. Now I am describing the above phenomenology by a geometrical representation-

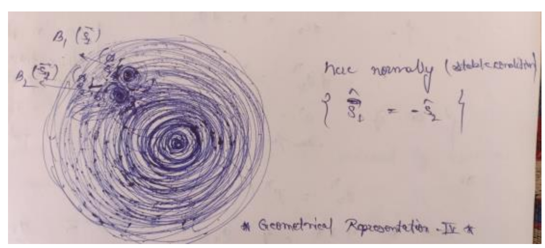

Fig. 7.
Distortion in Imperfect Scalar Field by Spin of Double Bodies

Here normally in stable condition $\{\widehat{S_1} = -\widehat{S_2}\}$. Here by the opposite spin both bodies reduce the variation in scalar field of the central system. So, change into the motion of both bodies would be less and they will move in a particular orbit around the imperfect center. Now I tend to explain the relation between the dynamics of the universe and various distortions and how these behave in universal frame of reference. So, starting with a universal frame of reference diagram-

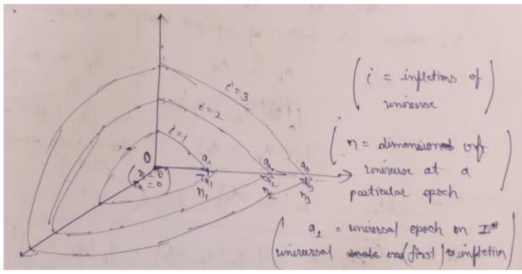

Fig. 8. Representation of n-inflations in Universal Frame of Reference

O= origin of the universe from where all type of creation had been started in sense of universal time $(\tau_u = 0)$. Here at first I intend to obtain the relation between universal time(τ_u) , dimensions (n) and universal scale (a) by variation in universal scalar field (Φ_u) .

$$\{\because d\tau_u = k.d\Phi_u\}$$

Or we can write the relation as-

$$(d\Phi_u)^n = \rho^n (d\tau_u)^n - (da)^n$$

{Here n depends upon the dimensions at that particular epoch}
{Or if $a^n = b^n + c^n \; \forall \; a, b, c \in \mathbb{Z}$ $or\ n\ is\ a\ positive\ integer\ with\ n \geq 3$, then there don't exist such integers by Fermat's Last Theorem}

$$(\Phi_u)^n = \rho^n (\tau_u)^n - (a)^n$$

So, for $n \geq 3$ Φ_u is complex or $\Phi_u \in \mathbb{C}^n$. Now I tend to obtain these universal functions in form of some basic functions.

When we look at an incident from the origin of universal frame of reference, then we see that universe is inflating in n-phases and the new bodies are forming out from some variation into scalar fields around them and again bodies are going to perfection by releasing some broken parts and vice versa.

So, distortion in at particular epoch also related to universal scale as-

$$\delta_d = \frac{\partial F}{\partial a} \tag{27}$$

Or by taking integration on both sides after multiplying by ∂a to both ends of (27), we get-

$$\int_{F_1}^{F_2} \partial F = \int_{a_1}^{a_2} \delta_d . \partial a \tag{28}$$

Now by summation of all type of distortions-

$$\delta_d = k\frac{\partial F}{\partial \tau} + \frac{\partial F}{\partial \phi} + \frac{\partial F}{\partial a} \tag{29}$$

$$\left\{\because \partial\tau = \frac{1}{\rho} . [(\partial\Phi_u)^n + (\partial a)^n]^{1/n}\right\}$$

Now by putting $\partial\tau$ value in (29), we get-

$$\delta_d = k.\rho \frac{\partial F}{[(\partial\Phi_u)^n + (\partial a)^n]^{1/n}} + \frac{\partial F}{\partial \phi} + \frac{\partial F}{\partial a}$$

$$\{\because k.\rho = 1\}$$

$$\boxed{\delta_d = \frac{\partial F}{[(\partial\Phi_u)^n + (\partial a)^n]^{1/n}} + \frac{\partial F}{\partial \phi} + \frac{\partial F}{\partial a}} \tag{30}$$

Now from geometrical representation-4 when we look into change or variation in the scalar field. Here flows at both midpoints a and b are-

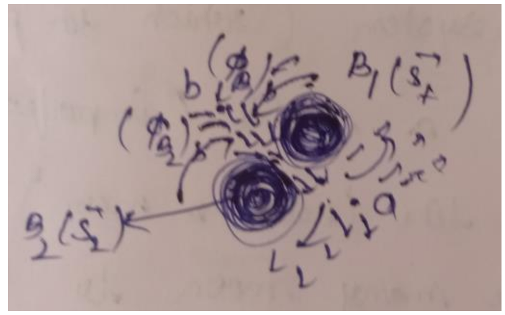
Fig. 9. Closure Representation of Flows of Scalar Fields by Spin of two Bodies

So, the variation in the scalar fields by spin are reduced by spin or a central system is stable.

$$\because (\Delta\phi_{ab})_p = \{(\phi_{B_1})_b - (\phi_{B_2})_b\} - \{(\phi_{B_1})_a - (\phi_{B_2})_a\}$$

Now the total variation in scalar field around imperfect body is-

$$f(\Delta\phi_{ab}) = f_a(\Phi_{im} \pm (\phi_{B_1B_2})_a) - f_b(\Phi_{im} \pm (\phi_{B_1B_2})_b)$$

If both bodies have similar type of spin or affect to the imperfect scalar field in very much similar way as the distortion caused by spin of combined bodies into the scalar field of imperfect body will be very less.

Or for $\{\widehat{S_1} = -\widehat{S_2}\}$ we get-

$$\Delta\phi_{ab} = (\Phi_{im})_b - (\phi_{B_1B_2})_b - (\Phi_{im})_a + (\phi_{B_1B_2})_a$$

And one thing to clear that $(\phi_{B_1B_2})_a$ & $(\phi_{B_1B_2})_b$ are not to the order of $\Delta\Phi_{im}$.

So, the only effect will be seen on both bodies which are responsible for the motion of the both bodies around the imperfect body or formerly known as gravity (in terms of Sir Isaac Newton).

So, by the help of $\Delta F = \delta_d . \Delta\phi_{ab}$ we get variation in motion of these bodies-

$$\boxed{\Delta F_{B_1B_2} = \delta_d . \{(\Phi_{im})_{ab} - (\phi_{B_1B_2})_b - (\Phi_{im})_a + (\phi_{B_1B_2})_a\}} \tag{31}$$

But the effect of spin of two imperfect bodies will be seen in variation of scalar field around them (like in X-Ray Binary Stars) because in such cases $(\phi_{B_1B_2})_a$ & $(\phi_{B_1B_2})_b$ are of the order of $\Delta\Phi_{im}$ or in Kerr-Neumann Black Hole (spinning minor singularity). So, spin doublet, triplet or n-plets are needed to reduce distortions in scalar field around an imperfect center and the best example of the following is our solar system. If any perfect body is spinning or moving single around a center (imperfect) is always less stable than spin doublet like earth and moon or bigger perfect bodies like Uranus or Saturn have many moon to reduce the effect of spin and moves stably in our solar central system. This effect is followed by all type of central systems (like for atoms, galaxies, clusters and many other types which exist in universe).

Now by summing up to all bodies exist in a particular central system (suppose n+1 including central body) and putting in equation (15), we get-

$$\sum_{n+1\in\mathbb{R}} {\delta_d}^2 \frac{\partial(\psi - \psi_p)}{\partial\tau} = \sum_{n+1\in\mathbb{R}} I.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \sum_{n+1\in\mathbb{R}} \alpha.\delta_d \frac{\partial I}{\partial\tau}$$
$$\{\because \Delta F = I\}$$

Now by excluding central imperfect body from other perfect bodies-

$${\delta_d}^2 \frac{\partial(\psi^c - \psi_p^c)}{\partial\tau} + \sum_{n\in\mathbb{R}} {\delta_d}^2 \frac{\partial(\psi^{p_n} - \psi_p^{p_n})}{\partial\tau} = \sum_{n+1\in\mathbb{R}} I.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \sum_{n+1\in\mathbb{R}} \alpha.\delta_d \frac{\partial I}{\partial\tau}$$

I is different for r major perfect bodies which have n-r spinning bodies around themselves. So, we can write above equation as-

$$\begin{aligned}{\delta_d}^2 \frac{\partial(\psi^c - \psi_p^c)}{\partial\tau} &+ \sum_{r\in\mathbb{R}} {\delta_d}^2 \frac{\partial(\psi^{p_r} - \psi_p^{p_r})}{\partial\tau} \\ &+ \sum_{n\in\mathbb{R}} {\delta_d}^2.\frac{\partial(\psi^{co} - \psi_p^{co})}{\partial\tau} \\ &= I_c.\frac{\partial(\alpha_c.\delta_d^c)}{\partial\tau} + \alpha_c.\delta_d^c \frac{\partial I_c}{\partial\tau} \\ &+ \sum_{r\in\mathbb{R}} I.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \sum_{r\in\mathbb{R}} \alpha.\delta_d \frac{\partial I}{\partial\tau} \\ &+ \sum_{n-r\in\mathbb{R}} I.\frac{\partial(\alpha.\delta_d)}{\partial\tau} + \sum_{n-r\in\mathbb{R}} \alpha.\delta_d \frac{\partial I}{\partial\tau}\end{aligned}$$

Here $\psi^c, \psi^{p_r} and\, \psi^{co}$ the respective quantities for central body, perfect bodies moving around central body and Co-bodies moving around perfect bodies. We can also say r spin n-plets are formed out by combination of k_1, $k_2, \dots\dots\dots\dots, k_r$ Co-bodies. So, we can write above equation as-

$$\begin{aligned}{\delta_d}^2 \frac{\partial(\psi^c - \psi_p^c)}{\partial\tau} &+ \sum_{r\in\mathbb{R}} {\delta_d}^2 \frac{\partial(\psi^{p_r} - \psi_p^{p_r})}{\partial\tau} \\ &+ \sum_{n\in\mathbb{R}} {\delta_d}^2.\frac{\partial(\psi^{co} - \psi_p^{co})}{\partial\tau} \\ &= I_c.\frac{\partial(\alpha_c.\delta_d^c)}{\partial\tau} + \alpha_c.\delta_d^c \frac{\partial I_c}{\partial\tau} \\ &+ \sum_{i=k_1,k_2,\dots,k_r} I_i.\frac{\partial(\alpha_i.\delta_{d_i})}{\partial\tau} \\ &+ \sum_{i=k_1,k_2,\dots,k_r} \alpha_i.\delta_{d_i} \frac{\partial I_i}{\partial\tau}\end{aligned}$$
$$\left\{\because \sum_{i=1}^{r} k_i = n\right\} \,\&\, \{I_i = \Delta F_i\}\ \forall\, r, k_i \le n$$

