Centripetal Force in Electromagnetic and Gravitational Fields

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Article

Centripetal Force in Electromagnetic and Gravitational Fields

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Abstract

Electromagnetic waves are propagated by photons, which are generated by electrons and have negative charge properties. Think of electromagnetic waves as microparticles in which photons propagate along a spiral. Microphotons running along the propagation direction of the electromagnetic wave will form an electric field that changes according to a sinusoidal wave. Microphotons running along the circular direction of the spiral will form a magnetic field that changes according to a sinusoidal wave. The repeated movement of microphotons along the spiral will form an electromagnetic field in which the electric field and magnetic field change continuously. Think of microphotons as small elastic balls. Photon-photon collisions can form hemispherical scattering along the direction of photon movement. Viewed from the direction of photon movement, it shows the broadening of the amplitude of microelectromagnetic waves. The degree of broadening is proportional to the number of photons that impact the electromagnetic wave. For visible light photons in the planet's electromagnetic field, the impact of photons facing the planet is much smaller than that of photons facing away from the planet. Therefore, the amplitude broadening of visible light photons facing the planet is much greater than the amplitude broadening of visible light photons facing away from the planet. However, as a unified whole photon, its photon center will move toward the planet, forming a centripetal force for visible light photons. The particle structure based on energy quality believes that material particles are all micron clouds formed by a large number of microns (photons, gravitons) orbiting each other. The essence of the interaction between gravitons and nucleons in the gravitational field is the interaction between gravitons and gravitons. Just like the interaction between photons and photons, the interaction between gravitons and nucleons can form hemispherical scattering along the direction of graviton movement. From the direction of graviton propagation, it is equivalent to the broadening of the amplitude of the gravity line. However, the gravitons here are neutral particles and will not form changing electric and magnetic fields. For a nucleon in the gravitational field of a planet, the direction of the nucleon facing the planet is much greater than the impact of the nucleon facing away from the planet. Therefore, the broadening trend of the nucleon facing the planet is much greater than the broadening trend of the nucleon facing away from the planet. As a whole nucleon, the center of the nucleon will move toward the direction of the planet, forming the centripetal force of the nucleon running in the gravitational field. Similarly, planets and satellites in the gravitational field of the planet are also composed of material particles, and the material particles are composed of micron clouds formed by gravitons orbiting each other. The number of gravitons on the side of the nucleus facing the central planet is much greater than the impact of gravitons on the side facing away from the central planet. Therefore, the side of the nucleus facing the central planet is impacted by gravitons. The amplitude broadening trend is much greater than the broadening trend on the side facing away from the central planet. A large number of nuclei facing the central planet form a tendency to move towards the central planet. The planet facing away from the central planet is not subject to the trend of movement. It can only move towards the central planet as a whole under the action of the cohesion of the planet, forming the centripetal force of the planet.

Keywords: photon; graviton; electromagnetic field; gravitational field; centripetal force; particle cloud structure

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1. Electromagnetic Waves

Electromagnetic waves [1] are oscillating particle waves emitted in space by electric fields and magnetic fields that oscillate in phase and are perpendicular to each other. They are electromagnetic fields that propagate in the form of waves, as shown in Figure 1. The traditional view is that the propagation of electromagnetic waves does not require a medium. Quantum mechanics believes that electromagnetic waves are propagated by photons.

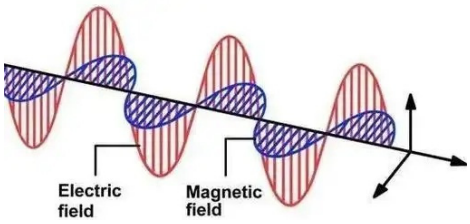

Figure 1. Electromagnetic waves.

In order to distinguish the concept of photons proposed by Einstein in the photoelectric effect, here we call the photons that propagate electromagnetic waves microphotons. Microphotons are generated when electrons transition, so they have the property of negative charge. In the universe, negatively charged microphotons run along the cylindrical spiral to form an electromagnetic field [2]. Microphotons run along the direction of light propagation to form an electric field, and microphotons run in a circular shape along the cylindrical spiral to form a magnetic field. This can well explain the mutual derivation of electric fields and magnetic fields during the propagation of electromagnetic waves. The traditional view is that photons have no rest mass and always travel at the speed of light. "Particle Structure Based on Energy, Mass and Bosons" [3] believes that the dynamic mass (equivalent mass) of a photon is 7.372×10^-51kg. Figure 2 is a schematic diagram of microphotons running along a cylindrical spiral to form electromagnetic waves. In the figure, Q is the microphoton, the z-axis is the propagation direction of the electromagnetic wave, and the running direction of the microphoton is marked by the black arrow. The pitch of the cylindrical spiral in the figure is the wavelength λ of the electromagnetic wave, the radius is the amplitude A of the electromagnetic wave, and the frequency of the electromagnetic wave f = speed of light c/wavelength λ.

