Loop Vectors in Curved D3-branes

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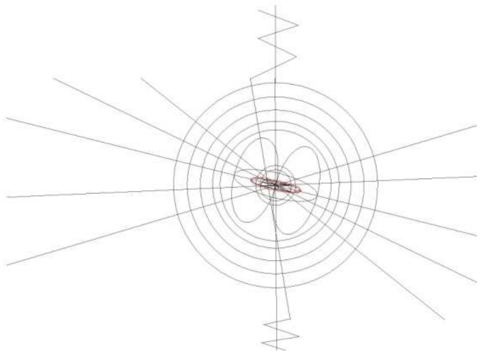

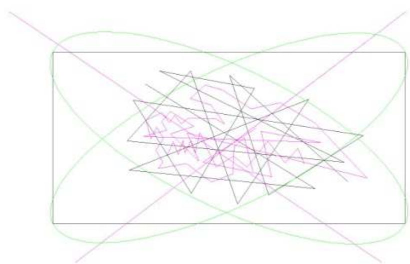

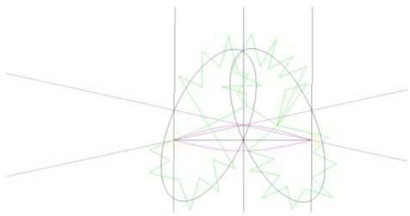

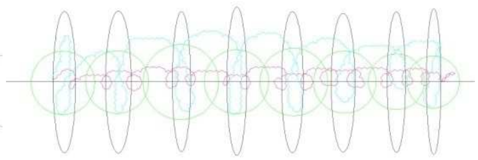

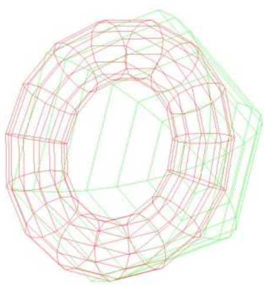

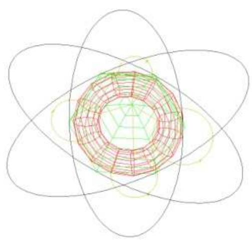

Abstract

After gaining a good idea of functioning and importance of Grids in FaTe, one can proceed to the main Properties and Types of Grids that we encounter while studying about the structure of Multi-dimensional universe. This paper focuses on the same.

Grids in FaTe and their Properties

A Grid is the effective region in a dimension in which particle interactions take place. A grid is mathematically defined as

$$P(Gg) = \{H + (Gg_{\emptyset}) + F_s + M_{u\%}\}^{D>4}$$

Where Fs=(Z+N)3+e i.e. 3 times the sum of protons and neutrons in a grid fraction

Mu% is the Mugbucket Probability (explained ahead)]

And Ggϕ represents the set of all fields in the grid

Properties:

1.) A grid has two fields that are a direct result of particle fields. (these are clearly visible in the 3rd diagram)
    High Corner field (HCF) - has high energy and exists at around 3000 rpm Grid Rotation.
    Low Corner Field (LCF) – has low energy and exists at 1000<I (r) <8000
2.) Grids allow every kind of observable particle interaction and phenomena.
3.) A grid with Mu%=0 is called an Ideal Grid.
4.) Any region in D=11 is part of a Grid if and only if the 1st three components of the grid are applicable there.

5.) ***Principle of Regularity :*** It states that "In an Ideal Grid, every point in the grid is well defined and can be described precisely using the equations of FaTe and the precision shall be within the limits set by the uncertainty principle.

6.) ***Mugbucket Transition :-*** It is a process where a grid (cuboidal) transforms into a closed system (Toroidal Grid-shown in last two figures). A grid with no probability of transforming (called Mugbucket Probability) is an Ideal Grid as described in 2.). A Cuboidal Grid after transformation becomes a torus grid.

7.) ***Addition index for fields inside a Grid:*** addition index for fields at subatomic D>4 hyperspace is defined as

$$(add)\epsilon = [+n, 0, -n]\ for\ [M, P, Q]$$

Where M, P and Q represent Muon, Photon and Quark fields respectively.

The **Node metric** for the addition index is written as

$$\left[{}^{(add)}{}_{\varepsilon}d_{\lambda}\right] = \sqrt{(x_M^2 + x_P^2 + x_Q^2 + y_M^2 + y_P^2 + y_Q^2)}$$

Important Result on Grid

Mugbucket Probability of a grid gives the Visible Twisting (twisting index on a large scale)

Mu%=[v(Tw)]

Mu% and Ideal Rotation I(r) is related as

Mu%=[v(Tw)]=1488[I(r)]

Loop Vectors

A vector around a closed loop or string is called a Loop Vector. It is denoted by **K**.

Magnitude of a Loop Vector **K** is defined as the length of its path times the twisting index of the loop.

$$|K| = 2\pi r[v(T_w)]$$

In component form, the Loop Vector can be written as

$$K = [(r-x)i_w + (r-y)j_w + (r-z)k_w]^{D>4}$$

It has x, y, z as dimensional components and the index 'D' defines the Hyperspace Dominance for the Loop Vector

A loop vector can have only two directions. Clockwise (+n) and Anti-clockwise (-n).

$$K = \begin{Bmatrix} +n & if\ \beta < 90 \\ -n & if\ \beta > 90 \end{Bmatrix}$$

Applying Loop Vectors on D3-branes

Loop Vectors are effective only at curved surfaces. We have D3-branes in fate Torus Grid after Mugbucket Transition, so they are applicable there.

For 'n' turns in a loop,

V(Tw) increases to (n+Tw)

$$|K| = K = 2\pi r(n + T_w)$$

Let $K_1 + K_2 + _{.} \ldots \ldots . + K_m = K$

$$K = m[2\pi r(n + T_w)]$$

Putting **K** in a 5-brane Bianchi Identity,

$$dK_7^{\sim} = \frac{-1}{2} K_4^2 + (2\pi)^4 \beta'^{\sim} X_8^{\sim}$$

Let $dK_7^{\sim} = dN_7^{\sim}$

So, $dN_7^{\sim} = -\frac{1}{2} K^2 + (2\pi)^4 \beta^{'\sim} X_8^{\sim}$

Reducing it to a D3- brane

$$dN_5^{\sim} = -\frac{1}{2}K^1 + (2\pi)^2\beta'^{\sim}X_6^{\sim}$$

$$dN_5^{\sim} = \frac{-1}{2}m[2\pi r(n+T_w)] + (2\pi)^2\beta'^{\sim}X_6^{\sim}$$

$$dN_5^{\sim} = \frac{-1}{2}(2\pi)^2\left[\!\left[\left[\frac{m(n+T_w)}{2\pi}\right] + \beta'^{\sim}X_6^{\sim}\right]\!\right]$$

$$dN_5^{\sim} = -2\pi^2\left[\left(\frac{m(n+T_w)}{2\pi}\right) + \beta'^{\sim}X_6^{\sim}\right]$$

The above equation is called **Brane-loop Vector for D3-branes**

References

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Credits:

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