For $k_i = 2\, and\, 1$ we can use respectively equations (31) and (26) or the above equation becomes-

$$\begin{aligned}{\delta_d}^2 \frac{\partial(\psi^c - \psi_p^c)}{\partial\tau} &+ \sum_{r\in\mathbb{R}} {\delta_d}^2 \frac{\partial(\psi^{p_r} - \psi_p^{p_r})}{\partial\tau} \\ &+ \sum_{n\in\mathbb{R}} {\delta_d}^2.\frac{\partial(\psi^{co} - \psi_p^{co})}{\partial\tau} \\ &= I_c.\frac{\partial(\alpha_c.\delta_d^c)}{\partial\tau} + \alpha_c.\delta_d^c \frac{\partial I_c}{\partial\tau} \\ &+ \sum_{\substack{i=k_i \\ or\ k_i=1}} \frac{\partial}{\partial\tau}\big(\alpha_i.\delta_{d_i}.\delta_{d_i}.\big[\digamma_a(\phi_{im} + \phi_p) \\ &- \digamma_b(\phi_{im} - \phi_p)\big]\big) \\ &+ \sum_{\substack{i=k_i \\ or\ k_i=2}} \frac{\partial}{\partial\tau}[\alpha_i.\delta_{d_i}.\delta_{d_i}.\{(\Phi_{im})_{ab} \\ &- (\phi_{B_1B_2})_b - (\Phi_{im})_a + (\phi_{B_1B_2})_a\}] \\ &+ \sum_{\substack{i=k_i \\ or\ k_i>2}} \frac{\partial}{\partial\tau}[\alpha_i.\delta_{d_i}.I_i]\end{aligned} \tag{32}$$

So, in this equation we can evaluate the stability of a particular central system by spin or perturbation of perfect bodies according to their Co-bodies. So, for a long lasting central system there always exist co-bodies of its perfect bodies.

Now I am obtaining the quantity of motion as-

$$\begin{aligned}&Quantity\ of\ Motion \\ &\quad = Quantity\ of\ Body \\ &\quad \times Covered\ Scalar\ Field\end{aligned}$$

Or we can write it mathematically as-

$$\boxed{F = \psi \times \phi_{covered}} \tag{33}$$

$$\{\because \psi = \psi_p + \alpha\Delta\phi\}$$
$$F = (\psi_p + \alpha\Delta\phi) \times \phi_{covered} \tag{34}$$
$$\{\because \Delta\phi.\delta_d = \Delta F\}$$

We can write (34) as-

$$F = (\psi_p + \alpha.\frac{\Delta F}{\delta_d}) \times \phi_{covered}$$
$$\{here\ \phi_{covered} = \frac{\partial\phi}{\partial\tau}\}$$

Now by multiplying above equation by δ_d and putting the value of $\phi_{covered}$, we get-

$$\delta_d.F = (\delta_d.\psi_p + \alpha.\Delta F).\frac{\partial\phi}{\partial\tau}$$

Now by dividing with F both sides-

$$\delta_d = \frac{\delta_d}{F}.\psi_p.\frac{\partial\phi}{\partial\tau} + \alpha.\frac{\Delta F}{F}.\frac{\partial\phi}{\partial\tau}$$

Now by putting δ_d parts in same sides-

$$\delta_d\left(1 - \frac{\psi_p}{F}.\frac{\partial\phi}{\partial\tau}\right) = \alpha.\frac{\Delta F}{F}.\frac{\partial\phi}{\partial\tau}$$

Now by some manipulations-

$$\delta_d\left(\frac{\partial\tau}{\partial\phi} - \frac{\psi_p}{F}\right) = \alpha.\frac{\Delta F}{F}$$
$$\boxed{\frac{\Delta F}{F} = \frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi} - \frac{\psi_p}{F}\right)} \tag{35}$$

For small variations we can write equation (35) as-

$$\frac{dF}{F}=\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}-\frac{\psi_p}{F}\right)$$

Now by putting dF as, we get-

$$\frac{I}{F}=\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}-\frac{\psi_p}{F}\right)$$

Now we get value of I as-

$$I=F.\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}\right)-\psi_p$$

Or we can write it as-

$$I+\psi_p=F.\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}\right)$$

From here we can define ψ_p in terms of quantity of motion (F) and variation in quantity of motion (I) as-

$$\boxed{\psi_p=F.\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}\right)-I} \tag{36}$$

Here the quantity of a body equals-

$$\psi=\psi_p+\alpha\Delta\phi$$

$$\boxed{\psi=F.\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}\right)+\alpha\Delta\phi-I} \tag{37}$$

Now by making equation (37) universal-

$$\psi_u=F_u.\frac{\delta_u^D}{\alpha_u}\left(\frac{\partial\tau}{\partial\Phi_u}\right)+\alpha_u\Delta\Phi_u-I_u$$

$$\left\{\because\frac{\partial\Phi_u}{\partial\tau}=\frac{\partial\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}{\partial\tau}\ from\ my\ third\ Paper\right\}$$

So, we can write above equation as-

$$\psi_u=F_u.\frac{\delta_u^D}{\alpha_u}\left(1\Big/\frac{\partial}{\partial\tau}\left(N\textstyle\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)\right)+\alpha_u\Delta\Phi_u-I_u$$

$$\{\because\delta_u^D=\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}\}$$

So the above equation becomes-

$$\psi_u=\frac{F_u}{\alpha_u}.\frac{\sum_{n\in\mathbb{R}}\alpha_u.\alpha_n.\frac{\partial F_n}{\partial\Phi_u}}{\frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}+\alpha_u\Delta\Phi_u-I_u$$

Now by cancelling α_u in first term of the above equation, we get-

$$\boxed{\psi_u=F_u.\frac{\sum_{n\in\mathbb{R}}\alpha_n.\frac{\partial F_n}{\partial\Phi_u}}{\frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}+\alpha_u\Delta\Phi_u-I_u} \tag{38}$$

$$\{\because I_u=\Delta F_u\}$$

So, equation (38) can be written as-

$$\boxed{\psi_u=F_u.\frac{\sum_{n\in\mathbb{R}}\alpha_n.\frac{\partial F_n}{\partial\Phi_u}}{\frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}+\alpha_u\Delta\Phi_u-\Delta F_u} \tag{39}$$

{Remember here n is the number of bodies exist in universe}

Now I am to represent a new geometrical representation for $k_i>2$ –

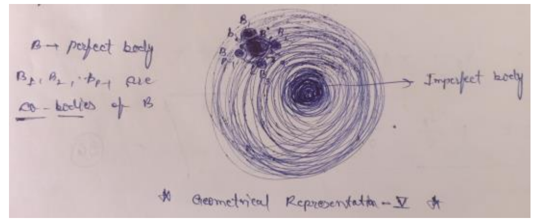

Fig. 10. Geometrical Representation of Co-Bodies in a Central System

Here B is perfect body and B_1, $B_{2,\ldots\ldots,}$ B_{p-1} are perfect co-bodies of B. so, from Geometrical Representation -5 there are p-1 perfect co-bodies moving around a perfect body (B). So, if we measure the variation in scalar field by various bodies, then-

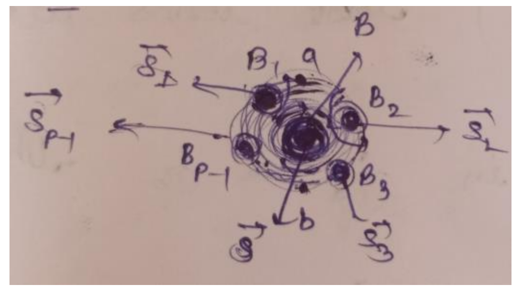

Fig. 11. Representation of effect of spin in Perfect body by Co-Bodies

$$\left\{\because\sum_{i=0}^{p-1}i=p\right\}$$

If we are measuring total variation between two critical points around all bodies let's assume points a & b, then we are to measure all kind of variations by each body on each other. So, we get-

$$(\Delta\phi_B)_{ab}=-\text{Ƒ}_a\left(\phi_{B_1},\phi_{B_2},\ldots\ldots,\phi_{B_{p-1}}\right)-(\phi_B)_a+\text{Ƒ}_b\left(\phi_{B_1},\phi_{B_2},\ldots\ldots,\phi_{B_{p-1}}\right)+(\phi_B)_b$$

∵Here $\text{Ƒ}\left(\phi_{B_1},\phi_{B_2},\ldots\ldots,\phi_{B_{p-1}}\right)$ is a function of interaction of various bodies' scalar fields. So, the expression becomes-

$$\text{Ƒ}\left(\phi_{B_1},\phi_{B_2},\ldots\ldots,\phi_{B_{p-1}}\right)=\left(\phi_{B_1}*\phi_{B_2}*\ldots\ldots*\phi_{B_{p-1}}\right)_a$$

If we measure the total variation in scalar field of the central body between points a & b-

$$\Delta\phi_{ab}=(\Phi_{im})_b-(\Phi_{im})_a+\left(\phi_B*\phi_{B_1}*\phi_{B_2}*\ldots\ldots*\phi_{B_{p-1}}\right)_b-\left(\phi_B*\phi_{B_1}*\phi_{B_2}*\ldots\ldots*\phi_{B_{p-1}}\right)_a$$

Or change into motion of each body by variation in scalar field is-

$$\Delta F=\delta_d.\Delta\phi_{ab}$$

$$\Delta F=\delta_d.(\Delta\Phi_{im})_{ab}+\delta_d.\left\{\left(\phi_B*\phi_{B_1}*\phi_{B_2}*\ldots\ldots*\phi_{B_{p-1}}\right)_b-\left(\phi_B*\phi_{B_1}*\phi_{B_2}*\ldots\ldots*\phi_{B_{p-1}}\right)_a\right\}$$