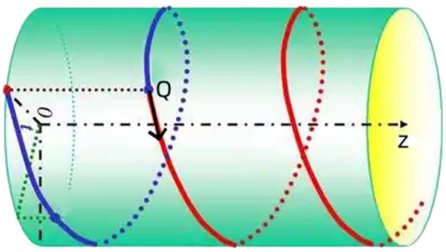

Figure 2. Schematic diagram of microphotons propagating along a spiral.

This article agrees: the electromagnetic waves emitted by the planet S are called radiation waves, and the electromagnetic waves running in the electromagnetic field formed by the planet S are called visible light.

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2. Photon Photon Scattering

Think of photons as extremely tiny elastic balls. The intersection of two light rays is equivalent to a completely elastic collision (scattering) of two photons. Figures 3 to 11 show photon scattering analysis diagrams under different circumstances. In the figure, it is assumed that the photon radius is equal to r, micro-photons all run at the speed of light, visible light propagates from top to bottom, and the photons emitted by the planet S run in opposite directions from the lower left to the upper right. The two photons meet at point O, and the angle is α (here set to $\pi/4$). The angle between the line connecting the two photons (that is, the running direction formed by the collision of the two photons) and the visible light is β. After the two photons interact, the angle between the running direction of the visible light photon and the original running direction is γ. Take the time when visible light travels (position y) as the starting point.

Figure 3 is the starting position of two photon emission collisions. At this time:

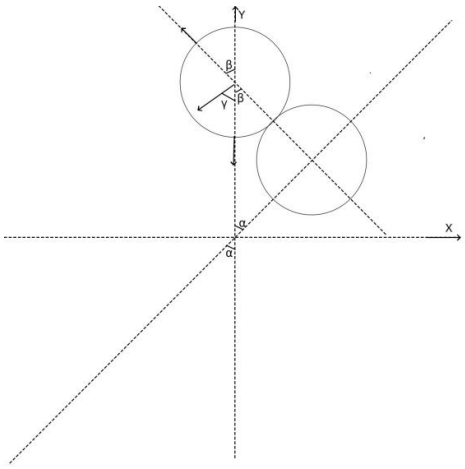

Figure 3. Schematic diagram of photon photon scattering 1.

$$\alpha = \frac{\pi}{4}$$

$$y_{\max} = \frac{2r}{\sin\alpha}$$

$$\frac{y_{\max}}{2r} = \frac{1}{\sin\alpha} = 1.414$$

$$\beta = \alpha = \frac{\pi}{4} = 0.785$$

$$\gamma = -\frac{1}{2}(\pi - \beta)$$

Figure 4 shows position 2 where two photons emit and collide. At this time:

$$\frac{2r}{\sin\alpha} = \frac{y}{\sin(\pi - \alpha - \beta)}$$

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$$\sin(\alpha+\beta_{-})=\frac{y}{2r}\sin\alpha$$

$$\beta_{-}=\arcsin\left(\frac{y}{2r}\sin\alpha\right)-\alpha$$

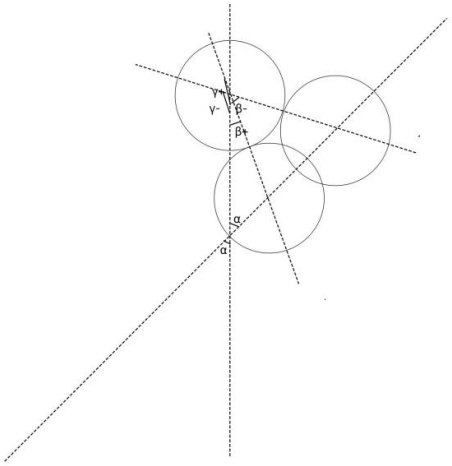

Figure 4. Schematic diagram of photon scattering 2.

$$\gamma_{-}=-\frac{1}{2}(\pi-\beta_{-})$$

$$\pi-\alpha-\beta_{+}=\arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\beta_{+}=\pi-\alpha-\arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\gamma_{+}=-\frac{1}{2}(\pi-\beta_{+})$$

Figure 5 shows the position 3 where two photons emit and collide. At this time:

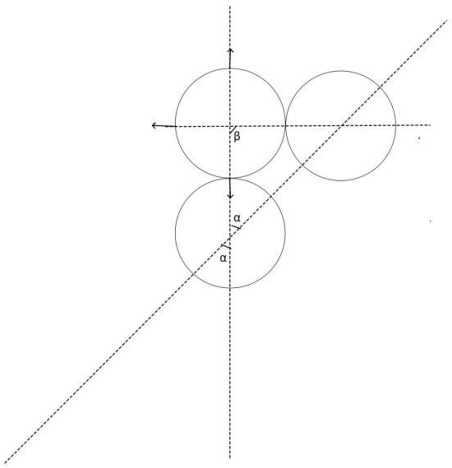

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Figure 5. Schematic diagram of photon scattering 3.

