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Causes of Gravitational Waves

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Abstract

This research investigates the causes of gravitational waves. The method investigated the magnetic field and rotational motion of celestial bodies. A celestial body has a temperature difference, and this temperature difference causes an electric current to flow. This current generates a magnetic field, which in turn generates a rotational force that rotates the celestial body. When a celestial body rotates, a magnetic field diverges, thus emitting gravitational waves. Each celestial body emits multiple gravitational wave sources. A magnetic field is the transmission medium of light. In conclusion, gravitational waves are waves of the force of a magnetic field.

Keywords: Gravitational Waves, Gravitational Wave Source, Generation of Gravitational Waves, Aphelion, Aether

Introduction

The thermoelectric effect on the two metals was discovered by German physicist T.J. Seebeck [1]. The thermoelectric effect of nonmetals and general materials was researched by Korean electronics engineer Dong-il Song [2]. Gravitational waves are known to be generated in the coalescence of a binary star. However, any celestial body that rotates produces gravitational waves.

A new gravitational wave detected in 2015 was created when two gravitational waves collided in the binary star. This is the observation of the third gravitational wave generated by the collision of gravitational waves of two stars. The temperature difference in a celestial body leads to current flows. The current generates a magnetic field, which rotates the celestial body.

When a celestial body rotates, it generates gravitational waves.
Each celestial body emits multiple gravitational wave sources.
All celestial bodies emit magnetic fields, so space is filled with magnetic fields.
Therefore, the medium of light is a magnetic field.
In other words, the medium of transmission of gravitational waves and light is a magnetic field.
The temperature difference of celestial bodies creates magnetic fields and gravitational waves.

Causes of Gravitational Wave

Figure 1 shows the magnetic field and the force direction of the Earth

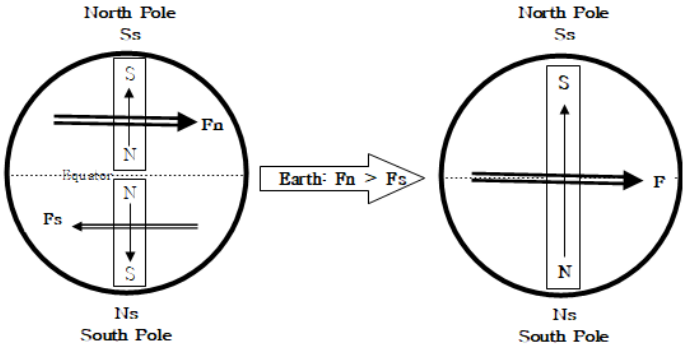

Figure 1: Magnetic field and the force direction of the Earth

S: S(Magnet), N: N(Magnet), Fn: Force of Northern Hemisphere magnetic field,
Fs: Force of Southern Hemisphere magnetic field, F: Force of magnetic field
Ss: Sum of Earth's magnetism (S), Ns: Sum of Earth's magnetism (N)

In celestial substances such as soil, a potential difference is generated due to a temperature difference and electric current flows [2]. In the case of the Earth, Temperatures at the equator are high, and temperatures at the South and North Poles are low. Additionally, the surface temperature of the Earth is low, and the temperature at the center of the Earth is high.

Therefore, current flows through the earth due to the temperature difference, this current generates a magnetic field, and this magnetic field rotates the Earth (Fleming's left-hand rule, motor principle). The Earth rotates by the force of a magnetic field, and as it rotates, it acts as a generator, continuing to rotate as if a motor and generator were combined.m When the earth rotates, it acts like a generator to generate an electromotive force and an electric current flow.

As the Earth rotates, its magnetic field oscillates, generating gravitational waves.
When current (It) generated due to temperature differences in celestial bodies flows through celestial bodies, a magnetic field is generated across the celestial bodies (Figure 1), and this magnetic field produces a force perpendicular both to that field and to the direction of the current flow (i.e., they are mutually perpendicular) (Fleming's left-hand rule, motor principle, electric motor's principle). The celestial body rotates due to the force of the magnetic field, and as it rotates, it functions as a generator, which continues to rotate as if the motor and generator are combined.

When a celestial body rotates, it acts like a generator and generates an electromotive force and an electric current (Id) flow.
The total current (I) of the celestial body is I=It + Id.
Then, current (I) flows through the celestial body, and a magnetic field is generated in the 90° direction. When a magnetic field is generated, a force is generated in the 90° direction (Fleming's left-hand rule, motor principle).
The celestial body rotates with the power of the magnetic field, and when the celestial body rotates (rotates), it acts like a generator, and the celestial body continues to rotate as if an electric motor (motor) and generator are combined.

This rotational force produces the gravitational wave of the celestial body.
For Earth, the Earth's rotational force generates a gravitational wave of gravity.
The jet stream of the Earth's Northern Hemisphere flows eastward and that of the Southern Hemisphere flows westward [3].

This is proof that the magnetic field forces rotate the jets and Earth. In other words, the Earth's Northern Hemisphere generates forces in the east direction, whereas the Southern Hemisphere generates forces in the west direction.

This magnetic field's force is the gravitational source of the gravitational wave, that is, the gravitational source (F1) in the Northern Hemisphere and the gravitational source (F2) in the Southern Hemisphere, which are spatial. The Earth's gravitational wave frequency is F = F1 ± F2, resulting in F1, F2, F1 − F2, and F1 + F2, generating four or more frequencies. This phenomenon is similar to the spatial modulation phenomenon, in which frequencies transmitted from antennas of two radio transmitters interfere in space.

