ISSN: 3068-0352

Katalyst Publishers

Open Access

Journal of Current Trends in Physics Research and Applications

Research Article

Viewing Time and the Laws of Object Existence from the Perspective of Unit Objects: Objects Exist only in the "Now" Moment; Examining the Speed of Light of Celestial Bodies from the Perspective of Unit Object Flow; and the Correct Visual Representation of Four-Dimensional Spacetime

Sean Yuxiang Wu*, Lü Wu
Two-W Object Company, El Cerrito, CA, USA

Abstract

The existence of objects is a fundamental concept explored in metaphysics and philosophy. We explore the relationship between the existence of objects and time, and how to understand the nature of time. By analyzing Unit Object and Unit Object Flow, we see that a time is emerging together with the birth of an object; the existence time of an object is in "Now" moment only. The time before "Now" moment is a trace of the object's past existence, no longer existing; the time after the "Now" moment is a future time that has not yet arrived and has never existed. We also discussed Unit Object Flow, which are easily confused with Unit Objects. This research is extremely helpful for our correct understanding of the universe.

Introduction

In (3), we pointed out three major problems with special relativity and errors in 12 of Einstein's papers and theories. In (4), we proved that the results of calculations on two reference bodies in a relative system can only be applied within the relative system and when the two objects exist as reference bodies. The results cannot be applied anywhere else. In other words, calculations in a relative system are illusory calculations with no practical use in the real world.

This article explores the relationship between the existence of objects and time.

Clock time is a tool for measuring time, a tool defined by Earthlings as a measure of time. It is an immutable scale used to measure the various processes of objects, strictly following their occurrence, development, and evolution. It is a physical tool commonly used and recognized by humanity.

Next, we will apply this scale to introduce other, seemingly elusive related concepts of time and existence.

***Corresponding Author:**

Sean Yuxiang Wu, Two-W Object Company, El Cerrito, CA, USA;
Tel: 1-510-332-2804;
E-Mail: seanyuwu@gmail.com

Received Date: 15th Oct, 2025
Accepted Date: 20th Oct, 2025
Published Date: 24th Oct, 2025

Citation: **Sean Yuxiang Wu* et al.,** (2025) Viewing Time and the Laws of Object Existence from the Perspective of Unit Objects: Objects Exist only in the "Now" Moment; Examining the Speed of Light of Celestial Bodies from the Perspective of Unit Object Flow; and the Correct Visual Representation of Four-Dimensional Spacetime. J Cur Tre Phy Res App 3(7): 1-3.

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The Relationship between Existence and Time from the Perspective of a Person's Growth Process

Assume that the 7 small pictures in *Fig. 1* are a diagram of Li Si's life growth process.

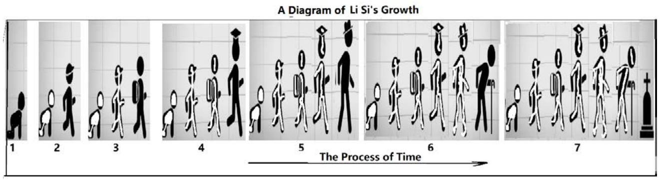

Fig. 1 Diagram of Li Si's Growth

In Frame 1 of *Fig. 1*, Li Si enters this world, and thus, his time begins to exist for Li Si.

In Frame 2, Li Si grows into a child. The front figure of frame 2 represents Li Si as a child in the present moment, while the back figure represents Li Si as a baby at the last moment before the present moment (also the previous present moment in Frame 1). Because this baby no longer exists, but merely a historical memory of Li Si, he is depicted as a hollow image.

In frame 3, Li Si's "Now" has progressed a step further and he has become an elementary school student. The baby and child Li Si have become historical memories and no longer exist. In frame 3, two virtual images are used to represent his historical existence.

Similarly, from Frame 1 to Frame 7, the "Now" moment in each successive frame represents Li Si's actual past existence; as time passes, the "Now" in each frame rolls into the past, and the "Now" in the next frame becomes Li Si's true existence. This rolling replacement of the "Now" moment into the future continues endlessly, gradually accumulating traces of Li Si's historical existence into an increasingly rich history, as clearly seen in the gradual accumulation of virtual images from Frame 1 to Frame 7.

After Li Si's death, his time continues to move forward, frame by frame, through the "Now" moment, accumulating ever more historical traces and memories.