$$\gamma = \pm\frac{\pi}{2}$$

$$\gamma = -\frac{\pi}{4}$$

Figure 6 shows the position 4 where two photons emit and collide. At this time:

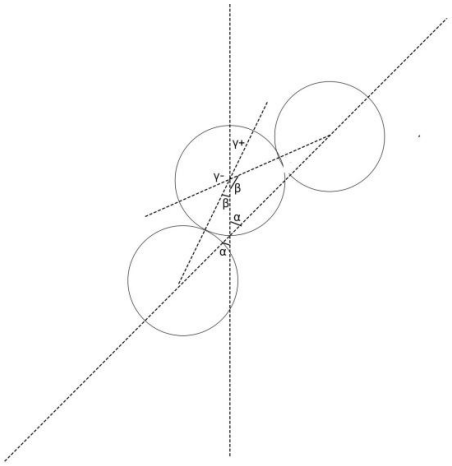

Figure 6. Schematic diagram of photon scattering 4.

$$\frac{2r}{\sin(\pi-\alpha)} = \frac{y}{\sin(\alpha-\beta_{-})}$$

$$\beta_{-} = \alpha - \arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\gamma_{-} = \frac{1}{2}(\pi-\beta_{-})$$

$$\frac{2r}{\sin\alpha} = \frac{y}{\sin(\pi-\alpha-\beta_{+})}$$

$$\sin(\pi-\alpha-\beta_{+}) = \frac{y}{2r}\sin\alpha$$

$$\beta_{+} = \pi - \alpha - \arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\gamma_{+} = -\frac{1}{2}(\pi-\beta)$$

Figure 7 shows the position 5 where two photons emit and collide. At this time:

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$$\gamma_{+} = -\frac{1}{2}\cdot\frac{\pi}{4} = -\frac{\pi}{8}$$

$$\gamma_{+} = \frac{1}{2}\cdot\left(\pi - \frac{\pi}{4}\right) = \frac{3\pi}{8}$$

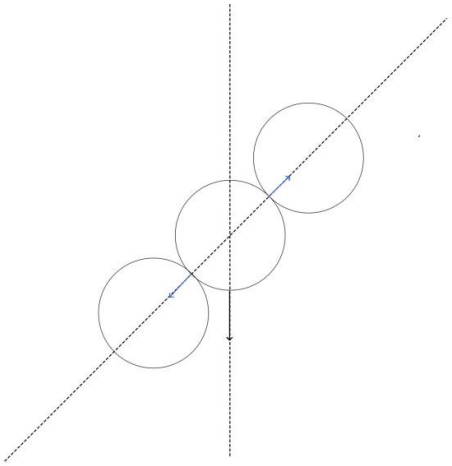

Figure 7. Schematic diagram of photon scattering 5.

Figure 8 shows the position 6 where two photons emit and collide. At this time:

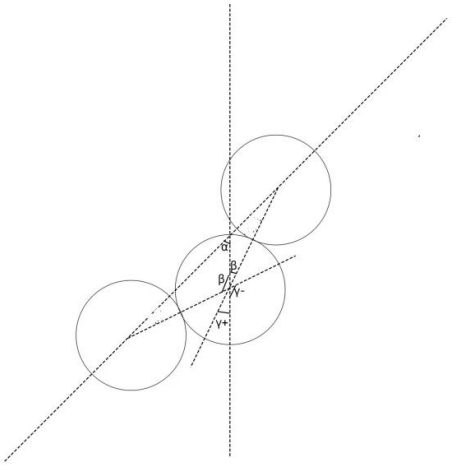

Figure 8. Photon photon scattering diagram 6.

$$\frac{2r}{\sin\alpha} = \frac{y}{\sin(\pi-\alpha-\beta_{-})}$$

$$\sin(\pi-\alpha-\beta_{-}) = \frac{y}{2r}\sin\alpha$$

$$\beta_{-} = \pi - \alpha - \arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

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$$\gamma_{-}=\frac{1}{2}\beta_{-}$$

$$\frac{2r}{\sin(\pi-\alpha)}=\frac{y}{\sin(\alpha-\beta_{+})}$$

$$\sin(\alpha-\beta_{+})=\frac{y}{2r}\sin\alpha$$

$$\beta_{+}=\alpha-\arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\gamma_{+}=-\frac{1}{2}\beta_{+}$$

Figure 9 shows the position 7 where two photons emit and collide. At this time:

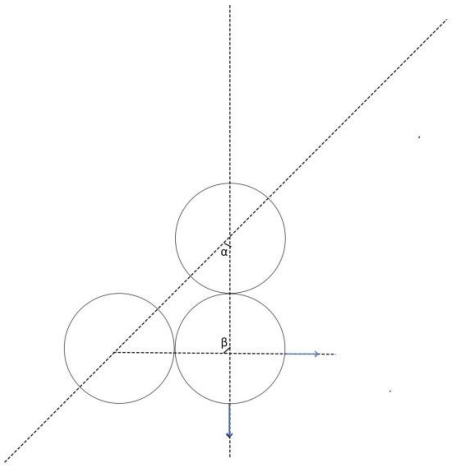

Figure 9. Schematic diagram of photon photon scattering 7.

$$\gamma_{-}=0$$

$$\gamma_{+}=\frac{\pi}{4}$$

Figure 10 shows the position 8 where two photons emit and collide. At this time:

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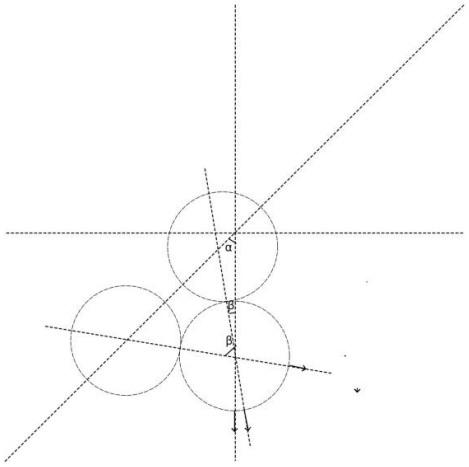

Figure 10. Photon photon scattering statistics Figure 8.

$$\frac{2r}{\sin\alpha}=\frac{y}{\sin(\pi-\alpha-\beta_{-})}$$

$$\sin(\alpha+\beta_{-})=\frac{y}{2r}\sin\alpha$$

$$\beta_{-}=\arcsin\left(\frac{y}{2r}\sin\alpha\right)-\alpha$$

$$\gamma_{-}=\frac{1}{2}\beta_{-}$$

$$\pi-\alpha-\beta_{+}=\arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\beta_{+}=\pi-\alpha-\arcsin\left(\frac{y}{2r}\sin\alpha\right)$$

$$\gamma_{+}=\frac{1}{2}\beta_{+}$$

Figure 11 shows the position 9 where two photons emit and collide. At this time:

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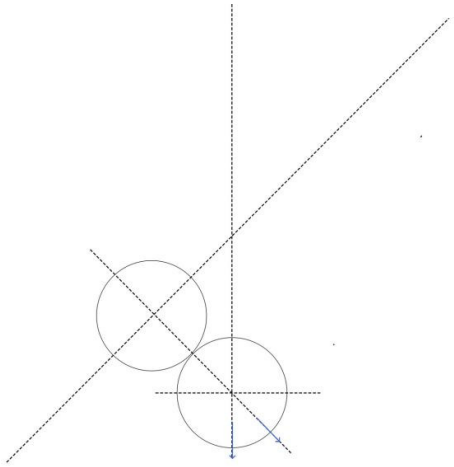

Figure 11. Photon photon scattering statistics chart 9.

$$\gamma = \frac{1}{2} \cdot \frac{\pi}{4} = \frac{\pi}{8}$$

Segment it into equal distances from top to bottom according to the time position, and then calculate the deflection angle γ, see Table 1。

Table 1. Photon photon scattering statistics table.

α	Y/2r	β+	β-	γ+	γ-
0.785	1.414	0.785	0.785	-1.178	-1.178
Y/2r	1.207	0.237	1.334	-1.452	-0.904
1.414	1.000	0.000	1.571	-1.571	-0.785
n	0.750	0.226	1.797	1.458	-0.672
8	0.500	0.424	1.995	1.359	-0.573
ΔY/2r	0.250	0.608	2.178	1.267	-0.482
0.177	0.000	0.785	2.356	1.178	-0.393
	-0.250	2.178	0.608	1.089	-0.304
	-0.500	1.995	0.424	0.997	-0.212
	-0.750	1.797	0.226	0.899	-0.113
	-1.000	1.571	0.000	0.785	0.000
	-1.207	1.334	0.237	0.667	0.119
	-1.414	0.785	0.785	0.393	0.393

The scatter plot generated directly based on the above table is shown in Figure 12.

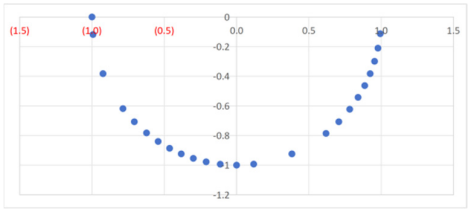

Figure 12. Photon photon scattering statistical chart.

It can be seen from the figure that photon photon scattering will form a semicircular scattering along the photon propagation direction. In three-dimensional space, photon photon scattering should form a hemispherical scattering along the photon propagation direction.

