The Working Principle of the Webb Space Telescope Is Fatally Flawed

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Research Article

Keywords: James Webb, double slit, interference, diffraction, dispersion, Michelson, Morey, light wave, wave particle duality, Huygens, polarization, superposition, causality, relativity, antimatter, quantum, observation, Schrodinger, matter wave, conservation of light speed, redshift, regression, Hubble, singularity, Big Bang, cosmic expansion, dark matter, dark energy, Doppler, Kepler, Thomas young, proliferation, standing wave, bandwidth, optical fiber, communication, modulation

Posted Date: March 17th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-744658/v19

Abstract

The constant speed of light is mutually exclusive with the Doppler effect. The gravity provided by dark matter destroys the solar system. If light wave interference produces double-slit test stripes, it will inevitably result in the following anti-conventional conclusions, which are mutually incompatible with this principle: (1) The farther the propagation distance is, the larger the cross section of the light wave, and therefore the larger the spot. (2) Interference only occurs in the space between the double-slit device and the target. The longer the optical path is, the more interference should be generated to make the pattern brighter. (3) Along the whole interference interval, the stripes are constantly reshaped by interference, and their style should change with the distance of the target. (4) Because the principle of interference has strict requirements on frequency and phase, interference and dispersion should be initiated simultaneously. (5) Because interference generates stripes, the product of light wave interference should be a new light wave that spreads around the interference point as the center of the ball. This will trigger more interference in all directions, which makes the light wave form a value-added mode of exponential infinite iteration cycle. This would create a singularity similar to the Big Bang. (6) Dark stripes are generated not by sustainable interference but by one-off annihilation. (7) The results of double-slit, Michelson–Morley and refraction tests cannot be obtained by using other wave sources instead of light sources. (8) Let alone a photon passing through two slits at once, since the stripes are so much fainter than the source, it proves that unaimed light cannot pass through either slit. (9) It is impossible to generate anything from the interference point of size 0. Interference to generate stripes is impractical. (10) Quantum indivisibility is mutually exclusive with the principle of interference. (11) The polarization characteristic unique to light cannot be absent in interference conditions. (12) The stripes are polarized and do not conform to the interference principle of light waves. (13) The phenomenon of "observation can tamper with results" is known through observation, which means that this phenomenon is tampered with by observation. (14) Similar to driving a car, light is refracted by turning the beam toward the side that slows down first. (15) The generation of a wavelet source at the point of contact is a general and fundamental law of waves, which is categorically rejected by light waves. (16) It is an objective astronomical phenomenon that binary star systems orbiting each other do not produce the Doppler effect. This phenomenon cannot prove that the speed of light is constant but can only be regarded as evidence that all celestial bodies cannot produce the Doppler effect; that is, redshift is a distortion of another astronomical phenomenon. The absorption spectrum of hydrogen is not radiation but a filtering feature, and it is impossible to produce the Doppler effect. The redshift cannot turn light into circular magnetic lines. Hubble's law without the Doppler effect has no basis. (17) The principle that allows light to travel properly through transparent objects is opposed to opaque ones. (18) A double-slit test with "lights that have collapsed into particles" could bring Schrodinger's cat back to life.

1. The Introduction

Newton thought light was a particle; Thomas Young thought light was a wave; Einstein believed that light has wave–particle duality. They are all wrong! Models that perfectly explain the principles of double-slit,

diffraction, refraction and dispersion tests cannot be presented in this paper for reasons of length.

"As much as I admire physicists' names, I do not think they're foolproof. I'm sorry to see that they get it wrong, and their authority can sometimes even hinder the progress of science."

What binds stripes to light interference seems to be an obsession from DNA, and when that bond breaks, instead of trying to dig deeper, people wonder and reflect on themselves and come up with more magical ways to justify it. This makes any doubt be seen as a cover for poor academic skills. When facing the stripes of the double-slit test, Newton's conclusion that light is a particle is no longer recognized, but scientists unfortunately misinterpret the stripes as the result of light wave interference. This seemingly reasonable conclusion but cannot stand the torture of science is actually a collective illusion, only reasonable deduction, it is not difficult to find that the principle of light wave interference violates: basic common sense, conservation of mass, conservation of energy, Gaussian flux theorem, etc. This article will enumerate much evidence to try to restore the truth.

"The moon exists because it is seen" is an inescapable problem in physics. The reason for all this is that modern physics has tailored its subjects to magical skills of unknown origin. Light has three forms: particles, waves and their superimposed state, and wave–particle duality [4][5]. Note that wave–particle duality, which is supposed to be a permanent form, is only the weakest of the three possible forms. The principle of wave–particle duality is a compromise, and it is only used in special cases. De Broglie's theory of matter waves, Bohr's idea that if light were not a wave, the physical world would immediately collapse. As seen, particle or wave–particle duality is only a temporary perfunctory, and the default form of light is wave. Like a chameleon, light can magically choose a form according to its environment. Do not delve into the rules of unknown origin. Wayward physics does not care. In geometric optics, which is usually within reach, the light automatically selects for pure particle properties. It is only in the double-slit causality experiment that this is a unique and palpable case in which light is reluctantly expressed as wave–particle duality, which, unfortunately, this paper will prove to be a misunderstanding. In the rest, the vast majority of cases, typically out of reach, light automatically changes into a wave, and other features of light automatically disappear, which is the content of this paper to correct. In addition, modern physics has endowed light with the following functions: (1) allowing directional collapse of wave–particle duality. (2) Allow particle or wave–particle duality to guest appear. (3) When light is a wave, the characteristics of the wave can be trimmed. Modern physics is the result of a series of careful choreography.

Physicists had imagined electromagnetic waves long before Marconi invented radio technology. After the invention of radio technology, the study of electromagnetic waves has made amazing achievements. However, strangely, because it seems to solve so many physical problems, this abstract concept, which contains almost no objective physical properties, is so popular that it avoids being updated by the knowledge. The electromagnetic wave in the field of radio is a science, but in the field of physics, it has become a hollow name. The original concept, although impractical, has persisted since there was no more convincing model to replace and match the results of many experiments. People have even established frontier disciplines on this basis, including relativity, quantum mechanics, big bang, dark

matter and dark energy. This is, of course, a bubble that, if punctured, could devastate the physical world. This is also a lament from Bohr! Unfortunately, Murphy's law makes Bohr's worries inevitable.

For various reasons, all three experiments proving that light is a wave are misunderstandings. The experiment does not support the principle of constant speed of light. The principle of light wave interference is full of holes. Light is definitely not a wave!

2. Analysis

Patterns cannot be generated by light waves

If light is a wave, the signal source used in the same experiment may be either light or wave. However, experiments on double-slit interference, Michelson–Morley and refraction with any kind of wave, including electromagnetic waves, do not obtain the corresponding results with light as the signal source. This is enough to prove that the physical properties of light and waves are completely different. The above three tests do not prove that light is a wave. The results of the double-slit interference experiment only proved that Newton's particle model of light was incorrect, not that light was a wave.