Summarizing the evolution of Li Si's life, we can begin to appreciate the traces of time and the mystery of the existence of objects:

1. Only after Li Si appeared and existed in the world did the time related to Li Si come into being;
2. Li Si exists only in the present moment, the "Now" moment;
3. Li Si's past is the historical trajectory of Li Si's past and his no longer existing history. This trajectory becomes longer as Li Si's existence increases;
4. Li Si's future doesn't yet exist; it's merely the next moment that Li Si's "Now" can reach. We expect Li Si's "Now" to smoothly and normally progress to his next future "Now," but it's entirely possible that Li Si's existence at this "Now" moment undergoes a dramatic change, such as the transition from frame 6 to frame 7 in *Fig. 1*. During this change, Li Si's life disappears, but his information and various other states persist. All the information about Li Si's life from frames 1 to 7 becomes a historical record. Li Si himself continues to exist in a different state in the rolling river of time.

Let's have a more in-depth discussion from a more general perspective.

Unit Object

We define a **Unit Object** as something that can exist independently. A man, a car, a planet, etc. are all Unit Objects. The "Li Si" we discussed earlier is also such a unit object.

Using the conclusions drawn from Li Si's above discussion to describe unit objects, we know that the time and existence related to unit objects are: unit objects exist at the "Now" moment; the past of unit objects is its historical trajectory, but it no longer exists in reality; the future of unit objects is the expectation of the rolling evolution of objects from the "Now" to the next moment, and it also does not exist at the "Now" moment.

A unit object is not just a single thing; it is more often a unit object composed of a collection of multiple unit objects. A typical example is that a human is composed of countless molecules and atoms. A large unit object can be broken down into smaller unit objects, or many unit objects can be aggregated into a single unit object. A unit object has various levels of complexity, and can be inclusive or combined. A typical example is when we view the Earth as a unit object, the countless unit objects on Earth, such as humans, animals, and so on, are all contained within this unit object - the Earth.

Various celestial bodies, including the Earth, are composed of countless different units. On the one hand, these celestial bodies themselves can also be considered individual units.

The world is a collection of units, composed of countless different units.

Units make up the world. The laws governing these units are the fundamental laws of the universe.

When we discuss the nature of units, their duration should also conform to the laws governing their existence: that is, they exist only in the present moment.

The world exists only in the present moment.

Definition of the Law of Time for the Existence of Unit Objects

In the process of evolution from birth, through the past, to the present, and into the future, a **Unit Object exists only in the moment of "Now."**

Specifically:

A unit object begins its own time memory from the moment of its birth, the "Now" moment.

The past of a unit object is the time memory of the events of its evolution, which has passed and no longer exists.

The future of a unit object is a prediction of the state that does not yet exist, an expectation of a possible future state.

The "Now" moment of a unit object is the moment of its true existence. This "Now" moment continuously rolls forward into the future.

Looking at "time" and the common time scale of human beings from the graphical expression of the world line of unit objects in four-dimensional space-time

We use a simple and effective method to depict the world line diagram of four-dimensional spacetime. In *Fig. 2* below, we depict the world line of Li Si's life trajectory shown in *Fig. 1*. The information conveyed by *Fig. 1* can be clearly obtained from *Fig.2*. Humans have created a huge time scale, which is the BC calendar, and use it as the basis for describing everything

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related to human time. If the time T-axis line in *Fig. 2* did not exist, we would not be able to intuitively add another dimension of time to the three-dimensional space image, because humans can only intuitively express and understand three-dimensional images.

While the added timeline T-axis in the diagram is simple, it solves the problem of visually representing the worldline of an object like Li Si in four-dimensional space-time. Furthermore, if we want to express or compare the worldlines of multiple objects in one figure, we can do so clearly using our space-time axis representation as *Fig.2*. Because all Earthlings use the same timescale, this timescale cannot be altered, nor does it change with the changes of any single entity.