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For two beams of light running in the same direction, Figure 13 shows the photon scattering analysis diagram under different circumstances. In the figure, visible light propagates from top to bottom, and the photons emitted by planet S travel from top left to bottom right. The two photons meet at point O, and the angle is α (here set to $\pi/4$). The angle between the line connecting the two photons and the visible light is β. After the two photons interact, the angle between the running direction of the visible light photon and the original running direction is γ. Take the time when visible light travels (position y) as the starting point.

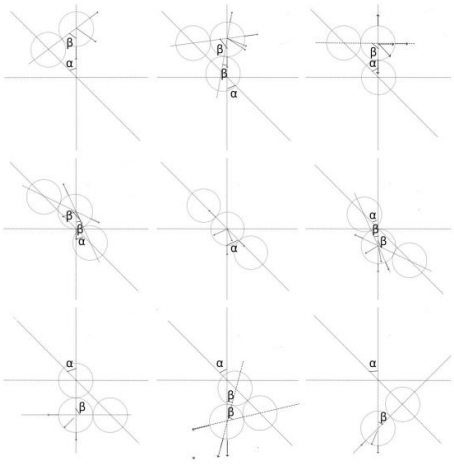

Figure 13. Schematic diagram of photon scattering of photons running in the same direction.

The calculation table of the deflection angle γ of photons running in the same direction at different time positions is shown in Table 2。

Table 2. Photon scattering statistical table of photons running in the same direction.

α	L/2r	β+	β-	γ+	γ-
0.785	1.414	0.785	0.785	-1.571	1.178
L/2r	1.207	0.237	1.334	1.452	0.904
1.414	1.000	0.000	1.571	1.571	0.785
n	0.750	1.797	0.226	0.672	-1.458
8	0.500	0.424	0.424	1.359	-1.359
ΔL/2r	0.250	0.608	0.608	1.267	-1.267
0.177	0.000	0.785	2.356	0.393	-1.178
	-0.250	0.608	2.178	0.304	-1.089
	-0.500	0.424	1.995	0.212	-0.997
	-0.750	0.226	1.797	0.113	-0.899
	-1.000	0.000	1.571	0.000	-0.785
	-1.207	1.334	0.237	-0.667	-0.119
	-1.414	0.785	0.785	-0.393	-0.393

The scatter plot generated directly from the table is shown in Figure 14.

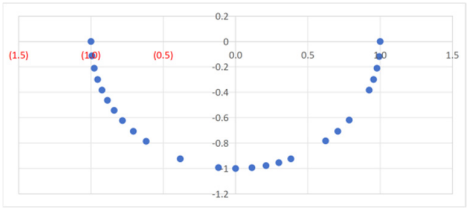

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Figure 14. Photon scattering statistical table of photons running in the same direction.

It can be seen from the figure that photon photon scattering will form a semicircular scattering along the photon propagation direction. In three-dimensional space, photon photon scattering should form a hemispherical scattering along the photon propagation direction.

Summary: It can be seen that in three-dimensional space, when two beams of light intersect, the photon scattering will form a hemispherical scattering along the propagation direction of the photon. This scattering has nothing to do with the propagation direction of the other light beam. It can be considered that this is also the fundamental reason for the formation of Huygens-Fresnel principle [4]。

3. The Role of Electromagnetic Waves and Uniform Photons

Electromagnetic waves are formed by microphotons running along a cylindrical spiral. When photons from other directions interact uniformly with this microphoton, each action point forms a hemispherical scattering along the propagation direction of the microphoton, as shown in Figure 15.

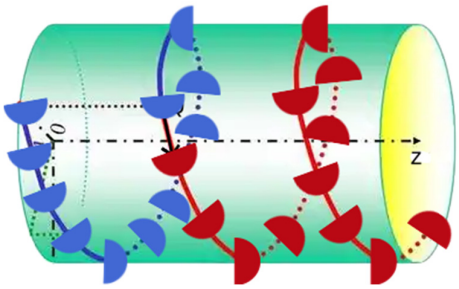

Figure 15. Schematic diagram of the interaction between uniform photons and electromagnetic waves.

In a three-dimensional space, photons propagating electromagnetic waves are uniformly affected by electrons, which manifests as a broadening of the amplitude of the electromagnetic wave. It can be inferred that the broadening width is proportional to the number of interactions between microphotons and radiation photons on the electromagnetic wave.

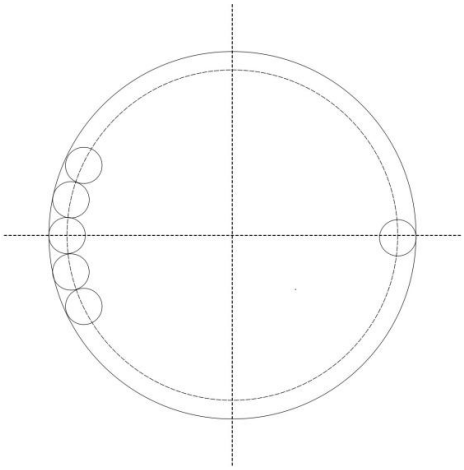

Figure 16. From the vertical direction of light propagation, the amplitude will be broadened when light rays intersect.