Whether the physical model of light is particle or wave or wave–particle duality, the spot of light left by a photon or wave on a target is always a dot. According to Fig. 1 and the general law of waves, the wave front of any physical model of a light wave must be arc-shaped, and the larger the propagation distance is, the larger the size of the wave front. If it does not collapse, each light wave must form a spot on the target with a radius equal to the propagation distance. The most reasonable light wave model is a bubble. When any part of the light wave touches any object, including the target, it must collapse into particles. Only in this way can the light spot on the target be guaranteed to be small. If so, according to the Tyndall effect, the collapse of light waves can be observed if smoke is applied in front of a target. Suffice it to say that light is never a wave.

Geometric models of beams generated by different tests cannot be unified

The common conclusion of the double-slit and Michelson–Morley tests is that their results are produced by interference of light waves. However, there are essential differences in beam shapes from these two interference tests. The Michelson–Morley beam is hemispherical; the double-slit interferometer beam is divided into classical and modern versions of the oddball cone. The modern version of the double-slit interference test uses a nearly parallel laser as the light source. The experimental result is the stripes shown in Fig. 2(a). The shape of the beam should be the fan shape, as shown in Fig. 1(a), and its thickness is both the height of the light source and the stripes. The classical version is not. Since the light source is a candle with omnidirectional scattering properties, the shape of the beam is more similar to that in Fig. 1(b). The relationship between the height of the stripes and the length of the slit and the light source is implemented by the principle of geometric optics. The common defects of the two versions of

the double-slit test are as follows: (1) the surface of the beam is cylindrical. In the normal plane of the propagation direction, only the width direction of the stripes produces an interference effect, while no interference occurs in other directions, including the height. (2) The wavelet source and its fan angle are unknown, and the classical version of the slit shape is unable to process the shape of the bell mouth. (3) The interference principle is mutually exclusive with the Michelson–Morley test.

The result of the Michelson–Morley experiment is shown in Fig. 2(b), which is deceptively similar in pattern to water waves. Close analysis reveals differences between the two. The center of the circles for water waves must be the source, but it can never be the source of light waves. Water circles should be constantly spreading out, but in this case, the circles are stationary. Moreover, the adjusted circles can expand as well as contract simultaneously.

The shape of the electromagnetic wave is the sphere shown in Fig. 1(d). The radius of the ball is the propagation distance, so its propagation is the expansion of the sphere. For waves, peaks and troughs are an indispensable pair of physical properties. In time and space, the peaks and troughs are always one after the other, and they must be half a wavelength apart, so this is also the difference between their radii.

The spherical center of the man-made electromagnetic wave must be at the emitting end, and its energy density is inversely proportional to the square of the radius. The mirror symmetry of the positive and negative half periods shows that the total energy is the same. Its quantum state is represented at its minimum energy, and its total energy is an integer multiple of this minimum. Electromagnetic waves are equipotential on a sphere. The energy distribution of light waves on the surface of the sphere is not uniform because of the polarization characteristics. As a result, the mirror symmetry of the positive and negative half periods of light waves is broken.

The polarization characteristic proves that light waves are shear waves. In contrast, the energy distribution of electromagnetic waves fluctuates radially during propagation. Therefore, electromagnetic waves are longitudinal waves. The classical theory that electric and magnetic conversion are orthogonal to each other so that electromagnetic waves are shear waves is incorrect because no such conversion occurs during propagation.

With all these differences, light is not an electromagnetic wave.

The principle of light wave interference is in serious opposition to the basic principle of physics

The conclusion of the double-slit interference test is that the interference of light waves produces stripes. The implication is that stripes are the work of something born out of interference. Because a light wave is a quantum that cannot be cut, the product of light wave interference cannot be a fragment but a whole light wave, and the new light wave cannot damage the parent light wave to any extent; otherwise, at least one of the two light waves involved in the interference will disappear as a whole. In Figs. 3(a) and 4(a), the interfered light waves remain intact and can continue to propagate and interfere with other light

waves. In this way, a light wave can create a new light wave without paying any cost, and the Gauss flux theorem, conservation of mass and conservation of energy and other principles are all invalid.

According to the principle of the double-slit interference test, as shown in Fig. 4(a), the light wave interferes only in the propagation process from the double-slit device to the target; that is, the light wave interferes as it propagates, indicating that the test results are gradually formed along the propagation process. If the distance Y is changed, the result on the target should be redrawn by interference. The pattern of the stripes cannot be constant, and different Y should correspond to different patterns. However, experiments showed that Y changed only the size and brightness of the stripes, not the pattern. The smaller Y is, the smaller and brighter the pattern. The larger Y is, the larger and darker the pattern. The flux of brightness is constant. This means that the stripes are shaped in the slits, no interference occurs, and light only travels in straight lines and has nothing to do with other light.

When the double-slit device rotates δ (as shown in Fig. 5, ranging from -π/8 to π/8), the experimental results should change with the rotation angle according to the principle of interference, but the measured results are almost unchanged.

According to the principle that light waves from different slits must interfere with each other, as shown in Fig. 4(a), if each light wave can interfere with *m* light waves from the other slit, then the value *m* is a large natural number proportional to the spacing Y and D and the light intensity and inversely proportional to the size and wavelength of the light. Because quanta are indivisible, no matter how big *m* is, the new light waves are whole individuals rather than fragments, and it is the new light waves that form stripes on the target. The number of interference points produced by two light waves from different slits is

$$2m - 1 \qquad (1)$$

In Fig. 3(a) and 4(a), the wavelet sources (light sources) are the center of the slits, and the adjacent light waves are exactly one wavelength apart. Obviously, this situation is very special; such a thin wave of light is almost no light; such a disciplined arrangement of light waves is impossible. Because photons are so small, it is normal to have *n* light waves at each slit width and *p* at each wavelength scattered together. In addition, the schematic diagram is only a brief cross-section diagram, so light waves are certainly not two-dimensional arcs without thickness, and thickness should also play a role in interference. If the light wavenumber at the height of the light source H (Fig. 4(c), 4(e)) can be divided into *q* layers, the interference points will be multiplied to

$$[(2m - 1)np]^q \qquad (2)$$

Formula (2) shows only the exponential increment of ancestral light waves, which seems strange enough. However, because ancestral light waves can only travel in one direction from the double-slit device to the target, the number of interference points is greatly limited. As a point light source, the new light wave propagates to three-dimensional space with the interference point as the spherical center, which

inevitably leads to more interference triggered by the new light wave with different propagation directions. Fig. 4(d) shows the value-added effect of a new interference point. If the role of all interference points is considered, the number of interferences triggered will be countless. More exaggeratingly, if the iterative situation caused by light waves traveling opposite each other is taken into full account, these interferences can trigger more interference without the need for light sources to form a closed loop of autonomous increment, which is an uncontrolled infinite increment. The scene resembles the singularity of the Big Bang. This spectacle, which follows from the two-slit interference conclusion, is impossible.

The trouble is that according to the principle of double-slit interference, slits are dispensable. In contrast, in the actual test, the slits are the determining factor.

In principle, the center of the slit is the wavelet source, which is in effect the light source. However, it is impossible to shine from the center of the slit, and in some experiments, the double-slit device operates in a vacuum. In addition, any light source can be easily observed, but experiments do not support this result.