Here first term in this equation is variation in the motion due to imperfect body which led all bodies move around the imperfect center, but second term is more complex which includes the variation in scalar field around perfect body and this cause moving to the Co-bodies around the perfect body and also some variation around the imperfect scalar field between both critical points but for normal central systems (which are more stable) these terms are less in order. So, there exists $p!$ terms in $\digamma_a$ & $\digamma_b$ like-

$$\digamma\left(\phi_B * \phi_{B_1} * \phi_{B_2} * \ldots\ldots * \phi_{B_{p-1}}\right) = \left(\phi_B * \phi_{B_1} + \phi_B * \phi_{B_2} + \cdots \ldots + \phi_B * \phi_{B_{p-1}}\right) + \left(\phi_{B_1} * \phi_{B_2} + \phi_{B_1} * \phi_{B_3} + \cdots \ldots + \phi_{B_1} * \phi_{B_{p-1}}\right) + \cdots \ldots .. + \left(\phi_{B_{p-2}} * \phi_{B_{p-1}}\right)$$

Here $\{\phi_B * \phi_{B_1} = \phi_{B_1} * \phi_B\}$ and the first term is the term which causes the motion around the p-1 Co-bodies around the perfect body (B). Now by putting the value of $\digamma$ in ΔF , we get-

$$\Delta F = \delta_d.(\Delta\Phi_{im})_{ab} + \delta_d.\left\{\left(\phi_B * \phi_{B_1} + \phi_B * \phi_{B_2} + \cdots \ldots + \phi_B * \phi_{B_{p-1}}\right)_b - \left(\phi_B * \phi_{B_1} + \phi_B * \phi_{B_2} + \cdots \ldots + \phi_B * \phi_{B_{p-1}}\right)_a\right\} + \delta_d.\left\{\left(\phi_{B_1} * \phi_{B_2} + \phi_{B_1} * \phi_{B_3} + \cdots \ldots + \phi_{B_1} * \phi_{B_{p-1}}\right)_b - \left(\phi_{B_1} * \phi_{B_2} + \phi_{B_1} * \phi_{B_3} + \cdots \ldots + \phi_{B_1} * \phi_{B_{p-1}}\right)_a + \cdots \ldots .. + \left(\phi_{B_{p-2}} * \phi_{B_{p-1}}\right)_b - \left(\phi_{B_{p-2}} * \phi_{B_{p-1}}\right)_a\right\}$$

$$\{\, here\ \phi_{ab} = \phi_b - \phi_a\}$$

So, we can write above equation as-

$$\Delta F = \delta_d.(\Delta\Phi_{im})_{ab} + \delta_d.\left\{\left(\phi_B * \phi_{B_1} + \phi_B * \phi_{B_2} + \cdots \ldots + \phi_B * \phi_{B_{p-1}}\right)_{ab}\right\} + \delta_d.\left\{\left(\phi_{B_1} * \phi_{B_2} + \phi_{B_1} * \phi_{B_3} + \cdots \ldots + \phi_{B_1} * \phi_{B_{p-1}}\right)_{ab} + \cdots \ldots .. + \left(\phi_{B_{p-2}} * \phi_{B_{p-1}}\right)_{ab}\right\} \tag{40}$$

So, the total variation in motion of system due to variation in scalar field for p-bodies (where p-1 perfect Co-bodies of 1 perfect body) can be obtained in the above manner. Now by putting equation (40) in equation (32) for $k_i > 2$, then we get-

$$\delta_d{}^2 \frac{\partial(\psi^c - \psi_p^c)}{\partial\tau} + \sum_{r\in\mathbb{R}} \delta_d{}^2 \frac{\partial(\psi^{p_r} - \psi_p^{p_r})}{\partial\tau} + \sum_{n\in\mathbb{R}} \delta_d{}^2 . \frac{\partial(\psi^{co} - \psi_p^{co})}{\partial\tau} = I_c.\frac{\partial(\alpha_c.\delta_d^c)}{\partial\tau} + \alpha_c.\delta_d^c \frac{\partial I_c}{\partial\tau} + \sum_{\substack{i=k_i \\ or\ k_i=1}} \frac{\partial}{\partial\tau}\left(\alpha_i.\delta_{d_i}.\delta_{d_i}.\left[\digamma_a\left(\phi_{im} + \phi_p\right) - \digamma_b\left(\phi_{im} - \phi_p\right)\right]\right) + \sum_{\substack{i=k_i \\ or\ k_i=2}} \frac{\partial}{\partial\tau}[\alpha_i.\delta_{d_i}.\delta_{d_i}.\{(\Phi_{im})_{ab} - (\phi_{B_1B_2})_b - (\Phi_{im})_a + (\phi_{B_1B_2})_a\}] + \sum_{\substack{i=k_i \\ or\ k_i>2}} \frac{\partial}{\partial\tau}[\alpha_i.\delta_{d_i}.\delta_{d_i}.(\left\{(\Delta\Phi_{im})_{ab} + \left(\phi_B * \phi_{B_1} + \phi_B * \phi_{B_2} + \cdots + \phi_B * \phi_{B_{p-1}}\right)_{ab}\right\} + .\left\{\left(\phi_{B_1} * \phi_{B_2} + \phi_{B_1} * \phi_{B_3} + \cdots + \phi_{B_1} * \phi_{B_{p-1}}\right)_{ab} + \cdots \ldots .. + \left(\phi_{B_{p-2}} * \phi_{B_{p-1}}\right)_{ab}\right\}_i)] \tag{41}$$

$$\{here\ p = k_i - 1\}$$

So, here we found a new equation (41) which seems so much complex but here we summed over all type of perfect bodies with their co-bodies moving around the imperfect central body.

3. Some Mathematical Expressions and their connections with above Analysis

In this phase of paper I am obtaining some remarkable mathematical equations from the above analysis. As we know from my second paper [2]-

$$\eta = \frac{\Psi - \alpha\Phi}{\Psi + \alpha\Phi}$$

Now by putting $\psi = \psi_p + \alpha\Delta\phi$ in η, we get-

$$\eta = \frac{\psi_p + \alpha\Delta\phi\ - \alpha\phi}{\psi_p + \alpha\Delta\phi\ + \alpha\phi}$$

Or we can write it as-

$$\boxed{\eta = \frac{\psi_p + \alpha(\Delta\phi - \phi)}{\psi_p + \alpha(\Delta\phi\ + \phi)}} \tag{42}$$

Now by some manipulation in (42)-

$$\eta\left(\psi_p + \alpha(\Delta\phi\ + \phi)\right) = \psi_p + \alpha(\Delta\phi - \phi)$$

Or by putting ψ_p on one hand and other terms on another hand, we get-

$$\eta\alpha(\Delta\phi\ + \phi) - \alpha(\Delta\phi - \phi) = \psi_p(1 - \eta)$$

Or we can write ψ_p as-

$$\psi_p = \frac{\alpha}{(1 - \eta)}.\{\,\eta\Delta\phi\ + \eta\phi + \phi - \Delta\phi\}$$

Now by rearranging R.H.S. of above equation-

$$\psi_p = \frac{\alpha}{(1-\eta)}.\{\phi(1+\eta) + \Delta\phi(\eta - 1)\}$$

Or we can write it as-

$$\psi_p = \frac{\alpha}{(1-\eta)}.\{\phi(1+\eta) - \Delta\phi(1 - \eta)\}$$

Now by taking $(1-\eta)$ inside, we get-

$$\boxed{\psi_p = \alpha.\left\{\frac{(1+\eta)}{(1-\eta)}\,\phi - \Delta\phi\right\}} \tag{43}$$

$\{\because \eta + \eta^* = 1\}$ Here η^* is imperfection constant or $\eta^* = 1 - \eta$. So, we can write equation (43) as-

$$\psi_p = \alpha.\left\{\frac{(1+\eta)}{\eta^*}\,\phi - \Delta\phi\right\}$$

Or we can write it as-

$$\psi_p = \frac{\alpha}{\eta^*}.\{\phi(1+\eta) - \eta^*\Delta\phi\}$$

Now by comparing equation (36) with equation (43), we get-

$$\boxed{F.\frac{\delta_d}{\alpha}\left(\frac{\partial\tau}{\partial\phi}\right) - \Delta F = \alpha.\left\{\frac{(1+\eta)}{(1-\eta)}\,\phi - \Delta\phi\right\}} \tag{44}$$

Or by expression $\psi - \alpha\Delta\phi = \psi_p$ and (43), we get-

$$\psi - \alpha\Delta\phi = \alpha.\left\{\frac{(1+\eta)}{(1-\eta)}\,\phi - \Delta\phi\right\}$$

So, we get for ψ the expression as-

$$\boxed{\psi = \alpha.\left\{\frac{(1+\eta)}{(1-\eta)}\,\phi\right\}} \tag{45}$$

Or we can write equation (45) in another way as-

$$\psi = \alpha.\left(\frac{1+\eta}{\eta^*}\right)\phi$$

$$\boxed{\psi = \frac{\alpha}{\eta^*}.(1+\eta)\phi} \tag{46}$$

Now by putting $\eta^* - 1 = \eta$ in above expression, we get-

$$\boxed{\psi = \frac{\alpha}{\eta^*}.(2 - \eta^*)\phi} \tag{47}$$

Now by dividing by η^* inside the bracket, we get-

$$\psi = \alpha.\left(\frac{2}{\eta^*} - 1\right)\phi$$

Or we can also write ϕ from equation (46) as-

$$\boxed{\phi = \frac{\eta^*}{\alpha}.\frac{1}{(1+\eta)}.\psi} \tag{48}$$

So, these are the relations between the scalar field and whole quantity of a body.

Now if in expression $\psi = \alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi$ $\eta \to 0$ then the body has more converged quantity-

$$\psi = \alpha\phi.\lim_{\eta\to 0}\left(\frac{1+\eta}{1-\eta}\right)\ or\ \{\psi = \alpha\phi\}$$

But for $\eta \to 1$ the expression becomes-

$$\psi = \alpha\phi.\lim_{\eta\to 1}\left(\frac{1+\eta}{1-\eta}\right)\ or\ \{\psi = very\ high\}$$

Or we can say for perfect body the conversion is very less measured.