Suppose the amplitude of the broadening of a single microphoton on the electromagnetic wave is ΔA. When the microphotons on the electromagnetic wave are uniformly radiated by photons, the

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positive and negative half-axis broadening amplitudes of the electromagnetic wave are equal. At this time, the visible light runs in the original direction.

Summary: The interaction between electromagnetic waves and uniform photons is manifested in the broadening of the amplitude of electromagnetic waves. That is to say, when electromagnetic waves intersect with electromagnetic waves, the amplitude of the electromagnetic waves will broaden at the intersection.

4. Centripetal Force of Visible Light in Electromagnetic Field

The analysis diagram of the operation process of visible light in the electromagnetic radiation field of the planet is shown in Figure 17. In the figure, S0 is the center of mass of the planet, and P0 is the center point of the single-wavelength electromagnetic wave. Suppose the amplitude of a single photon is ΔA, and visible light contains Np photons, then the amplitude of visible light is:

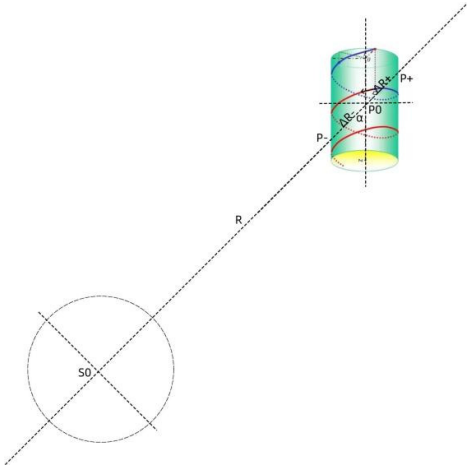

Figure 17. Centripetal force of visible light in the electromagnetic field of the planet.

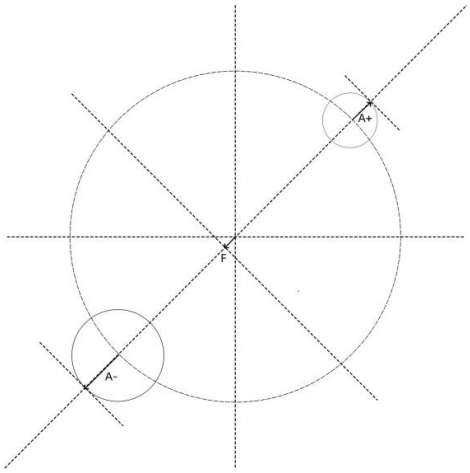

Figure 18. Centripetal force of visible light in the electromagnetic field of the planet.

$$E_1 = A_1^2$$

$$E_N = A_N^2$$

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$$E_N = NE_1$$

$$A_N^2 = NA_1^2$$

For the center point P0:

Assume that the amplitude of a single photon is Δ^2A, and the number of photons in visible light is Np

The energy is:

$$E_p = hN_p$$

The amplitude is:

$$A_p^2 = E_p = N_p E_1^2 = N_p A_1^2$$

$$N_{sp-} = k_{sp-} N_{sp} \left(k_{sp-} > 1\right)$$

$$N_{sp+} = k_{sp+} N_{sp} \left(k_{sp+} < 1\right)$$

$$F = \left(N_{sp-} - N_{sp+}\right) N_p \Delta^2 A = \left(k_{sp-} N_{sp} - k_{sp+} N_{sp}\right) N_p \Delta^2 A$$

$$F = \left(k_{sp-} - k_{sp+}\right) N_{sp} N_p \Delta^2 A = k_N \frac{N_s N_p}{R^2} = k_E \frac{E_s E_p}{R^2}$$

5. Particle Structure Based on Energy, Mass, and Bosons

"Particle Structure Based on Energy, Mass, and Bosons" believes that electromagnetic waves are propagated by photons, and gravitational energy waves are propagated by gravitons. Electromagnetic waves and gravitational energy waves are regarded as the process of an extremely tiny particle (micron) running along the wave crest. The kinetic energy of this tiny particle running at the speed of light is Planck's constant h, which is the smallest unit of energy. Microns propagate at the speed of light. According to Einstein's mass-energy equation, the dynamic mass of a micron is 7.372×10^-51kg. A single micron has no static mass, which means it cannot stand still. But for a stationary object, its mass can be divided into very small equal parts. When the energy contained in this equal part is Planck's constant h, its equivalent static mass is 7.372×10^-51kg. Since the dynamic mass of the micron is the same as the equivalent static mass of the micron, the dynamic mass and the equivalent static mass of the micron can usually be referred to as the mass of the micron. A large number of microns running at the speed of light orbit each other along the shell of the spherical shell to form the basic particles of matter (neutrons, protons, electrons, etc.), as shown below:

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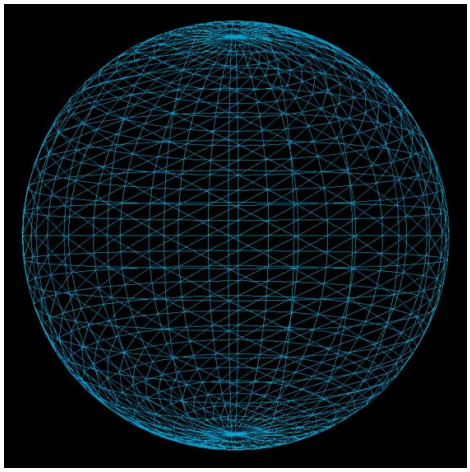

Figure 19. Particle structure based on energy mass.

This particle structure of matter can well explain the properties of energy and mass of matter. In fact, mass and energy are different attributes of the same substance. Quality is the "condensed state" of energy (a large number of particles orbiting each other to form the rest mass of the substance), and energy is the "released state" of mass (the kinetic energy of a single particle running at the speed of light forms energy). Different numbers of microns run along spherical shells of different radii to form micron clouds, and different micron clouds constitute different material particles. A large number of microns run along the spherical shell with a radius of 8×10^-16m to form neutrons and uncharged neutral particles; a large number of microns run along the spherical shell with a radius of 8.011×10^-16m to form protons and Positively charged particles, the positively charged particles carry a positive charge as a whole; a large number of particles run along the spherical shell with a radius of 1.471×10^-12m to form electrons and negatively charged particles, a negatively charged particle. The particle as a whole carries a negative charge; neutrons and protons emit microns (gravitons), which propagate along the crest of the sine wave to form a gravitational energy wave. The wavelength of the gravitational energy wave is 1.6-1.602×10^-15m; electrons emit trinos (photons), and the photons have a negative charge. Therefore, photons propagating along a straight line can form an electric field, photons propagating along a circular path can form a magnetic field, and photons propagating along the crest of a spiral form an electromagnetic wave. Material particles are all micron clouds composed of different numbers of microns. Neutrons, protons, and electrons whose radius matches the number of microns are long-lived particles. Other particles whose radius does not match the number of microns are short-lived particles. The particle structure based on energy, mass and bosons (photons, gravitons) can well explain the following problems that are difficult to explain from traditional viewpoints: 1. The size, charge, and small mass differences of neutrons, protons, and electrons; 2. Gravity (nuclear force), electromagnetic force; 3. Why are there so many basic particles according to traditional concepts; 4. The life span of particles; 5. The fact that there are particularly many matter particles and very few antimatter particles; 6. The respective conservation of mass and energy in Einstein's mass-energy equation. The micron cloud structure of material particles and string theory both believe that material particles are composed of very small things. Their fundamental difference is that string theory believes that the most basic unit of matter is a linear string, while micron cloud theory believes that the most basic unit of matter is a micron (photon, graviton) running at the speed of light, that is, energy.

Neutrons are 2.272×10^23 microns that revolve around each other to form a stable micron cloud with a radius of 0.8×10^-15m. Protons are 2.269×10^23 microns running along a sphere with a radius of 0.811×10^-15m to form stable protons; neutron nuclei and protons form nucleons.

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6. The Formation of Centripetal Force of Nucleons in the Gravitational Field

Nucleons are micron clouds formed by the mutual interference of a large number of gravitons traveling at the speed of light. Therefore, the interaction between gravitons and nucleons is essentially the interaction between gravitons and gravitons. Like photon-photon scattering, the interaction between gravitons and nucleons will form a hemispherical scattering along the direction of movement of the gravitons in the nucleon. The result of hemispherical scattering is that the gravitons on the nucleon shell protrude outward. The more gravitons impact the nucleon, the more the gravitons on the nucleon shell protrude outward.

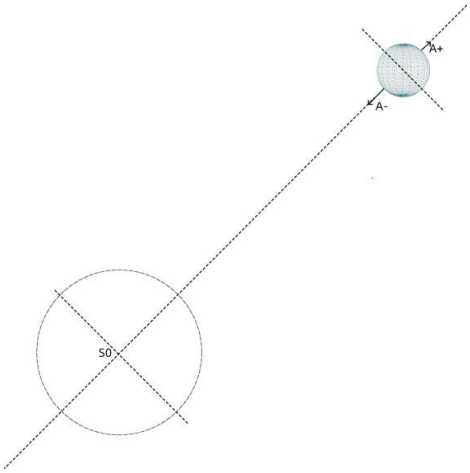

Figure 20. Nucleons in the gravitational field of the planet.