The size of the interference point is 0. Anything that comes out of this is out of thin air.

Because the principle is exactly the same, two things will happen at the same time in the double-slit test: the interference effect produces stripes, and the dispersion effect distinguishes the colors of the stripes. However, in the double-slit experiment of a multifrequency light source, the expected dispersion effect does not appear, only the "interference" effect.

As shown in Fig. 3(c), the divergence angle β of stripes in the double-slit interference test is very small. This is not consistent with the Michelson–Morley test and the characteristics of the wavelet source.

The result of water wave interference is standing waves, which are stationary and cannot propagate. In the same way, the light waves produced by superposition interference must not propagate and be static; they fluctuate only at the permanent interference points. Note that the interference points in the schematic diagram are all in the path of the double-slit device to the target. This is a set of fixed coordinates, and the stationary light wave can only be understood as the light wave that does not emit or radiate. The interference light that can reach the target must be superimposed on the target, and the interference effect from other positions cannot reach the target.

The initial inspiration for the principle of interference comes from the reflection of water waves, as shown in Fig. 4(b). The reason an object can be seen is because it reflects light, and although targets are not very reflective, they are always reflective to some extent. As shown in Fig. 4(b), according to principle, reflected light waves must produce interference phenomena. However, from the test results, none of the interference effect comes from reflected light waves.

The generation of wavelet sources at reflection points is a general and fundamental law for all kinds of waves except light waves. The principle of reflection that the angle of reflection equals the angle of incidence applies only to light and not to light waves. Specular reflection and focusing are laws of geometric optics that are obeyed only by light and not by light waves. In Fig. 4(b), the wavelet source of

the s-wave generates a wave with the same frequency (wavelength) as the wave source and a phase difference of π that propagates or diffuses around. Clearly, light waves ignore this rule. So light and light waves are not the same thing!

The geometrical principle of light wave interference is not consistent with the result of the double-slit test

See Figs. 3(a) and 4(a). The center of the two aiming points on the target, TS and TR, is a blind area that cannot be reached by light waves from any slit, so there should be a dark stripe. However, it turns out that instead of being a dark stripe, it is actually the brightest part of the pattern because it is targeted by the light source.

As the elements are too dense to be drawn, a large number of elements of the interference principle are forced to be deleted, so Fig. 3(a) and 4(a) are only brief schematic diagrams. Unlike the picture, in which light waves are arranged in an idealized fashion, the actual scene is sufficiently dense and disorderly. This means that the supposed regular dark stripes shown in Fig. 2(a) will be covered by other light waves gathered randomly in practice, and the formation principle of dark stripes loses its rationality.

The fundamental properties of quantum will eliminate the principle of interference

Interference and noninterference are mutually exclusive conditions of equal importance. According to the principle of quantum indivisibility, quantum and its basic physical properties can only play a role in the whole way rather than part, so only all interference conditions work at the same time can the interference be triggered, that is, the interference process must be quantum. Otherwise, it is impossible to clarify the legitimacy of the principle that why interference can be triggered when conditions are met but not when conditions are not met. The original interference mode is divided into two kinds: one is the superimposed interference of the wave crest to the wave crest; the other is the destructive interference of the wave crest to the wave trough; other circumstances do not interfere. The validity of this set of conditions is debatable, both mathematically and physically. Different from the original principle in Fig. 3(a), which only draws the crest without the trough, the complete principle of interference is shown in Fig. 4(a), where the solid line is the crest and the dotted line is the trough. In a period of countless points, only a pair of special points satisfying the condition can lead to an interference lack of legitimacy. If the noninterference condition can be interpreted as a limitation of quantum integrity, then the interference condition must also be restricted by this limitation. Let the two waves involved be A and B. To ensure that all points meet the interference conditions at the same time, the complete interference conditions should be modified as follows: (1) the superposition interference condition triggered by the same feature should be that when peak A aligns with peak B, trough A aligns with trough B; the condition for destructive interference triggered by different features should be that when peak A aligns with trough B, trough A

aligns with peak B. (2) Simultaneous rather than sequentially satisfied conditions trigger interference. (3) When conditions are met, interference occurs in a sudden rather than gradual manner.

Although photons look very different from light waves because they are much smaller than their wavelength, this does not prevent each photon from having all the characteristics of light waves; the most basic physical characteristics of light waves are peaks and troughs. Because the size of the intersection is zero, the duration of the interference approaches zero indefinitely. Therefore, the simultaneous alignment of the crest and trough with another wave is a minimum condition for triggering interference. However, if the light waves involved in interference come from different directions, due to the time sequence between the peak and trough, the interference has to scan the two light waves gradually from one point; that is, the way that the peak and trough meet the interference conditions is not simultaneous but sequential. This breaks the quantum principle of the interference process, so neither the double-slit nor the Michelson–Morley result is due to light wave interference.

Since the speed of light is the same, it is impossible for the latter of the waves in the same direction to catch up with the former, so interference cannot be triggered. Light waves in the same direction that fully meet the interference conditions constitute an ordinary beam, and photons in the beam coexist without interference. The laser beam is composed of many rays that meet the interference conditions but do not interfere with each other.

In contrast, regardless of when, where whether the frequency is different, whether the phase difference is constant, and whether the direction is consistent, interference between electromagnetic waves can occur unconditionally. The result of interference between electromagnetic waves is composed of vectors of all the factors and affects only the intersections. The waveform distorted into any shape by interference is normal. The principle of quantum indivisibility kills the principle of interference.

In summary, the current light wave interference condition is rejected by its noninterference condition.

Antimatter ghosts and the Death Line

Without loss of generality, the mathematical expression for waves is:

$$u1(t)=A\sin(2\pi ft+\theta 0) \qquad (3)$$

where A is the amplitude, f is the frequency, t is the time, and $\theta 0$ is the initial phase. If the phase is shifted by an odd multiple of π, then the result is reversed:

$$u2(t)=A\sin(2\pi ft+\theta 0\pm(2k+1)\pi)=-u1(t) \qquad (4)$$

where k is any integer.

See Fig. 6(a) and formulas (3) and (4). Since *u1(t)*+*u2(t)*=0, *u1(t)* and *u2(t)* are a pair of mathematically opposite numbers and can annihilate each other physically. Fig. 6(b) is a circuit that generates signals of opposite polarity. As shown in Fig. 6(a), if P is a positive polarity wave, N is a negative polarity wave, and the public area X is both the negative half period of the positive polarity wave and the positive half period of the negative polarity wave. The polarity of the wave is determined by the reference point and fluctuates periodically between positive and negative polarity over time. Electromagnetic waves are man-made signals. The effect of the positive and negative electromagnetic waves in the conductor cancelling each other is easily understood as the signal being short-circuited. Since mutual annihilation is the most typical characteristic of matter and antimatter and light waves are recognized as matter by physics, negative light waves are antimatter that can annihilate positive light. According to Fig. 6(a), matter and antimatter are conjoined, their roles are periodically swapped, and the antimatter ghost will arrive unexpectedly.