If we find the quantity of motion in terms of (33) and (45), then we get-

$$F = \alpha\phi\left(\frac{1+\eta}{1-\eta}\right)\phi_{covered}$$

Or we can write above equation as-

$$F = \alpha\left(\frac{1+\eta}{1-\eta}\right).\Phi.\frac{\partial\phi}{\partial\tau}$$

Now by some manipulation, we get-

$$F.\partial\tau = \alpha\left(\frac{1+\eta}{1-\eta}\right).\Phi.\partial\phi$$

By taking integration to both sides-

$$\boxed{\int_{\tau_1}^{\tau_2} F.\partial\tau = \alpha\left(\frac{1+\eta}{1-\eta}\right).\int_{\phi_1}^{\phi_2}\Phi.\partial\phi} \tag{49}$$

If we find quantity of motion in universal sense, then-

$$F = \psi \times \frac{\partial\Phi_u}{\partial\tau}\quad\left\{\because \phi_{covered} = \frac{\partial\Phi_u}{\partial\tau}\right\}$$

If we calculate it for broken part then-

$$\boxed{F_b = \psi_b \times \frac{\partial\Phi_u}{\partial\tau}} \tag{50}$$

So, quantity of motion of broken parts is also affected by the flow of universal scalar field. Now for scattered broken parts (if the broken part is divided in n-broken parts)-

$$\psi_b = \psi_{b_1} + \psi_{b_2} + \cdots + \psi_{b_n}$$

So, we can write equation (50) as-

$$F_b = \left(\psi_{b_1} + \psi_{b_2} + \cdots + \psi_{b_n}\right) \times \frac{\partial\Phi_u}{\partial\tau}$$

Now by perturbation-

$$F_b = \left(\psi_{b_1}.\frac{\partial\Phi_u}{\partial\tau} + \psi_{b_2}.\frac{\partial\Phi_u}{\partial\tau} + \cdots + \psi_{b_n}.\frac{\partial\Phi_u}{\partial\tau}\right)$$

Or we can write as-

$$\boxed{F_b = F_{b_1} + F_{b_2} + \cdots + F_{b_n}} \tag{51}$$

Now I tend to explain how broken parts are affected by the motion of universal scalar field (like when universe is inflating or deflating).

(a) Representation 1:- if a broken part is moving like the below representation, then-

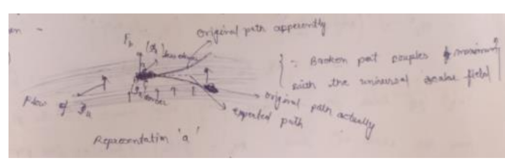

Fig. 12. Change in Path of Broken Part by moving horizontally in Φ_u

$$\left\{\because F_b = \psi_b \times \frac{\partial\Phi_u}{\partial\tau}\right\}$$

Here in representation 'a' the flow of Φ_u is in upper direction but the broken part have the tendency of change in path in opposite direction of the flow due to variation in the density of universal scalar field on points a and b. {∵scalar field flows from higher density to lesser}

(b) Representation 2:- here the effect will not be seen in path but in quantity there will be slight variation will be seen.

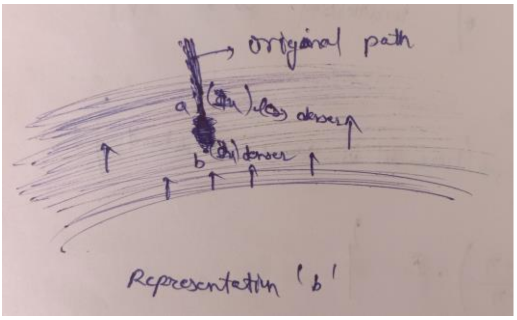

Fig. 13. Change in Quantity of Broken Part by moving vertically in Φ_u

$$\left\{\because F_b = \psi_b \times \frac{\partial \Phi_u}{\partial \tau}\right\} \ \& \ \{\Delta F = \delta_d . \Delta\phi\}$$

And from both representations we can write-

$$\Delta\overrightarrow{F_b} = \Delta\psi_b . \frac{\partial \Phi_u}{\partial \tau}\hat{\imath} + \psi_b . \Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)\hat{\jmath}$$

The first term governs variation in quantity and the second term governs path variation respectively with representation b and a. so, we can find out total variation in quantity of motion of broken part as-

$$\boxed{\Delta F_b = \sqrt{(\Delta\psi_b)^2\left(\frac{\partial \Phi_u}{\partial \tau}\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)\right\}^2}} \tag{52}$$

If both things happening at an angle θ, then-

$$\Delta {F_b}^2 = (\Delta\psi_b)^2\left(\frac{\partial \Phi_u}{\partial \tau}\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)\right\}^2 + 2\Delta\psi_b . \psi_b . \frac{\partial \Phi_u}{\partial \tau} . \Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right) . \cos\theta \tag{53}$$

Equation (53) holds for a bigger body exist nearer to the observation. From the above equation and $\Delta\psi_b = \frac{f(\varepsilon_m)}{k}$ (from my first paper [1]) where $f(\varepsilon_m)$ is friction, we get-

$$\Delta {F_b}^2 = \left(\frac{f(\varepsilon_m)}{k} . \frac{\partial \Phi_u}{\partial \tau}\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)\right\}^2 + 2\frac{f(\varepsilon_m)}{k} . \psi_b . \frac{\partial \Phi_u}{\partial \tau} . \Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right) . \cos\theta \tag{54}$$

Here θ depends upon any quantity exist nearer to the observation point which changes the flow of universal scalar field nearer to the point of observation. So, we can define θ as-

$$\theta \propto \psi$$

Or by removing the proportionality-

$$\theta = k'\psi$$

Here k' is some constant. As we know-

$$\left\{\because \psi = \alpha . \left(\frac{1+\eta}{1-\eta}\right)\phi\right\}$$

So, we can write θ as-

$$\theta = k' . \alpha . \left(\frac{1+\eta}{1-\eta}\right)\phi$$

So, we can write equation (54) in form of above equation as-

$$\Delta {F_b}^2 = \left(\frac{f(\varepsilon_m)}{k} . \frac{\partial \Phi_u}{\partial \tau}\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)\right\}^2 + 2\frac{f(\varepsilon_m)}{k} . \psi_b . \frac{\partial \Phi_u}{\partial \tau} . \Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right) . \cos\left(k' . \alpha . \left(\frac{1+\eta}{1-\eta}\right)\phi\right)$$

Or we know that-

$$\left\{\frac{\partial \Phi_u}{\partial \tau} = \frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right\}$$

Now by putting the above expression in equation we can find the exact form of equation by which we can merely define the motion of a broken part in presence of some bodies exist in path of that broken part as-

$$\Delta {F_b}^2 = \left(\frac{f(\varepsilon_m)}{k} . \frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right)\right\}^2 + 2\frac{f(\varepsilon_m)}{k} . \psi_b . \frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right) . \Delta\left(\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right) . \cos\left(k' . \alpha . \left(\frac{1+\eta}{1-\eta}\right)\phi\right) \tag{55}$$

For $\eta \to 0$ or there exist an imperfect body at the point of observation $\theta_{im} \to k' . \alpha . \phi$ so, we can write as-

$$\Delta {F_b}^2 = \left(\frac{f(\varepsilon_m)}{k} . \frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right)^2 + {\psi_b}^2 . \left\{\Delta\left(\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right)\right\}^2 + 2\frac{f(\varepsilon_m)}{k} . \psi_b . \frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right) . \Delta\left(\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}} \eta \Phi_n^c\right)\right) . \cos(k' . \alpha . \phi)$$

The above equation only holds for imperfect body but for $\eta \to 1$ or if there exists a body which is perfect, then k' should be managed (for $k' . \alpha . \left(\frac{1+\eta}{1-\eta}\right)\phi \to \theta_p$) like- $\theta_{im} < \theta_p \ if \ \theta \in \left[0, \frac{\pi}{2}\right]$

Or

$$k' . \alpha . \lim_{\eta\to 0}\left(\frac{1+\eta}{1-\eta}\right)\phi < \ k' . \alpha . \lim_{\eta\to 1}\left(\frac{1+\eta}{1-\eta}\right)\phi$$

If $\theta_{im} < \theta_p$ then, $\cos(\theta_{im}) > \cos(\theta_p)$ for $\theta \in \left[0, \frac{\pi}{2}\right]$

$\because$ third term in equation (55) is governed by the body type which exist near to the observation point or the body the body which is responsible for the variation in universal scalar field (Φ_u) . Now as we know from equation (33)-

$$\left\{\because F = \psi \times \frac{\partial \Phi_u}{\partial \tau}\right\} \ \& \ \{\Delta F = \delta_d . \Delta\phi\}$$

Now by taking variation in F, we get-

$$\Delta F = \Delta\psi . \frac{\partial \Phi_u}{\partial \tau} + \psi . \Delta\left(\frac{\partial \Phi_u}{\partial \tau}\right)$$

(56)

Now by putting the value of ΔF in (56), we get-

$$\delta_d.\Delta\phi = \Delta\psi.\frac{\partial\Phi_u}{\partial\tau} + \psi.\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

$$\{\because \Delta\psi = \alpha\Delta\phi\}$$

So, we can write above equation as-

$$\delta_d.\Delta\phi = \alpha\Delta\phi.\frac{\partial\Phi_u}{\partial\tau} + \psi.\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

$$\left\{\because \psi = \alpha.\left(\frac{2}{\eta^*} - 1\right)\phi \; from\; equation\; (47)\right\}$$

$$\delta_d.\Delta\phi = \alpha\Delta\phi.\frac{\partial\Phi_u}{\partial\tau} + \alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi.\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

Now by some manipulation-

$$\frac{\delta_d}{\alpha} = \frac{\partial\Phi_u}{\partial\tau} + \left(\frac{1+\eta}{1-\eta}\right).\left(\frac{\phi}{\Delta\phi}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

Now from equation (44) putting the value of $\frac{\delta_d}{\alpha}$ in above equation as-

$$\frac{\delta_d}{\alpha} = \frac{\Delta F}{F}.\frac{\partial\Phi_u}{\partial\tau} + \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\left\{\frac{(1+\eta)}{(1-\eta)}\;\phi - \Delta\phi\right\}$$