In the gravitational field, gravitons are emitted from the planet in one direction. For nuclei running in the gravitational field, the number of gravitons received in the direction facing the planet is N-, and in the direction away from the planet, they are subject to (1) a nucleon cloud composed of a large number of gravitons. The surface density is quite high, and the number of nucleons that can pass through the spherical surface of the nucleons facing the planet is already quite small. (2) Even when all the gravitons pass through a distance greater than the nuclear surface facing the planet, the radiation amount of the number of gravitons is <:

$$N_{sp-} = k_{sp-} N_{sp} \left(k_{sp-} > 1\right)$$

$$N_{sp+} = k_{sp+} N_{sp} \left(k_{sp+} < 1\right)$$

$$F = \left(N_{sp-} - N_{sp+}\right) N_p \Delta^2 A = \left(k_{sp-} N_{sp} - k_{sp+} N_{sp}\right) N_p \Delta^2 A$$

$$F = \left(k_{sp-} - k_{sp+}\right) N_{sp} N_p \Delta^2 A = k_N \frac{N_s N_p}{R^2} = k_E \frac{E_s E_p}{R^2}$$

Replace the nucleons in Figure 19 with planets or satellites. Planets or satellites are made of matter. Matter is made of molecules. Molecules are made of atoms. Atoms are made of nuclei and electrons. Ignoring the gravity of electrons, atomic nuclei are made of nucleons. Nucleons are made of micron clouds formed by the mutual interference of a large number of gravitons running at the speed of light. Therefore, planets or satellites running in a gravitational field face the direction of the central planet. When the nucleus is impacted by gravitons, the gravitons in the impacted nucleus will form a hemispherical scattering along the direction of the nucleon's movement. Since the number of graviton impacts on the nucleus facing the central planet is much greater than the impact of the graviton on the nucleus facing away from the central planet, the scattering of gravitons will appear

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as a broadening of the amplitude of the gravitational line. For the nucleon, it will appear as the tendency of the nucleon to run in the direction of the central planet. The tendency of a large number of nuclei to move toward the central planet drives the entire planet or satellite to form the centripetal force of the planet and satellite.

7. Conclusions

Electromagnetic waves are propagated by photons, which are generated by electrons and have negative charge properties. Think of electromagnetic waves as microparticles in which photons propagate along a spiral. Microphotons running along the propagation direction of the electromagnetic wave will form an electric field that changes according to a sinusoidal wave. Microphotons running along the circular direction of the spiral will form a magnetic field that changes according to a sinusoidal wave. The repeated movement of microphotons along the spiral will form an electromagnetic field in which the electric field and magnetic field change continuously. Think of microphotons as small elastic balls. Photon-photon collisions can form hemispherical scattering along the direction of photon movement. Viewed from the direction of photon movement, it shows the broadening of the amplitude of microelectromagnetic waves. The degree of broadening is proportional to the number of photons that impact the electromagnetic wave. For visible light photons in the planet's electromagnetic field, the impact of photons facing the planet is much smaller than that of photons facing away from the planet. Therefore, the amplitude broadening of visible light photons facing the planet is much greater than the amplitude broadening of visible light photons facing away from the planet. However, as a unified whole photon, its photon center will move toward the planet, forming a centripetal force for visible light photons. The particle structure based on energy quality believes that material particles are all micron clouds formed by a large number of microns (photons, gravitons) that revolve around each other. The essence of the interaction between gravitons and nucleons in the gravitational field is the interaction between gravitons and gravitons. Just like the interaction between photons and photons, the interaction between gravitons and nucleons can form hemispherical scattering along the direction of graviton movement. From the direction of graviton propagation, it is equivalent to the broadening of the amplitude of the gravity line. However, the gravitons here are neutral particles and will not form changing electric and magnetic fields. For a nucleon in the gravitational field of a planet, the direction of the nucleon facing the planet is much greater than the impact of the nucleon facing away from the planet. Therefore, the broadening trend of the nucleon facing the planet is much greater than the broadening trend of the nucleon facing away from the planet. As a whole nucleon, the center of the nucleon will move toward the direction of the planet, forming the centripetal force of the nucleon running in the gravitational field. Similarly, planets and satellites in the gravitational field of the planet are also composed of material particles, and the material particles are composed of micron clouds formed by gravitons orbiting each other. The number of gravitons on the side of the nucleus facing the central planet is much greater than the impact of gravitons on the side facing away from the central planet. Therefore, the side of the nucleus facing the central planet is impacted by gravitons. The amplitude broadening trend is much greater than the broadening trend on the side facing away from the central planet. A large number of nuclei facing the central planet form a tendency to move towards the central planet. The planet facing away from the central planet is not subject to the trend of movement. It can only move towards the central planet as a whole under the action of the cohesion of the planet, forming the centripetal force of the planet.

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