Waves are neither matter nor energy; they are just a way of moving energy. There is a vibration elimination instrument, the principle of which is to reverse the vibration signal and cancel the original vibration. Obviously, nothing is lost in this process, and only energy is lost. Since energy is independent of phase, the two strands of energy with a phase difference of π act in opposite directions and can cancel each other out without negative energy (inverse energy).

According to the principle of the double-slit interference test, when peak A aligns with trough B and trough A aligns peak B at the same time, this will trigger destructive interference to form a dark stripe. According to trigonometry, this is actually annihilation, not interference, triggered by a pair of mathematically cancelling light waves with a phase difference of π. The difference between interference and annihilation is that light waves after interference are lossless; they are still alive and can continue to propagate and interfere with each other. The light waves that annihilate or cancel out are permanently dead and completely gone; they never shine again. That is, destructive interference is a dead line. Because superposition and destructive interference occur alternately, once the interference is triggered, all light waves are wiped out by annihilation, leaving only darkness.

Rotation test of the double-slit device

As shown in Fig. 7, La is the direction of the stripe arrangement, and Lm is the middle line of the double slit. La rotates synchronously with the double-slit device and is always perpendicular to Lm. The geometric relationship between La and Lm should not be so tight because the interference interval is behind the slit and the interference of the light wave in the whole interval produces the stripe. This suggests that it is the direction of the slits rather than the interference behind it that determines the direction of the stripe alignment.

The role of ignoring the polarization direction in interference conditions is unacceptable

Light cannot be a wave on the basis that only light has the characteristic of polarization and other types of waves do not.

Water waves vibrate in one dimension, only vertically toward the center of the earth. Light is a shear wave whose polarization lies in the normal plane S of its propagation. If the polarization direction of all components is evenly distributed, such as sunlight, the beam has no preferred polarization direction. The phase condition of interference is the plane angle before considering the polarization factor. The phase condition of interference is upgraded to a solid angle after considering the polarization factor. This would make the conditions for intervention extremely harsh. If the polarization direction is inconsistent, even if all other conditions are met, interference of light waves cannot occur because the vector composition destroys the quantum characteristics. Stereoscopic films are a typical application where different polarization directions do not trigger light wave interference. The effect of the polarization direction should not be ignored by interference conditions.

Interference and dispersion

The principle requires that the light waves involved in interference have the same frequency and a constant phase difference, meaning that the light waves only choose to interfere with light of the same color. Light waves of different colors are separated by the principle of interference. This shows that if the light source is multi-color composite light, the interference fringe should be chromatographic fringe. This is not consistent with reality.

The original double-slit test is not easy to reproduce, as the "light wave" only passes through the targeted slit

Note that there is a problem with the classical diffraction [18][19][20] principle that static patterns are not produced by dynamic waves. After leaving the device, the light propagates only in straight lines without any wave characteristics. In this paper, only diffraction results are used, not the principle.

The principle of the original version of the double-slit test is shown in Fig. 3(a), and the result is shown in Fig. 3(b), which is difficult to reproduce. This version of the device does not have a glass substrate, and the main material has a certain light transmittance, reflective properties, and fiber residue edge paper. Such edges inevitably produce diffraction. When the slit is wide enough, the vertex of the fan beam is the source and obeys geometric optics. When the slit is narrow enough, the vertex of the fan beam suddenly switches to the center of the slit, and the divergence angle β increases, resulting in a diffraction phenomenon. The traditional theory misunderstands the slit as a wavelet source, but the wavelet source is a light source, and the light source can only be the product of the transition of the

energy level of the electron. The slit cannot emit light out of thin air; it only changes the way the light moves. Since all slits produce diffraction, the diffraction of slit S1 causes slits S2 and S3, which are too far apart, to produce diffraction to form stripes.

The section diagram of the modern version of the double-slit device is shown in Fig. 5, the principle is shown in Fig. 4(c), and the test results are shown in Fig. 2(a). Instead of paper, smooth-edged, opaque, vacuum-aluminized coatings are attached to a glass substrate with strong refraction properties. See Fig. 4(a) and (c), whose equivalent effect is that a thin line G is placed in the center of a single-slit SS. The width Sw of slits SR and SL is roughly the same as the width Gw of partition G (thin line) between the slits, and they are made very narrow. Thus, the modern version of a double-slit device consists of three optical elements with slits SR, SL and partition G that each produce diffraction separately. The stripes are synthesized by their diffraction effects.

According to interferometric principles Figs. 3(a) and 4(a), light waves must pass through all slits, whether aimed or not. However, experiments showed that the brightness of the stripes was too low, proving that only a small amount of light aimed successfully passed through the slit, while the vast majority of light not aimed at any slit was reflected or absorbed. This means that light has no wave. A photon cannot pass through two slits at once.

Principle of refraction and propagation distance of light

The basic formula of the quantum is:

$$E=Nhf \qquad (5)$$

where E is the quantum energy, N is a natural number, h is Planck's constant, and f is the frequency.

Note: The Planck constant h is a universal constant. It does not change for any substance. The frequency f is a special constant. Different kinds of matter have their own special constants (frequencies). N is the number of quantum energy components and the number of quanta coexisting together.

According to Huygens' principle, the refractive index is the ratio of wavelengths in different media that are refracted when a light wave passes through an interface. The principle is debatable. A simple explanation is that, like driving a car, a beam of light naturally turns to the side that slows down first.

According to Formula (5), the energy of a quantum is determined only by the frequency [1][2][3]. In contrast, the energy of an electromagnetic wave is determined by its amplitude and has nothing to do with frequency or wavelength. The quantum character of an electromagnetic wave is shown in the minimum value of energy, which corresponds to the minimum value of the unsubdivided amplitude. Therefore, light is not a wave.

Because a quantum is indivisible, it is destroyed when it collides head-on with an obstacle; it cannot be partially destroyed but can be slowed down when it passes an obstacle. Therefore, the higher the density of the medium or the farther it travels, the greater the probability that a photon will be destroyed when it hits an obstacle. Therefore, the denser the medium is, the shorter the distance light travels. If the photons travel a long enough distance, they will all be destroyed by the obstacle as a whole.

The principle that light waves travel through transparent objects is incompatible with opaque objects.

Polarization of stripes in the double-slit test

The result of the double-slit test is a group of bright and dark stripes, but the stripes except the bright spot in the center have obvious polarization characteristics. The direction of polarization corresponds to the length of the slit. The principle of light-wave interference cannot explain this phenomenon.

Light waves and Communication

According to the modulation effect of the communication principle [15][16][17], if the angular frequencies of the light source and the signal are ω_c and ω_s, respectively, the modulation result is the signal with angular frequencies of $\omega_c+\omega_s$ and $\omega_c-\omega_s$, respectively. This means that modulation turns the light source into two conjugate varieties centered on its frequency. This clearly violates quantum fundamentals and in fact does not happen in fiber-optic communication. Moreover, the spectrum is discrete, and not every spectrum has a corresponding photon.

Since the diameter of a photon is much smaller than its wavelength, the time occupied by a photon in the whole cycle is negligible, which indicates that the photon is only an element of the light wave, its physical significance is only equivalent to a sampling of the light wave, and the photon is more like a fragment of the light wave. In other words, a series of light wave fragments with different phases are linked together to form a complete light wave, which is clearly not true.