By comparing both equations-

$$\frac{\Delta F}{F}.\frac{\partial\Phi_u}{\partial\tau} - \frac{\partial\Phi_u}{\partial\tau} + \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\left\{\frac{(1+\eta)}{(1-\eta)}\;\phi - \Delta\phi\right\} = \left(\frac{1+\eta}{1-\eta}\right).\left(\frac{\phi}{\Delta\phi}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

By some manipulations in above equation, we get-

$$\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F}{F} - 1\right) - \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}.\Delta\phi = \left(\frac{1+\eta}{1-\eta}\right).\left\{\left(\frac{\phi}{\Delta\phi}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right) - \phi.\frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\right\}$$

Now by merging L.H.S part together and taking ϕ out in R.H.S. part in above equation-

$$\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F - \alpha.\Delta\phi}{F} - 1\right) = \phi.\left(\frac{1+\eta}{1-\eta}\right).\left\{\left(\frac{1}{\Delta\phi}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right) - \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\right\}$$

So, we can write systematically to the above equation as-

$$\boxed{\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F - F - \alpha.\Delta\phi}{F}\right) = \phi.\left(\frac{1+\eta}{1-\eta}\right).\left\{\left(\frac{1}{\Delta\phi}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right) - \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\right\}}$$

(57)

Equation (57) is solvable for a quantity which has some perfection constant (η), conversion constant (α) and quantity of motion (F). if we convert equation (57) in form of quantity then by replacing $\left\{\phi = \frac{\eta^*}{\alpha}.\frac{1}{(1+\eta)}.\psi\right\}$ & $\alpha.\Delta\phi = \psi - \psi_p$ then,we get-

$$\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F - F + (\psi_p - \psi)}{F}\right) = \frac{\psi}{\alpha}.\left(\frac{1+\eta}{1-\eta}\right).\left(\frac{1-\eta}{1+\eta}\right).\left\{\left(\frac{\alpha}{\psi - \psi_p}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right) - \frac{\alpha}{F}.\frac{\partial\Phi_u}{\partial\tau}\right\}$$

Now by removing common parts-

$$\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F - F + (\psi_p - \psi)}{F}\right) = \psi.\left\{\left(\frac{1}{\psi - \psi_p}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right) - \frac{1}{F}.\frac{\partial\Phi_u}{\partial\tau}\right\}$$

Now by taking similar terms together-

$$\frac{\partial\Phi_u}{\partial\tau}.\left(\frac{\Delta F - F + (\psi_p - \psi) + \psi}{F}\right) = \left(\frac{\psi}{\psi - \psi_p}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

So, the equation becomes like this-

$$\boxed{\frac{(\Delta F - F + \psi_p)(\psi - \psi_p)}{\psi F} = \left(\frac{1}{\partial\Phi_u/\partial\tau}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)}$$

(58)

Now by solving further to equation (58), we get-

$$\frac{\left(\psi\Delta F - \psi F + \psi\psi_p - \psi_p\Delta F + \psi_p F - {\psi_p}^2\right)}{\psi F} = \left(\frac{1}{\partial\Phi_u/\partial\tau}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

(59)

Now taking the above part of (59) as-

$$Q(\psi, F) = \psi\Delta F - \psi F + \psi\psi_p - \psi_p\Delta F + \psi_p F - {\psi_p}^2$$

(60)

So, by using expression (60) we can write equation (59) as-

$$\frac{Q(\psi, F)}{\psi F} = \left(\frac{1}{\partial\Phi_u/\partial\tau}\right).\Delta\left(\frac{\partial\Phi_u}{\partial\tau}\right)$$

(61)

Now as we know from equation (33)-

$$F = \psi \times \phi_{covered}$$

$$\{\because \phi_{covered} = (v_p)_b = \frac{\partial\Phi_u}{\partial\tau}\; from\; my\; first\; paper\}$$

For broken parts the propagation velocity is-

$$(v_p)_b = \frac{(\partial\Phi_u)_{covered}}{\partial\tau}$$

$$\left\{\because F_b = \psi_b \times \frac{\partial\Phi_u}{\partial\tau}\right\}$$

As we know for photons $\psi_b = (\psi_p)_b + \alpha.\Delta\phi$ and $(\psi_p)_b = 0$ so-

$$\boxed{F_b = \psi_b.(v_p)_b}$$

(62)

In normal condition $\{F_b = \psi_b.(v_p)_b = mc = P\}$ if c is constant because photon transforms into scalar field but if propagation speed of photon is changing according to variation in scalar field, then-

$$\Delta F_b = \Delta\psi_b.(v_p)_b + \psi_b.\Delta(v_p)_b$$

Now for a normal body how propagation speed should be measured? The answer is-

$$\because F = \psi.v_p \;\&\; v_p = \frac{\partial\Phi_u}{\partial\tau}$$

If we calculate infinitesimal variation in F for two parameters (ϕ&τ), then-

$$dF = \frac{\partial F}{\partial\tau}.d\tau + \frac{\partial F}{\partial\phi}.d\phi$$

Now by putting value from above-

$$\boxed{\begin{aligned} dF = \frac{\partial\psi}{\partial\tau}.\frac{\partial\Phi_u}{\partial\tau}.d\tau + \psi.\frac{\partial^2\Phi_u}{\partial\tau^2}d\tau \\ +\frac{\partial\psi}{\partial\phi}.\frac{\partial\Phi_u}{\partial\tau}.d\phi + \psi.\frac{\partial}{\partial\phi}\left(\frac{\partial\Phi_u}{\partial\tau}\right).d\phi \end{aligned}} \tag{63}$$

$$\because d\tau = k.d\Phi_u$$

So, we can write (63) as-

$$dF = \frac{\partial\psi}{\partial\tau}.\frac{\partial\Phi_u}{\partial\tau}.k.d\Phi_u + \psi.\frac{\partial^2\Phi_u}{\partial\tau^2}k.d\Phi_u + \frac{\partial\psi}{\partial\phi}.\frac{\partial\Phi_u}{\partial\tau}.d\phi + \psi.\frac{\partial}{\partial\phi}\left(\frac{\partial\Phi_u}{\partial\tau}\right).d\phi$$

Now by using $v_p = \frac{\partial\Phi_u}{\partial\tau}$, we get-

$$dF = \frac{\partial\psi}{\partial\tau}.v_p.k.d\Phi_u + \psi.\frac{\partial v_p}{\partial\tau}k.d\Phi_u + \frac{\partial\psi}{\partial\phi}.v_p.d\phi + \psi.\frac{\partial v_p}{\partial\phi}.d\phi$$

Now by using some manipulation in above equation-

$$\boxed{\frac{1}{k}.\frac{dF}{d\Phi_u} = \left\{\frac{\partial\psi}{\partial\tau}.v_p + \psi.\frac{\partial v_p}{\partial\tau}\right\} + \frac{\partial\psi}{\partial\phi}.\frac{v_p}{k}.\frac{d\phi}{d\Phi_u} + \frac{\psi}{k}.\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}} \tag{64}$$

The term $\left\{\frac{\partial\psi}{\partial\tau}.v_p + \psi.\frac{\partial v_p}{\partial\tau}\right\}$ seems like Newton's second law of motion but it only holds when bodies are not affected by scalar fields. Now the other two terms $\frac{\partial\psi}{\partial\phi}.\frac{v_p}{k}.\frac{d\phi}{d\Phi_u} + \frac{\psi}{k}.\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}$ gives the generalization of bodies affected with the universal scalar field (Φ_u) and another scalar fields (ϕ)

$$\{\because \psi = \psi_p + \alpha\Delta\phi\}$$

So, the last two terms can be written as-

$$\left\{\frac{\partial\psi_p}{\partial\phi} + \frac{\partial\alpha}{\partial\phi}.\Delta\phi + \alpha.\frac{\partial(\Delta\phi)}{\partial\phi}\right\}\frac{1}{k}\frac{\partial\Phi_u}{\partial\tau}.\frac{d\phi}{d\Phi_u} + \frac{(\psi_p + \alpha\Delta\phi)}{k}.\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}$$

So, we can write equation (64) in a generalized form as-

$$\begin{aligned} \frac{1}{k}.\frac{dF}{d\Phi_u} = &\left\{\frac{\partial\psi_p}{\partial\tau}.v_p + \psi_p.\frac{\partial v_p}{\partial\tau}\right\} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi.v_p + \frac{\partial(\Delta\phi)}{\partial\tau}.\alpha.v_p \\ &+ \frac{\partial v_p}{\partial\tau}.\Delta\phi.\alpha \\ &+ \frac{1}{k}\frac{\partial\Phi_u}{\partial\tau}.\frac{d\phi}{d\Phi_u}\left\{\frac{\partial\psi_p}{\partial\phi} + \frac{\partial\alpha}{\partial\phi}.\Delta\phi + \alpha.\frac{\partial(\Delta\phi)}{\partial\phi}\right\} \\ &+ \frac{(\psi_p + \alpha\Delta\phi)}{k}.\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u} \end{aligned} \tag{65}$$

Exactly the Newton's Second Low of motion is defined by the first two terms in equation (65) as $\left\{\frac{\partial\psi_p}{\partial\tau}.v_p + \psi_p.\frac{\partial v_p}{\partial\tau}\right\}$ because the ϕ-ψ transformation part is perturbed from equation (64).

So, we can write equation (65) in generalized form as-

$$\begin{aligned} \frac{dF}{d\tau} = &\left\{\frac{\partial\psi_p}{\partial\tau}.v_p + \psi_p.\frac{\partial v_p}{\partial\tau}\right\} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi.v_p + \frac{\partial(\Delta\phi)}{\partial\tau}.\alpha.v_p \\ &+ \frac{\partial v_p}{\partial\tau}.\Delta\phi.\alpha \\ &+ \frac{1}{k}\frac{\partial\Phi_u}{\partial\tau}.\frac{d\phi}{d\Phi_u}\left\{\frac{\partial\psi_p}{\partial\phi} + \frac{\partial\alpha}{\partial\phi}.\Delta\phi + \alpha.\frac{\partial(\Delta\phi)}{\partial\phi}\right\} \\ &+ \frac{(\psi_p + \alpha\Delta\phi)}{k}.\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u} \end{aligned} \tag{66}$$

Last term can be written as-

$$\frac{(\psi_p + \alpha\Delta\phi)}{k}.\frac{\partial v_p}{\partial\Phi_u} = (\psi_p + \alpha\Delta\phi)\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\tau}$$

$$\because d\tau = k.d\Phi_u$$

Some terms like $\frac{\partial\alpha}{\partial\tau}$ are measured very less in our central system or variation is long time behavior. So, for a body the variation in quantity of motion can be completely measured by above equation (66). Form the above equation we can clearly justify that Newton's laws don't consider scalar field-quantity transformation or ϕ-ψ transformation but Einstein's Relativity consider scalar field transformation only in terms of broken parts not to the whole quantity, but this type of transformation exist in bodies also or if we say in terms of Einstein "Matter transforms in Space-Time" and vice versa.