F1 + F2 has the largest amplitude and high frequency, making it easy to manufacture equipment that detects gravitational waves. The wave frequency F1 + F2 (the third gravitational wave) is essential, and the solar system estimates that the planet's orbital position (Titius–Bode's Law) is the third gravitational wave (F = F1 + F2) frequency. That is, planets (such as Mercury, Venus, Earth, and Mars) appear to orbit at a distance where the distance between the Sun and Earth is maximum for two wave frequency amplitudes.

◈ Evidence: The jet stream (Northern Hemisphere) moves from west to east, and the jet stream moves from east to west in the Southern Hemisphere [3].
Saturn's rings are also created by the force of the gravitational wave magnetic field.

Gravitational Wave and Revolution of Celestial Body

Figure. 2 Shows the gravitational-wave source of the Sun.

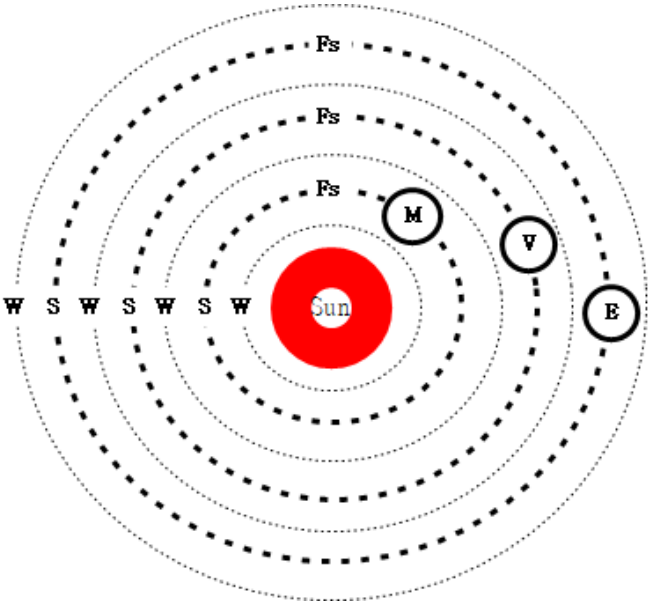

Figure 2: Gravitational-wave source

Fs: Gravitational-wave source, M: Mercury, V: Venus, E: Earth, W: Weak, S: Strong

A celestial body generates universal gravitation toward its center and a revolving force of gravitational waves that lets the surrounding celestial bodies revolve. The gravitational-wave source is repeatedly strengthened and weakened in the shape of a sinusoidal wave depending on the distance of the celestial body. The Sun's gravitational-wave source changes between strong and weak in the shape of a sinusoidal wave depending on the distance from the Sun, with planets Mercury, Venus, Earth, and Mars revolving at the "strong" point where the gravitational-wave source has the same force as the universal gravitation with a direction (revolving) difference of 90°, which causes the Earth to revolve around the Sun.

In the case of the Earth, it revolves around the Sun without leaving the Sun because of the difference between the Sun's universal gravitation and the gravitational wave source's force. At the aphelion where the Earth is farthest away from the Sun, the force of the gravitational-wave source gets smaller than the universal gravitation and the Earth begins to get closer to the Sun due to the Sun's gravity; however, at the perihelion where the Earth is nearest to the Sun, the gravitational-wave source's force become larger than the universal gravitation and the Earth moves toward the gravitational-wave source "Strong" to begin to get farther from the Sun, causing the Earth to revolve around the Sun, resulting in four seasons.

This means that near the center of the gravitational-wave source, the force of the gravitational-wave source is large, and the force of the gravitational-wave source is small at a position far from the center of the gravitational-wave source. The strong weak orbits of the gravitational wave follow the Titius–Bode law. This determines the position of the revolving orbit of planets by the orbit of the gravitational-wave source. In particular, according to the Titius–Bode distance, the planet revolves in a position where the force of the gravitational-wave source is strong, since the frequencies of two or more gravitational-wave sources of the Sun are superimposed.
That is, the sun radiates two or more gravitational wave sources.

The medium of light is a magnetic field

1. All celestial bodies radiate magnetic fields, so space is filled with magnetic fields.
2. All celestial bodies emit gravitational waves, and the cause of these gravitational waves is a magnetic field.
3. Therefore, outer space is filled with a magnetic field.
4. The medium of light is a magnetic field
5. In the wave theory of light, there must be a medium for light to travel, and this medium is a magnetic field.
6. In the wave theory of light, the hypothetical medium (Aether) that scientists have argued is a magnetic field.

Discussion

1. Gravitational wave terminology needs to be reviewed.
2. Gravity is a straight line, and gravitational waves are circular.
3. Gravitational waves cannot be considered to be generated by gravity.
4. Therefore, it is necessary to reexamine the term gravitational wave.

Conclusion

The kinetic energy of the celestial body is due to the temperature difference.
Rotating celestial bodies generate gravitational waves.
The celestial body causes power generation and rotation of the celestial body as if an electric motor and a generator were combined.
The orbit of the magnetic field emitted by the celestial body changes with strength and weakness depending on the distance, and the planet orbits at a distance where the magnetic field is strong.
The reason for the aphelion of the planets in the solar system is related to Fleming's left-hand rule of magnetic fields.
The medium of light is a magnetic field.

Data Availability

Data supporting the findings of this manuscript are available from the corresponding author upon reasonable request.
Further documentation about data processing is available at Electromotive Force Generated in All Materials under Temperature Difference, 3-4. https://doi.org/10.21203.re.3.rs-1137728/v2

Code Availability

Custom codes that support the findings of this study are available at a dedicated Github repository (https://github.com/DongilSong/CausesofGravitationalWaves) Received: 20 January 2022.

References

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2. Song, D. I. (2021). Electromotive Force Generated in All Materials under Temperature Difference.
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