Although frequency is the basic physical parameter of a wave, according to the Fourier transform principle [12][13][14], any wave that exists only in finite space-time cannot have only one frequency but must be a frequency band. This conclusion has been confirmed by radiocommunication technology [10][11] and is regarded as the basic principle that must be followed. Otherwise, if electromagnetic waves had zero bandwidth, as physics says, radio communication would require no technology at all.

Suspicion of the Michelson–Morley test

The results of the Michelson–Morley test yield three very important conclusions. (1) Light is a wave. (2) The speed of light is the same in all directions. (3) The aether does not exist.

First, the wave–particle duality is absent. Second, since there is a great deal of evidence that light is not a wave, it is necessary to clarify the following questions to dispel doubts. (1) Pinhole diffraction, which will directly produce exactly the same results as the test. (2) Due to the limitation of processing capacity, arcs are forced to be replaced by broken lines, making it impossible to process ideal optical surfaces. Mechanical traces of objects such as glasses and the bottom of glass bottles can produce optical patterns similar to the results of this experiment. (3) Remove one of the two optical paths and perform the single optical path test without interference. (4) Open research on the opaque intermediate process to find other causes.

Questions about relativity

Incredibly, man has never truly measured the speed of light. The currently accepted data come from the frequency and wavelength of electromagnetic waves. A way to check if the speed of light is constant: the sun is near the horizon in the morning and evening, and the Earth rotates at a speed of approximately 466 m/s toward or away from the sun, respectively. Accurate measurements of the speed of light at these two specific times can verify this conclusion. Note that the Earth's motion around the sun cannot be ignored.

The result of the relativistic calculation is completely different from the GPS error data. The GPS error can be reasonably explained as the orbit being an ellipse with a large eccentricity due to its low orbit, which causes the acceleration of the satellite to vary over a wide range. The core of a cesium atomic clock [24] is a quartz crystal oscillator synchronized by the transition frequency of the cesium atom. Regardless of the transition of the cesium atom or the oscillation of the crystal, the stress caused by the acceleration over a large range and rapid change inevitably affects the frequency, which is the main cause of GPS error. Other factors (such as temperature, atmospheric pressure, etc.) can not be ignored. Although the speed was slow and the number of tests was small, the experimental data of the cesium atomic clock on the aircraft closely matched the results of the relativistic calculations. Compare the GPS data, and if they're real, they're missing some corrections that make them suspicious. Sadly, relativity does not work as it should.

Hubble's Law and the Webb Space Telescope

The cornerstone of relativity is that the speed of light is constant and independent of the frame of reference. Doubts about the Michelson–Morley test have been raised as evidence for this conclusion. This section will explain the principle that celestial bodies do not produce the Doppler effect. In the vast universe, single star systems such as our solar system are not the norm. More common are binary or multistar systems. Due to the advantages of large number, different attitude, wide distribution, short

period, and the most significant change of motion velocity in a short period, the binary star systems orbiting each other are the best samples to observe the Doppler effect. When the two stars are exactly at the end of their orbits from Earth's perspective, they both fly toward and away from Earth as fast as they can. According to Doppler's principle, the corresponding star's light wave has the shortest and longest wavelengths. However, the objective observation results show that no Doppler effect is observed in binary systems.

Now, we have evidence that celestial bodies cannot produce the Doppler effect: light is not a wave, light is an s-wave, and observations of binary star systems. The redshift data are derived from the distortion of the reddening phenomenon of distant celestial bodies. In fact, no direct evidence of the Doppler effect has been found, only that the farther away objects are, the redder they become. The reason why distant objects become redder is not redshift but redding (blue decay). The sky is blue because light with shorter wavelengths is more easily refracted by the atmosphere. The reason the sun gets redder the closer it is to the horizon is that light travels the longest through the atmosphere, and the shorter the wavelength is, the more it loses. Water molecules in the atmosphere, the spherical surface of the atmosphere and the radial density gradient distribution are more harmful to the shortwavelength component of the spectrum. Because there is no absolute vacuum, the farther the light travels, the more gas accumulates along its path and the greater the spectrum is disturbed. Because gas molecules are small enough, longer wavelengths of light are easier to bypass, and shorter wavelengths cause more damage. Although the James Weber Space Telescope has lost the support of the Doppler principle, it can work according to the above principle.

The object of redshift should be the radiation spectrum of the celestial body, not the absorption spectrum of hydrogen. The absorption spectrum is caused by the filtering (notch) feature of the spectrum of the star by the relevant subject, which is a function of the absorption efficiency of different wavelengths of light. A celestial body is a light source when it radiates, and a redshift occurs when the light source recedes. The filtering material is wrapped outside the celestial body, and when the spectrum that has produced the Doppler effect is filtered, the filtering characteristics cannot be changed due to the moving speed. Why is that? Because filtering characteristics are the basic physical characteristics of substances, different substances have corresponding filtering characteristics. Changing the filtering characteristics changes the species of the substance. This would lead to the absurd conclusion that a substance, such as hydrogen, is only in its resting state, and once it starts moving, it is no longer hydrogen.

Hubble's law uses redshift data that are characteristic of hydrogen absorption spectra, which may have too few sample points to meet the lower limit of Nyquist's law. This is because all spectral lines should obey the same attenuation function. Although the only data used is the hydrogen absorption spectrum, other lines are important to ensure the validity of the data so that excessive distortions can be filtered out.

A magnetic line is a closed loop that connects the radiating end to the receiving end, and a redshift cannot turn light into a magnetic line.

The important assumption of relativity and Lorentz transformation [22][23] is that the speed of light is constant and independent of the reference frame. However, whether the Lorentz transform is used or not, the standard spectrum cannot be accurately matched with the redshift data after being transformed by the same law. Unfortunately, if the speed of light is constant, it is impossible to produce Doppler effects based on relative velocity. Hubble's Law [6][7] and relativity are mutually exclusive.

The derivative conclusion of Hubble's law: the expansion of the universe, the Big Bang, dark matter and dark energy. However, dark matter is incompatible with Kepler's planetary laws [8][9]. Kepler's planetary laws are unmistakable. Not only have they stood up to every object in the solar system, but they have been used to find Uranus, Neptune and Pluto without dark matter or dark energy. Modern astronomy suggests that visible matter provides only 4% of the force of gravity, in which case dark matter has to provide a huge portion (reportedly 23%). Because the Sun revolves around the center of the galaxy, the planets revolve around the Sun, and the satellites revolve around the planets, the gravitational pull toward the Sun is toward the center of the galaxy, the gravitational pull toward the planets is toward the Sun, and the gravitational pull toward the satellites is toward the planets. If the direction of the dark matter's gravity does not interfere with the Sun's motion, it would have a huge damping effect on the normal functioning of the planets and their moons. Our solar system is about to be upended by dark matter.

Because of the short distance and the use of the law of cosines, the results obtained by the triangulation parallax method are more accurate and reliable. Contrary to the expansion of the universe, the data confirm that the closest galaxies to the Milky Way, such as Canis Major, Large Magellan, Small Magellan and Andromeda, are moving closer together.