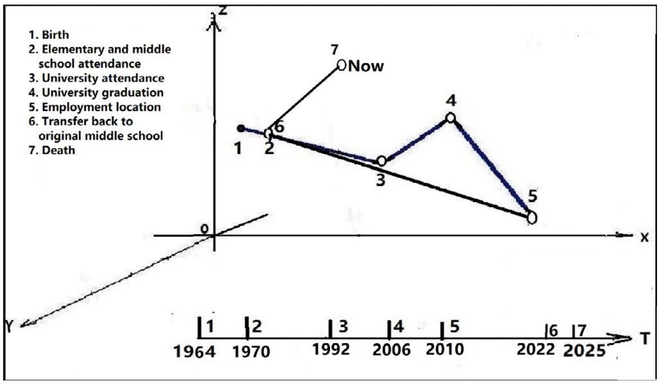

Fig. 2 A timeline diagram of Li Si's life trajectory, incorporating a common human method of recording time.

We notice that before Li Si's birth, that is, before Li Si's existing in this world, time related to Li Si, including the timeline describing Li Si, did not exist. After Li Si's birth, a record of Li Si's existence began to appear. However, this time is merely a record, using a time system invented by Earthlings to record and describe Li Si's existence. It has no impact on Li Si's existence or growth. In primitive societies, humans had no need for concepts like "year," yet society continued to exist and progress.

In fact, humans have created a vast scale of time: the BC year, and use it as the basis for describing everything related to human time. This scale is unique because it is the only one recognized by humanity. Of course, many nations have their own time scales, but they all convert to this universally recognized BC time scale.

Humanity has designated a certain date on this scale as the year 1 AD, marking the starting point for human calendar history. This serves as a benchmark for human history, and events occurring before or after this point can be extrapolated from this benchmark.

Because it is a pure scale, this scale is irreversible. This is because, from its birth, any single entity corresponds to a point on this scale. As things develop, this point moves from current toward the future (all things are and must be recorded in the same way, so there is no reversible time record), terminating at the "Now" moment. If the state of an entity changes during this period, it can be recorded in writing at the point of change of its state.

Because all people on Earth use the same time scale, it cannot be altered, nor does it change with the changes in any single entity. Otherwise, it would be impossible to use it to describe and measure all things.

A famous theory in modern physics is that time and space can be transformed, and the speed of time can be altered. However, how do you know if the speed of time in a particular space has slowed down? You still need to compare it with the unchanging time scale that accurately measures everything in the world to determine the specific, altered speed of time you are talking about. This means that the so-called specific change in the speed of time cannot be a change in the entire time scale of the world, but only related to the specific individual entities you are discussing. Moreover, it is not related to the time of these individual entities.

The Temporal Progression of a Unit Object

Consider dividing the growth process of a unit object into intervals, such as "a year" or "a day." We call the day this unit object exists "today," the day that just passed "yesterday," the upcoming day "tomorrow," and the day after "tomorrow" "the day after tomorrow." Similarly, we call the countless days after tomorrow "the future," and the time from "yesterday" to the day this unit object was born "the past." Therefore, all past time is the historical trajectory of the unit object 's past existence, a time when it once existed but no longer exists. The future is not the time when this unit object existed, but rather an unrealized expectation of its future existence. The only time that unit object truly exist is the present moment!

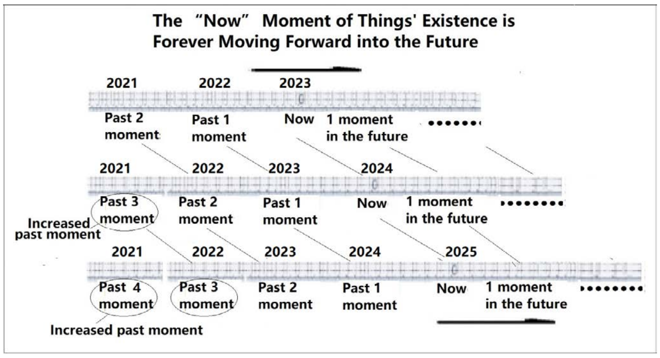

Fig. 3 The "Now" moment of existence of a unit object is progressing as things progress in "year" moments

Fig. 3 illustrates a unit object, born in 2021, progressing year by year from the "Now" moment of 2023 to 2024, one moment in the future. The unit object's overall time advances one moment into the future. The history of this unit object also adds the "past 3 moment" in the left edge of middle row in the diagram. The bottom row of the diagram shows the unit object progressing from 2024 to 2025. With each step, the "Now" moment advances one moment into the future, and the final history of this unit object adds a record of a past moment. Thus, the unit object evolves moment by moment, accumulating history. The result of this evolution is that the unit object always exists in the "Now" moment, its future is always just one possible development, never exists, and its past leaves an increasingly long historical trajectory from the "Now" moment to its birth. This is the law of evolution of unit objects.