The above equation holds when the motion of particular body is considered in universal frame of reference or the dynamics of universe is also considered because each and every body exist in universe is affected by the dynamics of Universe.

Now by some manipulation in equation (66), we get-

$$\begin{aligned} \frac{dF}{d\tau} = &\left\{\frac{\partial\psi_p}{\partial\tau}.v_p + \psi_p.\frac{\partial v_p}{\partial\tau}\right\} + \alpha\Delta\phi\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \\ &+ v_p.\Delta\phi\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \\ &+ \alpha.v_p\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \\ &+ \frac{1}{k}.\frac{d\phi}{d\Phi_u}\left\{\psi_p.\frac{\partial v_p}{\partial\phi} + \frac{\partial\psi_p}{\partial\phi}.v_p\right\} \end{aligned}$$

Now by writing it systematically-

$$\boxed{\begin{aligned} \frac{dF}{d\tau} = &\left\{\frac{\partial\psi_p}{\partial\tau}.v_p + \psi_p.\frac{\partial v_p}{\partial\tau}\right\} + \frac{1}{k}.\frac{d\phi}{d\Phi_u}\left\{\psi_p.\frac{\partial v_p}{\partial\phi} + \frac{\partial\psi_p}{\partial\phi}.v_p\right\} \\ &+\alpha\Delta\phi\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} + v_p.\Delta\phi\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \\ &+\alpha.v_p\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \end{aligned}} \tag{67}$$

So, we can apply equation (67) on each and every body exist in universe weather on broken parts also but for broken parts $\psi_p = 0$ because broken parts are totally convertible in scalar field (ϕ). $\{\psi_b = \alpha\Delta\phi\}$ So, for broken parts the equation of motion is like this-

$$\begin{aligned} \frac{dF_b}{d\tau} = &\alpha\Delta\phi\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} + v_p.\Delta\phi\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \\ &+ \alpha.v_p\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\} \end{aligned} \tag{68}$$

If the speed of light is a universal constant then the equation must be zero but is does not. So, from equation (68) we can prove that light or photons also vary with universal flow and also lose some quantity.

Now by multiplying both sides in equation (68) by , we get-

$$dF_b = \alpha\Delta\phi\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau + v_p.\Delta\phi\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau + \alpha.v_p\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau \quad (69)$$

Now by small variations in equation (54) we can write $\{\Delta F = dF\}$ and by putting $\frac{\partial\Phi_u}{\partial\tau} = v_p$, we get-

$$dF_b{}^2 = \left(\frac{f(\varepsilon_m)}{k}.v_p\right)^2 + \psi_b{}^2.\{dv_p\}^2 + 2\frac{f(\varepsilon_m)}{k}.\psi_b.v_p.d(v_p).\cos\theta \quad (70)$$

$$\because \cos\theta = \cos\left(k'.\alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi\right)$$

Now by squiring equation (69) and putting $dF_b{}^2$ value in (70), we get-

$$\left[\alpha\Delta\phi\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau + v_p.\Delta\phi\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau + \alpha.v_p\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u}\right\}.d\tau\right]^2 = \left(\frac{f(\varepsilon_m)}{k}.v_p\right)^2 + \{\psi_b.dv_p\}^2 + 2\frac{f(\varepsilon_m)}{k}.\psi_b.v_p.d(v_p).\cos\theta$$

Or by putting-

$$\left\{\frac{\partial v_p}{\partial\tau} + \frac{1}{k}\frac{\partial v_p}{\partial\phi}.\frac{d\phi}{d\Phi_u} = dv_p(\tau,\phi)\right\}$$

$$\left\{\frac{\partial\alpha}{\partial\tau} + \frac{1}{k}\frac{\partial\alpha}{\partial\phi}.\frac{d\phi}{d\Phi_u} = d\alpha(\tau,\phi)\right\}$$

$$\left\{\frac{\partial(\Delta\phi)}{\partial\tau} + \frac{1}{k}\frac{\partial(\Delta\phi)}{\partial\phi}.\frac{d\phi}{d\Phi_u} = d[\Delta\phi](\tau,\phi)\right\}$$

So, we can write above equation as-

$$\left[\alpha\Delta\phi dv_p + v_p.\Delta\phi.d\alpha + d[\Delta\phi]\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 + 2d\psi_b.\psi_b.v_p.dv_p.\cos\theta$$

Now by putting-

$$\alpha\Delta\phi dv_p + v_p.\Delta\phi.d\alpha + d[\Delta\phi] = d\left(\alpha v_p\Delta\phi\right)$$

So, above equation becomes-

$$\left[d\left(\alpha v_p\Delta\phi\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 + 2d\psi_b.\psi_b.v_p.dv_p.\cos\theta$$

(a) If there is no another body is interrupting the broken part then by putting $\cos\theta = 0$, we get-

$$\left[d\left(\alpha v_p\Delta\phi\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2$$

Or we can define above equation as-

$$\left[d\left(\psi_b v_p\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 \quad (71)$$

Or both $\psi_b \& v_p$ can be represented on graph with x and y axis.

(b) If there exist an interruption body in path of broken part, then-

$$\left[d\left(\psi_b v_p\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 + 2d\psi_b.\psi_b.v_p.dv_p.\cos\theta$$

Or we can write it as-

$$\left[d\left(\psi_b v_p\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 + 2d\psi_b.\psi_b.v_p.dv_p.\cos\left(k'.\alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi\right) \quad (72)$$

If the broken part is forming n-broken parts by some interaction, then by equation (71)-

$$\boxed{\left[d\left(\psi_{b_1}v_{b_1} + \psi_{b_2}v_{b_2} + \cdots + \psi_{b_n}v_{b_n}\right)\right]^2 = \left(d\psi_b.v_p\right)^2 + \left(\psi_b.dv_p\right)^2 + 2d\psi_b.\psi_b.v_p.dv_p.\cos\left(k'.\alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi\right)} \quad (73)$$

For the broken part-

$$\delta_d = \frac{\partial F}{\partial\phi} \ \& \ \because F = \psi_b v_p \ or \ \psi_b = \alpha\Delta\phi$$

$$\left\{\because \Delta\psi_b = \frac{f(\varepsilon_m)}{k}\right\}$$

$$\delta_d = \frac{\partial\psi_b}{\partial\phi}.v_p + \frac{\partial v_p}{\partial\phi}.\psi_b$$

Now we can write δ_d as-

$$\delta_d.d\phi = d\psi_b.v_p + \psi_b.dv_p$$

For small variations $\left\{\because d\psi_b = \frac{f(\varepsilon_m)}{k}\right\}$ the above equation becomes-

$$\delta_d.d\phi = \frac{f(\varepsilon_m)}{k}.v_p + \alpha.d\phi.dv_p$$

Now by some manipulation in above equation, we get-

$$f(\varepsilon_m) = \frac{k}{v_p}\delta_d.d\phi - k.\alpha\frac{dv_p}{v_p}.d\phi$$

Or we can write it as-

$$\boxed{f(\varepsilon_m) = k.\frac{\delta_d}{v_p}.d\phi - k.\alpha\frac{dv_p}{v_p}.d\phi} \quad (74)$$

So, from equation (74) we can calculate friction caused in body by the formation of broken part. Here k can be written as k_f for general understanding-

$$f(\varepsilon_m) = k_f.\frac{\delta_d}{v_p}.d\phi - k_f.\alpha\frac{dv_p}{v_p}.d\phi$$

Now if we find k_f in terms of conversion constant, then-

$$k_f = \frac{f(\varepsilon_m)}{\left(\frac{\delta_d}{v_p}.d\phi - \alpha\frac{dv_p}{v_p}.d\phi\right)}$$

$$\because d\psi_b = \frac{f(\varepsilon_m)}{k_f} \ or \ k_f = \frac{f(\varepsilon_m)}{\Delta\psi_b}$$

Now by comparing of both k_f we found $\Delta\psi_b$ in terms of propagation speed, distortion and variation in scalar field, as-

$$\boxed{\Delta\psi_b = \frac{\delta_d}{v_p}.d\phi - \alpha\frac{dv_p}{v_p}.d\phi} \tag{75}$$

∵for broken part ($\psi_p = 0$) and by putting $\psi_p = 0$ in equation (42) we can find η for broken part-

$$\eta_b = \frac{\alpha(\Delta\phi - \phi)}{\alpha(\Delta\phi + \phi)} \tag{76}$$

∵ $\Delta\psi_b = \alpha\Delta\phi$ for broken part from my first paper. So, we can write equation (76) as-

$$\eta_b = \frac{\Delta\psi_b - \alpha\phi}{\Delta\psi_b + \alpha\phi} \tag{77}$$

Now by putting the value of $\Delta\psi_b$ from equation (75) in equation (77), we get-

$$\eta_b = \frac{\frac{\delta_d}{v_p}.d\phi - \alpha\frac{dv_p}{v_p}.d\phi - \alpha\phi}{\frac{\delta_d}{v_p}.d\phi - \alpha\frac{dv_p}{v_p}.d\phi + \alpha\phi}$$

Now by some manipulations in above equation, we find-

$$\eta_b = \frac{\delta_d.d\phi - \alpha dv_p.d\phi - \alpha v_p\phi}{\delta_d.d\phi - \alpha dv_p.d\phi + \alpha v_p\phi}$$

$$\{\because dF_b = \delta_d.d\phi\}$$

So, we can write above equation as-

$$\eta_b = \frac{dF_b - \alpha dv_p.d\phi - \alpha v_p\phi}{dF_b - \alpha dv_p.d\phi + \alpha v_p\phi}$$

$$\{\because \delta_d.d\phi = d\psi_b.v_p + \psi_b.dv_p\}$$

So, we can write above expression as-

$$\eta_b = \frac{d\psi_b.v_p + \psi_b.dv_p - \alpha dv_p.d\phi - \alpha v_p\phi}{d\psi_b.v_p + \psi_b.dv_p - \alpha dv_p.d\phi + \alpha v_p\phi}$$

Now by putting similar terms together in above equation, we get-

$$\boxed{\eta_b = \frac{dv_p(\psi_b - \alpha.d\phi) + v_p(d\psi_b - \alpha\phi)}{dv_p(\psi_b - \alpha.d\phi) + v_p(d\psi_b + \alpha\phi)}} \tag{78}$$

So, η for broken part also not completely 1 or 0. This is due to the dual nature of the broken part or not the complete transformation into scalar field from quantity and vice versa. So, broken part is neither imperfect nor perfect. From the above mathematical terminologies we can also find the functions or tools which are needed to generalize our view about universe.

