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Gravitational Current

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ABSTRACT

The weakest force ever known to us is the gravitational force but on the other side it is the only force which binds our universe. According to Sir Isaac Newton, gravity acts between two bodies placed at some distances and have some stationary mass, but what if the bodies have only moving mass, what do you think, the gravitational force would be same in this case as well, as it was in case of stationary mass.

Keywords: Gravitational Current (G), $M'n'K$ Field (M), $M'n'K$ Force Devraj's constant (D), Shiva (S).

1. INTRODUCTION

We all know the laws of gravity, When two bodies having mass 'M' and 'm' respectively are placed at a distance 'r' they both experiences a force which is called Gravitational force.

$$\text{Mathematically: } F = G \frac{Mm}{r^2} [G = 6.67 \times 10^{-11}]$$

This force acts between two masses, No matter whether they are in motion or in rest. But there exist one more force which acts between two masses when they are in motion. We named that as $M'n'K$ Force. Actually when the masses are in motion there exists $M'n'K$ Force. In other words whenever any mass moves at some velocity then it creates a new effect due to its motion named as Gravitational Current (G),

$$\text{Mathematically } G = dm/dt$$

This current gives birth to a new type of field, named as $M'n'K$ Field. Whenever any another mass moves in this field, it experiences a force called $M'n'K$ Force.

2. RESEARCH METHODOLOGY

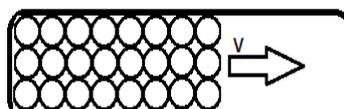
Gravitational Current

It is an effect of mass, moving at some particular velocity. When a body having some mass moves at some velocity it creates Gravitational Current.

$$G = dm/dt$$

Units- Ms^{-1} (M stands for mass)

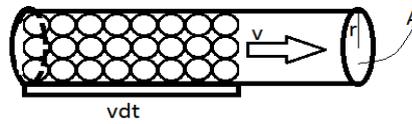
Consider a tube having some radius 'r' and water flows through it with some velocity 'v'.



Assuming every particle to have velocity equal to that of flowing water and supposing that, smallest particle of water has a mass 'm' and unit volume of the tube contains 'n' number of particles; so the total mass of water flowing through the tube can be calculated as

$$“nm * volume of tube”$$

Mathematically, $dm = nm * volume$



$$Volume = vdt * A$$

$$Hence, dm = nmvdtA$$

$$So, G = nmvdtA/dt = nmvA$$

Here, nm is the mass of unit volume so, we can also say it as the Density (ρ) of water.

So it can also be written as

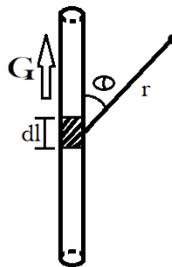
$$G = \rho v A$$

v – velocity of water particles.

A – area of cross-section of tube.

This flow of water “is considered as Gravitational Current” and due to this flowing water there exists a field around the tube called as M’n’K Field [\mathcal{M}]

M’n’K FIELD



$$\mathcal{M} \propto G$$

$$\mathcal{M} \propto dl$$

$$\mathcal{M} \propto \sin\theta$$

$$\mathcal{M} \propto 1/r^2$$

$$\mathcal{M} = D G dl \sin \theta / r^2 \quad [Units:- S = NsKg^{-1}m^{-1}] \text{ (S stands for Shiva)}$$

$$Devraj's \ constant \ (D) = 9.31878642 \times 10^{-27} \quad Units- \ NmsKg^{-2}$$

M’n’K Force

If any mass (m') is moving in M’n’K field with a velocity of (v'), then it will experience a force and named as M’n’K force.

$$F = m' v' \times \mathcal{M}$$

$$F = m' v' \mathcal{M} \sin\theta$$

3. RESULTS

- When a mass moves at some velocity then it produces an effect known as gravitational current.

$$G = dm/dt$$

$$G = nmvA$$

$$G = \rho vA$$

This current produces a field known as $M' n' K (\mathbb{M})$ field.

$$\mathbb{M} = D \int G dl \sin \theta / r^2$$

- Whenever any mass (m') moves in this field with a velocity (v'), then it experiences a force called as $M' n' K$ force.

$$F = m' v' \times \mathbb{M}$$

$$F = m' v' \mathbb{M} \sin \theta$$

4. APPLICATIONS

Any mass which moves with some velocity, produces some $M' n' K$ Field, we will emphasize over field produced due to sun.

Sun (mass = 1.989×10^{30} kg) revolves around our galaxy and due to this it produces some $M' n' K$ field. Let us discuss about it.

Sun revolves around our galaxy at a velocity of 2.20×10^5 m/s. The path of the sun is elliptical, assuming a tube to be spread in elliptical shape in manner same as sun's path around our galaxy and sun is moving in that tube. So due to its motion it will produce gravitational current around the tube.

$$G = nmvA$$

$$= \rho vA$$

Assuming our spherical sun as a cube (for simplification), keeping its mass and volume same as that in spherical shape. Then the side of cube will be 'a'

$$a^3 = 4/3 \pi r^3$$

$$a = (4/3 \pi)^{1/3} r$$

Then,

$$G = \rho vA \quad [A = a^2]$$

$$= \rho v (4/3 \pi)^{2/3} r^2$$

This Gravitational current flows in tube (assumed by us) in direction to that of sun, which produces some $M' n' K$ field following right hand thumb rule. In which thumb indicates the direction of Gravitational current and fingers indicates $M' n' K$ field.

Equals to,

$$\mathbb{M} = D \int G dl \sin \theta / x^2$$

$$[\text{Devraj's constant } (D) = 9.26 \times 10^{-27},$$

G = Gravitational current,

dl = effective length of current component (here $dl = a$, side of cube)

θ = angle between current component and length vector

x = distance from tube where $M' n' K$ is to be calculated]

$$G = \rho v A$$

[ρ =density of sun,

v =velocity at which sun revolves,

A =area of cross-section of tube]

Then,

$$\begin{aligned} M &= D G d l \sin \theta / x^2 && [\theta = 90^\circ] \\ &= D \rho v (4/3\pi)^{2/3} r^2 (4/3\pi)^{1/3} r / x^2 && [dl = a] \\ &= D \rho v (4/3\pi) r^3 / x^2 && [4/3\pi r^3 = a^3] \\ &= D v M / x^2 && [4/3\pi r^3 \rho = M] \\ &&& [M = \text{Mass of sun}] \end{aligned}$$

$$= 9.26 \times 10^{-27} \times 2.2 \times 10^5 \times 1.989 \times 10^{30} / x^2$$

If $x = 1\text{m}$;

$$\begin{aligned} M &= 40.519908 \times 10^8 \\ &= 4.052 \times 10^9 \end{aligned}$$

Hence, Magnetic field produced by the sun is

4.052×10^9 (around 1 metre from the surface).

So force produced by it on light particle will be

$$\begin{aligned} F &= m v \cdot M \sin \theta \\ &= (h/\lambda c) \cdot c \cdot M \quad [\lambda = \text{wavelength of light}] [\text{here } \theta = 90^\circ, \text{ so } \sin \theta = 1] \\ &= 6.64 \times 10^{-34} \times 4.052 \times 10^9 / \lambda \\ &= 26.90528 \times 10^{-25} / \lambda \\ &= 2.7 \times 10^{-24} / \lambda \end{aligned}$$

5. REFERENCES

- [1] Newton laws of gravitation
- [2] Electric current
- [3] Magnetic effect of current
- [4] Right hand thumb rule