"Observe tamper results"

In experiments on the causality of double-slit interference, a puzzling phenomenon has been observed: before the introduction of observation, the result of the experiment is the stripes of light and dark produced by interfering light waves. After introducing observations, the test results are patterns formed by particles. From this, Einstein proposed the principle of wave–particle duality. According to this principle, light has wave–particle duality, and light is a superposition of both particles and waves. Light is waves without observation, and observation collapses superpositions into particles. However, there is a tangled logic lurking here. Why do superpositions without observation only look like waves? Why does collapse always turn out to be a particle? Regardless of whether observation is introduced, the test results in both cases are obtained by observation, and the test results without observation cannot be obtained without observation. Does this mean that the results of all tests have been tampered with by observation? Reading is also observed. Has this article been tampered with as you browse? If observation had a tampering function, would not all information from observation be discredited? Because observation is a necessary means to obtain information, the wave–particle duality principle cannot solve the problem of whether the information has been tampered with but can only obtain some information about the tampered version.

The collapse mode of superposition states is not random but directional selection, which inevitably raises questions about wave–particle duality and Schrodinger's cat principle. A double-slit experiment with light that "collapsed into particles" would bring Schrodinger's cat back to life. The "interference" stripes show that (1) the principle of wave–particle duality is incorrect; the pattern without "interference" is not because light collapses into particles, and the stripes are not the result of "light wave interference". (2) The introduced observations cause unknown disturbances to the test.

As shown in Fig. 7 (b), "observation tampering with test results" occurs when the installation position and posture of the observation device are "S" and "L". However, the test is not complete. For comparison, the test results of the installation position and posture, such as "T" and "B", must also be obtained. This would prove that observations of different positions and attitudes would not tamper with the results. The reason for tampering is not the observation but the position and posture of the observation.

The slits of both the double-slit device and the mask have similar optical properties. According to the conclusion of the double-slit interference test, the light waves passing through the slit interfere with each other and produce streaks. The mask would have countless interference streaks due to its numerous slits, making it impossible for the photolithography machine to reduce the pattern clearly onto the wafer. This conclusion is obviously undesirable. Streaks are not a general rule of slits but the result of coincidental conditions. Instead of "letting God roll the dice," the lithography machine successfully modifies the script using the wavelength of the light source so that the conditions that produce the stripes are suppressed.

The rights and wrongs of the uncertainty principle

The uncertainty principle, which seems to solve all the problems, must face scientific scrutiny. Why are only phenomena that cannot be explained by modern physics filtered out and not the results of the experiment, including the streaks produced by the basic double-slit test?

3. Instruction

Although not a wave, a quantum still has physical parameters such as wavelength, frequency and period.

Just as an electric current is a directional flow of charge, light is a flow of photons.

Since the rest mass of photons is zero, they are transparent to each other. Any space already occupied by a photon does not prevent other photons from being used in whole or in part, and the number of other photons is not limited. According to formula (5), quantum theory also recognizes this rule. Therefore, if both sides are photons of zero rest mass, they can pass through each other innocently and do not interact with each other.

References

1. Steven Weinberg, Lectures on Quantum Mechanics, Cambridge University Press.
2. James Binney and David Skinner, The Physics of Quantum Mechanics.
3. Leslie E. Ballentine, Quantum Mechanics - A Modern Development, World Scientific Publishing Company.
4. P. Mittelstaedt, A. Prieur and R. Schieder, Unsharp particle–wave duality in a photon split-beam experiment, Foundations of Physics, 17, 891-903 (1987).
5. Greene, Brian. The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory. New York: W.W.Norton. 1999: pp.97–109.
6. Hubble, Edwin, "A Relation between Distance and Radial Velocity among Extra-Galactic Nebulae" (1929) Proceedings of the National Academy of Sciences of the United States of America, Volume 15, Issue 3, pp. 168-173
7. Move over, Hubble: Discovery of expanding cosmos assigned to little-known Belgian astronomer-priest | Science | AAAS
8. Johannes Kepler, Harmony in the World, Peking University Press, 2011
9. David Yang, Lectures on General Astronomy, August 1999
10. Fan Changxin, Cao Lina, Principle of Communication (7th Edition), National Defense Industry Press, September 2013
11. Jiongban-Zhou, Communication Principles (3rd Edition), Beijing University of Posts and Telecommunications Press, August 1, 2008
12. C. C. Lin & L. A. Segel, Mathematics Applied to Deterministic Problems in the Natural Sciences, Macmillan Inc., New York. Beijing, Science Press, 1974
13. The Scientist and Engineer's Guide to Digital Signal Processing. 1997-09-09
14. Li Wenke, The Magic Matrix Season 2, Harbin Engineering University, 2014
15. Zhang Baofu. Optical Fiber Communication: Xidian University Press, 2009-09
16. Zhang Hongbin, Qiu Kun, Zhou Dong. Wavelength Division Multiplexing Optical Fiber Communication Technology: 2000-04, Journal of University of Electronic Science and Technology of China
17. Liu Xilian, Peng Tianxiang. Optics and Soliton Communication: Physics and Engineering, 2002-05
18. Xie Jianing, Zhao Jianlin, Chen Weicheng et al. Computer simulation of Fraunhoffer diffraction. CNKI;WanFang, 2004
19. Dai Bing, He Anzhi, Zhu Zhaoqing. Fraunhoffer diffraction studies of a class of aperture associated with ellipses and rectangles. CNKI, 2003
20. Lu-zhong CAI, Self-consistency of Fresnel diffraction and Fraunhofer diffraction formulas for free propagation problems. University Physics, 2002
21. Qingzhen Li. The Great Dictionary of Scientific and Technological Methods: Science Press, 1999

22. Zhang Yuanzhong, Encyclopedia of China vol. 74 (Physics), Encyclopedia of China Publishing House, 2009-07:342
23. Zhao Kaihua, Luo Weiyin, New Concept Physics Course – Mechanics: Higher Education Press, 2004
24. Chen JIANG, Li Detian, Wang Ji, et al. Current situation and trend of cesium atomic clock for navigation [J]. International Space, 2016(4):20-24.

Figures

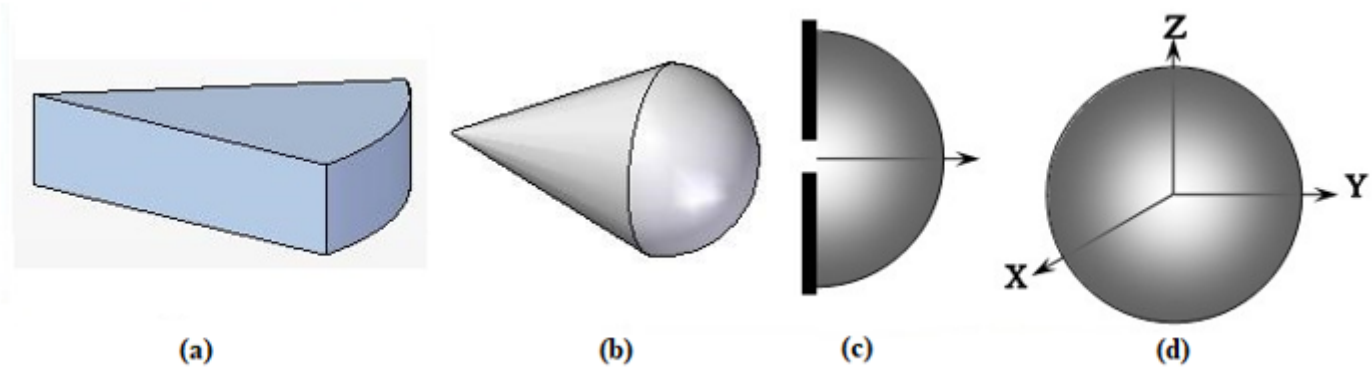

Figure 1

(a) Fan beam, (b) conical solid angle beam, (c) hemispherical beam, (d) spherical beams or waves