∵ Friction is also a type of distortion. So, we can generalize k_f in terms of quantity of motion as-

$$\because f(\varepsilon_m) = \delta_d$$

So by

$$\delta_d = \frac{dF}{d\phi}$$

Now by comparing both expressions, we get-

$$f(\varepsilon_m) = \frac{dF}{d\phi_b}$$

$$\left\{\because k_f = \frac{f(\varepsilon_m)}{\Delta\psi_b}\right\}$$

So, we can write it as-

$$k_f\Delta\psi_b = \frac{dF}{d\phi_b}$$

From here we can get-

$$\boxed{dF = k_f\Delta\psi_b.d\phi} \tag{79}$$

Now by putting the value of k_f in (79), we get-

$$dF = \frac{f(\varepsilon_m).\Delta\psi_b.d\phi}{\left(\frac{\delta_d}{v_p}.d\phi - \alpha\frac{dv_p}{v_p}.d\phi\right)}$$

Now by resolving similar terms in above equation, we get-

$$dF = \frac{f(\varepsilon_m).d\psi_b.v_p}{(\delta_d - \alpha.dv_p)}$$

Now we can write it in differentiating form as-

$$\boxed{\frac{dF}{d\psi} = \frac{f(\varepsilon_m).v_p}{(\delta_d - \alpha.dv_p)}} \tag{80}$$

$$\{\because \delta_d = f(\varepsilon_m)\}$$

Now the equation (80) becomes-

$$\boxed{\frac{dF}{d\psi} = \frac{f(\varepsilon_m).v_p}{(f(\varepsilon_m) - \alpha.dv_p)}} \tag{81}$$

Now by some manipulation-

$$\frac{dF}{d\psi}(f(\varepsilon_m) - \alpha.dv_p) = f(\varepsilon_m).v_p$$

Now by putting similar terms together in above equation-

$$f(\varepsilon_m)\left\{\frac{dF}{d\psi} - v_p\right\} = \frac{dF}{d\psi}.\alpha.dv_p$$

Or we can write $f(\varepsilon_m)$ as-

$$\boxed{f(\varepsilon_m) = \frac{\alpha.\frac{dF}{d\psi}.dv_p}{\left(\frac{dF}{d\psi} - v_p\right)}} \tag{82}$$

Now by putting the value of dF in equation (81)-

$$\frac{(v_p.d\psi_b + \psi_b.dv_p)}{d\psi_b} = \frac{f(\varepsilon_m).v_p}{(f(\varepsilon_m) - \alpha.dv_p)}$$

Now by removing similar terms in above equation, we get-

$$v_p + \psi\frac{dv_p}{d\psi} = \frac{f(\varepsilon_m).v_p}{(f(\varepsilon_m) - \alpha.dv_p)}$$

Now by taking v_p to another side-

$$\psi\frac{dv_p}{d\psi} = v_p\left\{\frac{f(\varepsilon_m) - f(\varepsilon_m) + \alpha.dv_p}{(f(\varepsilon_m) - \alpha.dv_p)}\right\}$$

Or we can write by eliminating term-

$$\psi\frac{dv_p}{d\psi} = \frac{\alpha.v_p.dv_p}{(f(\varepsilon_m) - \alpha.dv_p)}$$

Or we can write it as-

$$\boxed{\psi = \frac{\alpha.v_p.d\psi}{(f(\varepsilon_m) - \alpha.dv_p)}} \tag{83}$$

$$\left\{\because \psi = \alpha.\left(\frac{1+\eta}{1-\eta}\right)\phi\right\}$$

Now by putting ψ value in equation (83), we get-

$$\left(\frac{1+\eta}{1-\eta}\right)\phi = \frac{v_p.d\psi}{\left(f(\varepsilon_m) - \alpha.dv_p\right)}$$

Now we get ϕ value as-

$$\boxed{\phi = \left\{\frac{v_p.d\psi}{\left(\left(f(\varepsilon_m) - \alpha.dv_p\right)\right)}\right\}\left(\frac{1-\eta}{1+\eta}\right)} \tag{84}$$

Now by solving further to the equation (84), we get-

$$\phi + \eta\phi = \frac{1}{\left(f(\varepsilon_m) - \alpha.dv_p\right)}.\left\{v_p.d\psi - \eta.v_p.d\psi\right\}$$

Now by putting similar terms together, we get-

$$\eta\left\{\phi + \frac{v_p.d\psi}{\left(f(\varepsilon_m) - \alpha.dv_p\right)}\right\} = \left\{\frac{v_p.d\psi}{\left(f(\varepsilon_m) - \alpha.dv_p\right)} - \phi\right\}$$

So, we get value of η from above equation as-

$$\boxed{\eta = \frac{v_p.d\psi - \phi.f(\varepsilon_m) + \alpha.\phi.dv_p}{v_p.d\psi + \phi.f(\varepsilon_m) - \alpha.\phi.dv_p}} \tag{85}$$

This relation holds for broken parts.

$$\{\because \psi = \psi_p + \alpha\Delta\phi\}\ or\ (\psi_p)_b = 0\ for\ broken\ parts$$

And as we know $\Delta\psi_b = \alpha\Delta\phi_b$ from my first paper [1] or $\psi_b = (\psi_p)_b + \alpha\Delta\phi$

Here $\Delta\phi$ is variation in the scalar field of the body from which the broken part generated.

Now by variation in $\psi_b = \alpha\Delta\phi$, we get-

$$\Delta\psi_b = \Delta\alpha\Delta\phi + \alpha.\Delta(\Delta\phi) \tag{86}$$

Now by comparing both equations for $\Delta\psi_b$, we get-

$$\alpha\Delta\phi_b = \Delta\alpha\Delta\phi + \alpha.\Delta(\Delta\phi)$$

So, the value of $\Delta\phi_b$ from above equation is-

$$\boxed{\Delta\phi_b = \frac{\Delta\alpha}{\alpha}\Delta\phi + \Delta(\Delta\phi)} \tag{87}$$

Now by putting the ϕ value from equation (47) in (87), we get-

$$\Delta\phi_b = \frac{\Delta\alpha}{\alpha}\Delta\left\{\frac{1}{\alpha}.\left(\frac{1-\eta}{1+\eta}\right)\psi\right\} + \Delta.\Delta\left\{\frac{1}{\alpha}.\left(\frac{1-\eta}{1+\eta}\right)\psi\right\}$$

Here ψ is the quantity of body from which the broken part is generated.

Now by solving further to the above equation, we get-

$$\Delta\phi_b = \frac{\Delta\alpha}{\alpha}\left\{\frac{\Delta\alpha}{\alpha^2}.\left(\frac{1-\eta}{1+\eta}\right)\psi + \frac{1}{\alpha}.\left(\frac{1-\eta}{1+\eta}\right)\Delta\psi\right\} + \Delta.\left\{\frac{\Delta\alpha}{\alpha^2}.\left(\frac{1-\eta}{1+\eta}\right)\psi + \frac{1}{\alpha}.\left(\frac{1-\eta}{1+\eta}\right)\Delta\psi\right\}$$

The above expression holds if η is constant in the moment in which the both quantities α & ψ are measured. So, we can write above equation as-

$$\Delta\phi_b = \frac{\Delta\alpha}{\alpha}\left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\} + \left(\frac{1-\eta}{1+\eta}\right)\left\{\Delta\left(\frac{\psi.\Delta\alpha}{\alpha^2}\right) + \Delta\left(\frac{\Delta\psi}{\alpha}\right)\right\}$$

Now by solving further to above equation, we get-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2}\right\} + \left(\frac{1-\eta}{1+\eta}\right)\left\{\left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\}$$

Now by putting similar terms together, we get-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2} + \left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} \tag{88}$$

Or as we know $\delta_d = \frac{dF}{d\phi}$ so variation in motion for broken parts is-

$$\Delta F_b = \frac{1}{\delta_d}\left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2} + \left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} \tag{89}$$

Equation (88) and (89) only holds when $\Delta\eta \to 0$ but if the η also very then (by Appendix-A), we get equation (88) as-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2}\right\} + \frac{\psi}{\alpha}\left\{\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\} + \Delta\left[\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\frac{\psi}{\alpha} + \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\}\right] \tag{90}$$

Now by putting the value of $\Delta.\Delta\left(\frac{1-\eta}{1+\eta}\right)$ (from Appendix-B) in $\Delta\phi_b$, we get $\Delta\phi_b$ (when higher order terms are neglected like $\Delta^2\eta$ & $(\Delta\eta)^2$) as-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2}\right\} + \frac{\psi}{\alpha}\left\{\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\} + \left\{\frac{4(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\}.\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\} + \left(\frac{1-\eta}{1+\eta}\right)\left\{\left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} + \frac{\psi}{\alpha}\left\{\frac{2\Delta\eta(1 - 2\eta + \eta^2)}{(1+\eta)^4}\right\}$$

Now by solving further-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2} + \left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} + \frac{\psi}{\alpha}\left\{\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\} + \left\{\frac{4(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\}.\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\} + \frac{\psi}{\alpha}\left\{\frac{2\Delta\eta(1-2\eta+\eta^2)}{(1+\eta)^4}\right\} \tag{91}$$

