A Single paper ①

OSCillations / Structure in 29/3/2020

Space / time 12:00 pm

The ~~[illegible]~~ cosmological context

[illegible] [illegible] in terms

of a linear [illegible] in

Space [NB possible connection to Branes]

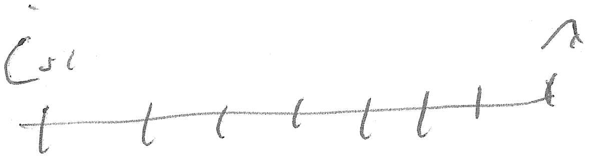
F = [illegible]

(See [illegible] [illegible] [illegible]

2 GR)

in terms of the

mass per unit [illegible]



mass of each (can [illegible] [illegible] [illegible] [illegible]

Also

n times of total mass
of n particles of roughly
equal mass

$$m_i = \frac{1}{n} \quad \text{i.e.} \quad \sum_n m_i = \text{Mass}$$

$$\sum_n \frac{1}{n} = \text{Mass}$$

now $F = ma \rightarrow$ [illegible]

$$ma = -kr \; d[illegible]$$

$$a = \frac{-kr + [illegible]}{m}$$

$$ma \rightarrow (m_i) \rightarrow \sum \frac{1}{n} a$$

Also

$$a = \sum n^2 (-kr + \lambda r)$$

let λ be dependent on

$$\{ \vec{I}, \vec{C}, D \ldots \}$$

a Strong

$i \leftarrow I$

$F = m \frac{d^2x}{dt^2}$

$\frac{d^2x}{dt^2} = r\left(-kr + \lambda(t) r\right)$

[illegible] $r \rightarrow r(t)$

[illegible] [illegible] be a

zero force [illegible] ie

$r^2 \rightarrow \infty$ a $\frac{[illegible]}{r^2}$

[illegible] [illegible] [illegible]

[illegible]

$\frac{-k x(t) \dot{x} + \lambda \dot{x} r(t) r}{m^2}$ [illegible] $\neq 0$

[illegible]

$\lambda = k$ [illegible]

[illegible] [illegible] $m = \sum \frac{1}{n}$

now assume

$$V = \frac{x}{t} \qquad x = \frac{V_i}{H_i} = r_i$$

we have

$$r = V t$$

assuming the dark energy increases velocity as time increases and the equation is VT ET

~~and constant~~

N ∝ number of fields.

fields are defined as massless ↔ massive

Smashed particles

(B)

we have

~~m~~ ⟷

$ma = -kr$

$\frac{-kr}{m} = a$

Chr

$$\frac{d^2r}{dt^2} = \frac{-k r(t)}{m^2} + \frac{\delta(t)}{m^2}$$

$$\frac{1}{n}\frac{d^2r}{dt^2} = \frac{-kr}{m} + \frac{\delta(t)}{m}$$

but a a ~~Cohert~~ ~~Crted~~ Critical

part occurs dt (cutdw)

LHS = 0

now $m \propto \sum \frac{1}{n}$

where n = number of [illegible]

NB

$$\epsilon = \frac{\Delta i}{r_i^n}$$

If LHS = 0

the curvature in shaded

calculus = 0

then if $K(t) = \dot{x}(t)$

Singularity (assumption $i \neq j$) (except noted)

$$\frac{-K r_{ij}(t)}{m} \quad \text{and} \quad \frac{\lambda r_{ij}(t)}{m}$$

Such that as

$F \propto K r_{ij}(t) \approx$ the ...

$r_{ij}(t) \to \infty \quad F \to 0$

Seen as oscillators

$K r = m a = \frac{k m m}{r^2}$

So according $F = \frac{k m_i m_j}{r_{ij}(t)^2}$

$$\frac{1}{r}\frac{dr}{dt} = \frac{\lambda r(t)}{m}$$

$$r = \frac{m}{r} = \frac{m_i}{x_i}$$

$$r = \frac{r}{x_i}$$

$$r = \rho_i x_i$$

$$\frac{dr}{dt} = \frac{\rho_i x_i \lambda r(t)}{m}$$

$$\rho r(t) = r t$$

$$r_j = \frac{v_j}{\delta_j} \quad \& \quad \frac{\chi_j \hat{}}{\delta_j} \quad 5) \; k_j \hat{} \; r_j$$

$$\frac{d^2 r}{dt^2} = \frac{\rho \, r_i \, \delta_i \, \lambda \, r_j(t)}{m}$$

$$F = -k r + \lambda r$$

$$\rho \, r_i \, \delta_i \, \lambda \, r_j(t) = k -$$

$$\omega = \frac{n}{N} \quad F = \frac{k r_j(t)}{m} \Rightarrow \quad \rho \left(\begin{matrix} e \\ \rho k m \to 0 \\ 0 \end{matrix} \right)$$

$$-k r_j(t) \hookrightarrow \lambda r_j(t) \quad \text{if} \; j \; (\text{eigen})$$

but these is

logical contradiction

i.e. F=∞

thus Gravity is considered

to λ

then

$$\frac{1}{n}\frac{d^2 n}{dt^2} = \lambda \, r(t)$$

$$\frac{1}{n_i}\frac{d^2 n}{dt^2} = \lambda \frac{V_j}{\delta_j}$$

or

$$\frac{d^2 n}{dt^2} = n_i \lambda \frac{V_j}{\delta_j}$$

$$\frac{d^2 n}{dt^2} = n_i \lambda r$$

but

$$\rho = \frac{n}{r} \Rightarrow n = \rho r$$

$$E_1 = \rho \lambda r^2$$

NB Oscillation / "Duality" Kinetic ⟺ potential

~~To [illegible] ⇒ T − U → [illegible]~~

(10)

which can be

construed as the

[elastic/potential energy of a "spring"]

[Term param. ... $\Delta B \leftrightarrow \Delta$ Dimensions]

also ... in terms

of the right units

we have to ok energy

in terms of a "field" or

[that is an oscillation between potential $\leftrightarrow$ kinetic]

the author's ... masses

and ... oscillator

So $m \to \frac{k}{m \pm L}$

where L varies. Contiguous

even $m \to \frac{k}{m^2}$

the author is aware of

the math but

$r = ct$ & $v_i t_i$

thus

$$\frac{d^2 x}{dt^2} = a_x^2 \lambda \frac{x}{c} a^2 \Rightarrow a_i \lambda \frac{x}{v_{x,i}} a^2$$

or

$$\frac{d^2 x}{dt^2} \propto x,$$

NB for a relativistic person

$\lambda \to c\lambda$ [illegible]

$r \to \frac{r}{c}$ etc

which has exponential solutions.

(The author hopes a relativistic person checks the math and develops.)

References

- Leininger, C.W Relativistic equations
- Susskind All Stanford lectures in order.