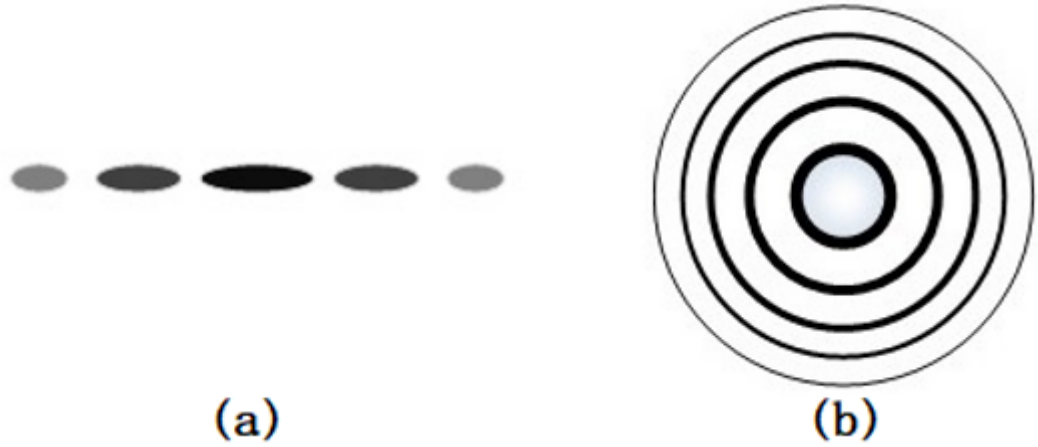

Figure 2

(a) Results of the double-slit interference test, (b) results of the Michelson–Morley test

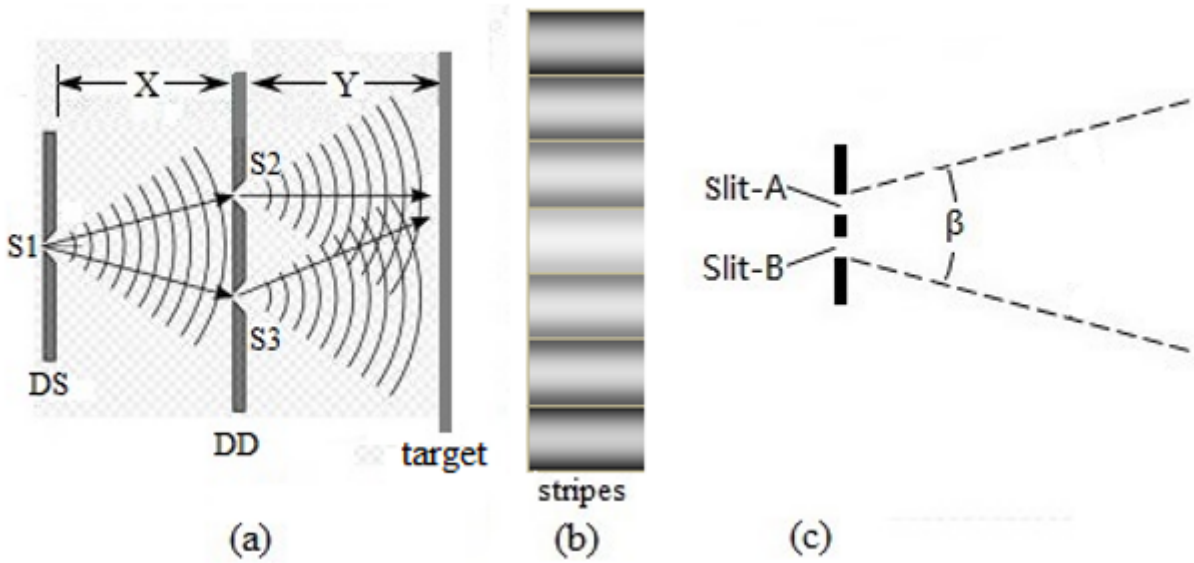

Figure 3

(a) The principle of the original light wave interference. (b) Stripes. (c) Scattering angle of stripes