As we know equation (91) is only approximation but when the higher order terms are not neglected, then (from Appendix-(B))-

$$\Delta\phi_b = \left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2} + \left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} + \frac{\psi}{\alpha}\left\{\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\} + \left\{\frac{4(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\}.\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\} + \frac{2\psi}{\alpha}\left\{\frac{\{(\Delta\eta - \Delta^2\eta - (\Delta\eta)^2 - \eta\Delta^2\eta)(1+2\eta+\eta^2)\}}{(1+\eta)^4} - \frac{4\Delta\eta(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^4}\right\} \tag{92}$$

Or equation (89) becomes-

$$\Delta F = \frac{1}{\delta_d}\left(\frac{1-\eta}{1+\eta}\right)\left\{\frac{\psi.(\Delta\alpha)^2}{\alpha^3} + \frac{\Delta\psi\Delta\alpha}{\alpha^2} + \left(\frac{\alpha^2\Delta\psi.\Delta\alpha + \alpha^2\psi.\Delta(\Delta\alpha) - 2\psi\alpha.\Delta\alpha}{\alpha^4}\right) + \left(\frac{\alpha\Delta(\Delta\psi) - \Delta\alpha\Delta\psi}{\alpha^2}\right)\right\} + \frac{\psi}{\delta_d.\alpha}\left\{\frac{2(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^2}\right\} + \left\{\frac{4(\eta - \Delta\eta - \eta\Delta\eta)}{\delta_d.(1+\eta)^2}\right\}.\left\{\frac{\psi.\Delta\alpha}{\alpha^2} + \frac{\Delta\psi}{\alpha}\right\} + \frac{2\psi}{\delta_d.\alpha}\left\{\frac{\{(\Delta\eta - \Delta^2\eta - (\Delta\eta)^2 - \eta\Delta^2\eta)(1+2\eta+\eta^2)\}}{(1+\eta)^4} - \frac{4\Delta\eta(\eta - \Delta\eta - \eta\Delta\eta)}{(1+\eta)^4}\right\} \tag{93}$$

Now I tend to explain quantization, when it appears into universe by my gorgeous equation-

$$\psi = \psi_p + \alpha\Delta\phi$$

If a bigger body containing many shorter central systems and for the body weather $\alpha\Delta\phi$ is very less, then there will be less mixing of scalar fields and whenever this type of condition comes into appearance, the quantization effect also comes into appearance. So, for a n^th body (from my third paper [3])-

$$\psi_n = \sum_{i\in\mathbb{R}} (\psi_{n-1})_{\mathrm{i}} - \text{broken parts} + \text{mixed part}$$

$$\because \psi_n = (\psi_p)_n + \alpha\Delta\phi_n$$

Now by putting both equations together-

$$(\psi_p)_n + \alpha\Delta\phi_n = \sum_{i\in\mathbb{R}}\left\{\left((\psi_p)_{\mathrm{n-1}}\right)_{\mathrm{i}} + \alpha_i(\Delta\phi_{\mathrm{n-1}})_{\mathrm{i}}\right\} - \text{broken part term} + \text{mixed part term} \tag{94}$$

Now from equation (94) in three conditions the quantization will come into existence-

(a) If broken part term ≈ mixed part term , then quantization in system will appear.

(b) If broken part term & *mixed part term* both are very less in comparison of both first two terms, then also quantization in system will appear.

(c) If $\alpha\Delta\phi_n$ is very less, then the terms other than $(\psi_p)_n$ also very less in comparison of quantity term. So, in this case quantization will appear very clearly in system. In case of quantization in body the equation of body becomes-

$$\boxed{(\psi_p)_n = \sum_{i\in\mathbb{R}}\left((\psi_p)_{\mathrm{n-1}}\right)_{\mathrm{i}}} \tag{95}$$

Or the terms-

$$\alpha\Delta\phi_n \to 0\,, \sum_{i\in\mathbb{R}} \alpha_i\left((\Delta\phi_{\mathrm{n-1}})\right)_{\mathrm{i}} \to 0$$

Or in sense of quantization-

$$\boxed{\psi \to \psi_p} \tag{96}$$

Or in same way as (96)-

$$\psi_{n-1} \to (\psi_p)_{\mathrm{n-1}}$$

Or in other words "when the total quantity tends to perfect quantity, then the quantization is always appear in a particular system". On earth this is measured clearly but on sun (imperfect body) this is measured less clearly.

We can write equation (94) as-

$$(\psi_p)_n + \alpha\Delta\phi_n = \sum_{i\in\mathbb{R}}\left\{\left((\psi_p)_{\mathrm{n-1}}\right)_{\mathrm{i}} + \alpha_i(\Delta\phi_{\mathrm{n-1}})_{\mathrm{i}}\right\} - \sum_{k\in\mathbb{R}}\{\alpha_k(\Delta\phi_{\mathrm{b}})_{\mathrm{k}}\} + f(\phi) \tag{97}$$

Here $f(\phi)$ is some combination of $\phi * \phi$ for various bodies this can be in different forms like in equation (41).

4. Explanation of Hawking Radiation by $\phi - \psi$ Transformation

In this last phase of article I am representing a beautiful phenomenology by Stephen Hawking in terms of higher order ϕ-ψ transformation. So, I am describing the hawking radiation by black hole (minor singularity). As I described formerly that black holes are not the starting of time but these minor singularities inflate the universe in the next phase or responsible for the variation in the flow of universe time $\mathcal{F}(\tau)$.

$$\because \tau \cong \mathrm{F}(\Phi_{\mathrm{u}})$$

So

$$\mathcal{F}(\tau)\cong\mathcal{F}\big(\mathcal{F}(\Phi_u)\big) \tag{98}$$

For minor singularities-

$$\delta\mathcal{F}(\tau)\neq 0 \tag{99}$$

Or by putting $\mathcal{F}(\tau)$ value from equation (98) in (99), we get-

$$\delta\mathcal{F}\big(\mathcal{F}(\Phi_u)\big)\neq 0 \tag{100}$$

So, the geometrical representation for a minor singularity as a manifestation of higher order ϕ-ψ transformation is-

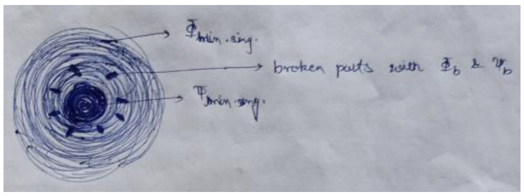

Fig. 14. Geometrical Representation of Hawking Radiation

Here In this situation the broken parts will be of higher order formed at by high level order of distortion. In this case we can represent ψ_b as-

$$n\psi_b=\alpha\Delta\Phi_{minor-sing.} \tag{101}$$

Or the ψ_b will be-

$$\psi_b=\frac{\alpha}{n}\Delta\Phi_{minor-sing.} \tag{102}$$

If the order of ϕ-ψ transformation is high, then average value of quantity of broken parts released by the minor singularity will be high. This will decrease the total quantity of the minor singularity. At a level of distortion in shorter bodies (by which the minor singularity formed out) the scalar fields will cause repulsion which will be responsible for the next inflation by blasting.

Now I am ending the article by concluding some facts from whole analysis.

5. Conclusion

So, in this particular article we have got some new ways to describe some fundamental things in universe by distortions and tendency to perfection. Now we have some rigorous queries like if this is the method to combine things, then what are the proper definitions of the various physical quantities and how these behave in our former terminologies? The answers of this type of fundamental queries will be explained by me in my next article on basic definitions. Now the concluded facts from this article are-

- Space-Time is transformed into quantity and quantity is transformed into spacetime.
- There exists p Co-bodies in each central system (like atoms, solar systems etc.).
- Quantization can be obtained in terms of ϕ-ψ transformation.
- Newton's Laws of Motion are valid in zero ϕ-ψ transformation condition or the Einstein's terms also included for a particular type of ϕ-ψ transformation not to all.
- Equation of motion for each and every particle exists in universe is (67).
- Broken parts also affected by the dynamics of the universal scalar field.
- Universal distortion can be obtained by summing over all bodies exist in universe.
- Even and odd parts of τ_u (Age of Universe) can be calculated by the method of universal distortion.

Hawking radiation can be explained in terms of ϕ-ψ transformation

Appendix

(A) First variation in $\Delta\left(\frac{1-\eta}{1+\eta}\right)$

$$\Delta\left(\frac{1-\eta}{1+\eta}\right)=\frac{(1-\Delta\eta)(1+\eta)-(1-\eta)(1+\Delta\eta)}{(1+\eta)^2}$$

Now by solving further-

$$\Delta\left(\frac{1-\eta}{1+\eta}\right)=\frac{1-\Delta\eta-\eta\Delta\eta+\eta-1+\eta-\Delta\eta-\eta\Delta\eta}{(1+\eta)^2}$$

Now by removing some terms from above equation-

$$\boxed{\Delta\left(\frac{1-\eta}{1+\eta}\right)=\frac{2(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^2}}$$

(B) Second variation in $\Delta.\Delta\left(\frac{1-\eta}{1+\eta}\right)$

$$\Delta.\Delta\left(\frac{1-\eta}{1+\eta}\right)=\Delta\left\{\frac{2(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^2}\right\}$$

In similar way as done earlier-

$$\Delta\left\{\frac{(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^2}\right\}=\left\{\frac{(\Delta\eta-\Delta^2\eta-(\Delta\eta)^2-\eta\Delta^2\eta)(1+2\eta+\eta^2)}{(1+\eta)^4}-\frac{(2\Delta\eta+2\Delta\eta)(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^4}\right\}$$

So, the second term in the numerator is $4\Delta\eta(\eta-\Delta\eta-\eta\Delta\eta)$-

$$\Delta\left\{\frac{(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^2}\right\}=\frac{\{(\Delta\eta-\Delta^2\eta-(\Delta\eta)^2-\eta\Delta^2\eta)(1+2\eta+\eta^2)-4\Delta\eta(\eta-\Delta\eta-\eta\Delta\eta)\}}{(1+\eta)^4}$$

For small variations putting $\Delta^2\eta$ & $(\Delta\eta)^2$ as zero, we get-

$$\Delta\left\{\frac{(\eta-\Delta\eta-\eta\Delta\eta)}{(1+\eta)^2}\right\}=\frac{\{\Delta\eta(1-2\eta+\eta^2)\}}{(1+\eta)^4}$$

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