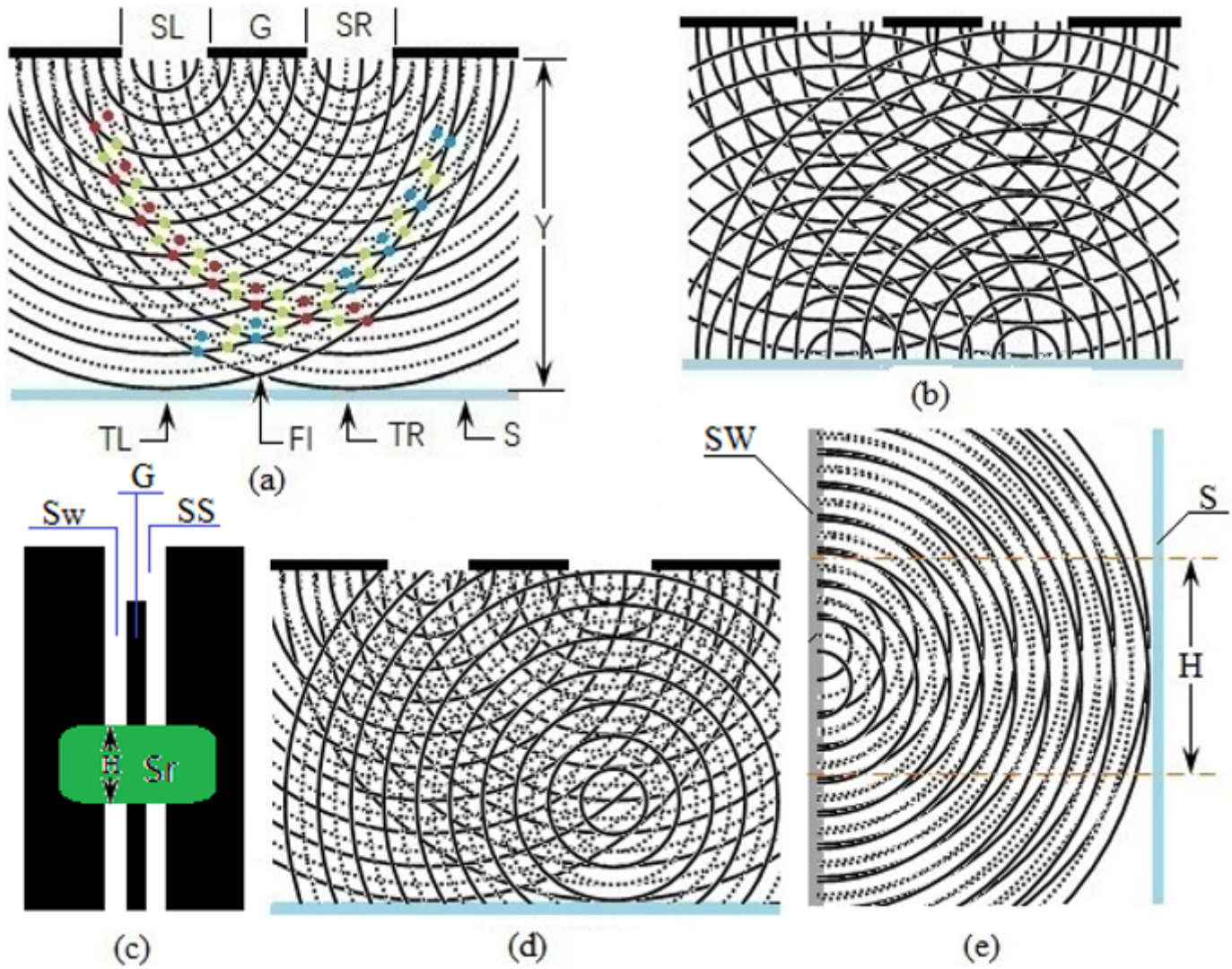

Figure 4

(a) The principle of double-slit interference. (b) Interference of reflected light waves. (c) Light source and slit. (d) Interference of light waves generated by interference. (e) Interference between two layers of light waves in the same slit.

Note:

(1) SL: left slit, width Sw. SR: right slit, width Sw. G: partition between the two slits, width Gw. D: D: Distance between slits Sw+Gw. Y: the distance between the double-slit device and the target. S: target. TL: left aiming point. TR: right aiming point. FI: the most forward interference point. SW: wall of slit. SS: single slit. Sr: light source. H: height of the light source.

(2) Because of the Michelson–Morley test, Fig. (a) and (b) are drawn as semicircles rather than as fan-shaped arcs, as shown in Fig. 3(a).

(3) The solid line represents the crest, and the dashed line represents the trough. They are a pair of typical features of the wave. Using only one arc to represent a wave is misleading.

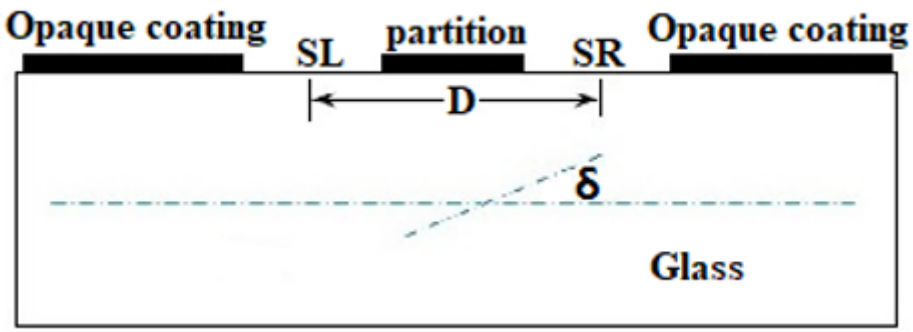

Figure 5

Section of double-slit device

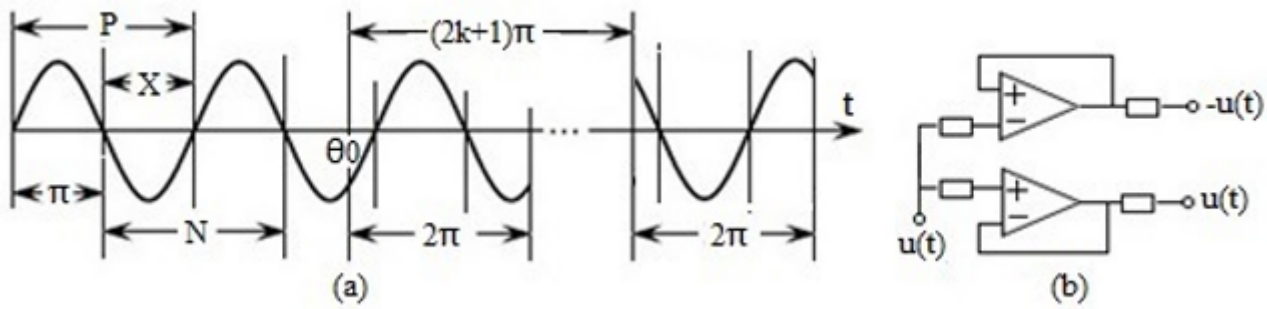

Figure 6

(a) Matter and antimatter waves are conjoined. (b) Circuit for generating mutually inverted signals.

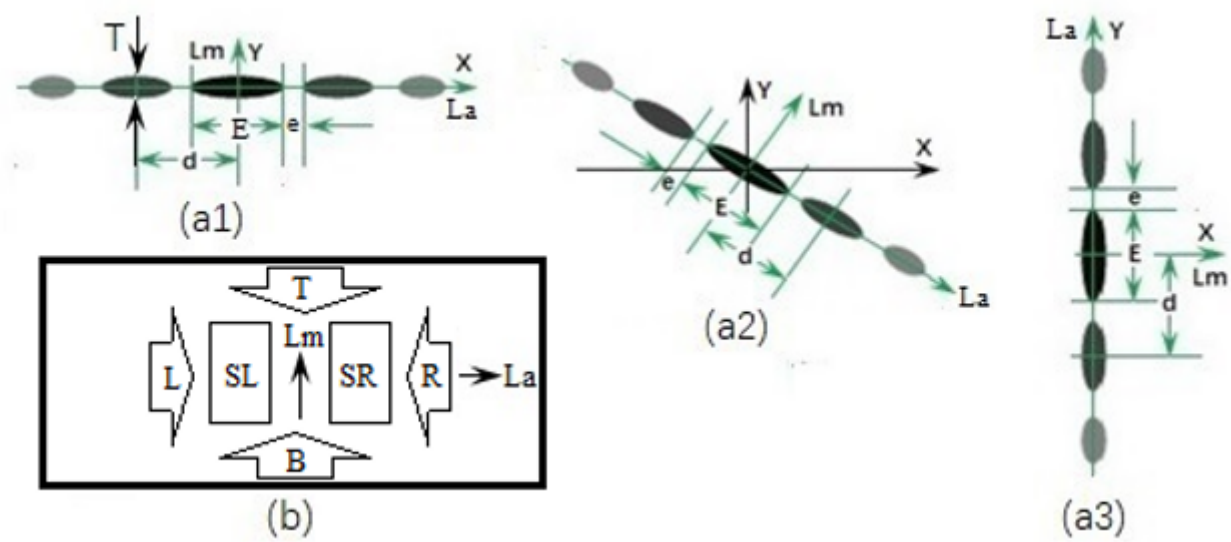

Figure 7

Double-slit test results: (a1) vertical slit; (a2) inclined slit; (a3) horizontal slit. (b) Double-slit devices.