The Growth Rhythm of Unit Objects

Linking the time of unit objects with the rate of their evolution would easily blur the distinction between time and the rate of their development. Time is a standard measure used by all humans, but the time associated with individuals varies from one object to another.

To this end, we propose the new concept of the tempo of development of unit objects to distinguish it from concepts such as time dilation. For example, if an astronaut returns younger than his twin brother who stayed on Earth after a spacecraft travel, we cannot say that time has slowed down for him (Because time is only a constant measure). Rather, we should say that his aging tempo has been slowed down by the impact of the flight.

Conversely, if there is no unchanging time scale, how can we know how fast objects change? Only by measuring with an unchanging time scale can we measure the different rhythms of objects happening and developing.

The scale of time is constant, but the paces of growth of unit objects change with changes in their environmental conditions. These changes shouldn't be interpreted as changes in the velocities of time for those unit objects. For example, if Li Si's heart rate is 200 beats per minute while running, compared to 60 beats per minute at other times, we shouldn't say that the velocity of time has changed while Li Si is running. Instead, we should understand that it's the unchanging scale of time that measures the change in Li Si's heart rate as the intensity of his exercise changes.

Wouldn't it be more reasonable to say that each of unit objects has its own growth rhythm, and unit objects are not exactly the same. Just as my heart rate is 60 beats per minute, while the average person's is 74 beats per minute, there are always some equal and some different rhythms. When certain conditions change (such as running), the rhythms of these people's hearts change. This cannot be attributed to a change in time itself affecting each unit object, but rather to the influence of something else (in this case, running). It's not that time itself has changed, but rather that the relative rhythm of the unit object has changed. When people use time to describe this change, they are measuring it on an unchanging time scale, thus knowing that the relative rhythm of each unit object is different. If time changes with the changes in the rhythms of different unit objects, then people have no accurate scale to measure the rhythms of unit objects, and therefore cannot measure the differences in the rhythms of different unit objects.

How Long is the "Now" Moment?

How long is the "Now" moment?

This is a profound question worthy of in-depth study.

The "Now" moment refers to the actual duration of a unit object's existence, and it's not easily determined. For example, if Li Si's arm is broken in a car accident at a certain minute, should the "Now" describing Li Si's accident be defined as "minute"?

We haven't figured out the relationship between the "Now" moment and the rhythm of things.

We also haven't yet figured out how to determine the actual duration of the "Now" moment for a unit object. There are profound implications here, and interested readers are encouraged to join us in this study.

Examining Concepts like Time Travel and Parallel Worlds from the Perspective of the Temporal Laws of the Existence of Unit Objects

Examining concepts like time travel and parallel worlds from the perspective of the temporal law of the existence of unit objects

The temporal law of the existence of unit objects tells us that a unit object exists only in the present moment. If we define "Now" as a day, then yesterday no longer exists, tomorrow has not yet arrived, and we exist only today.

Time travel, parallel worlds, and traveling back to the past, among other concepts, lack sufficient basis.

I now ask those who support concepts like time travel and parallel worlds to perform a simple scientific experiment to prove their point:

Find a way to travel back from "Now" to a previous moment. Send any person or object from today back to yesterday. Or, travel from this second back to the second immediately past. If such an experiment can be carried out, then myths like time travel and time dilation can be considered fact. However, if even a simple return to a previous moment is unattainable, then there's no point in promoting them under the guise of science!

The thought of being able to travel back in time for just a moment holds immense fascination for humans.

If Li Si gets into a car accident today, let him go back to yesterday and start over. If Li Si breaks his arm today, he can go back to yesterday and continue using it. If I could travel back in time every day, wouldn't that keep me young and be happy forever?

In 2018, the American Physical Society's prestigious journal, Physical Review, published an article titled "Time travel using degenerate metrics." This article explores how time travel can be achieved in this named No.1 academic journal.

Unit Object Flow

A **unit object flow** is a flowing group composed of a large number of identical unit objects. Rivers, starlight, and so on are examples of unit object flows. Rivers are composed of a large number of flowing individual water molecules, while starlight is composed of a large number of moving individual photons. Unit objects and unit object flows are two complementary concepts that we define.

Previous research on unit object flow has been largely incomplete. Unit object flows refer to groups composed of many units. Previously, unit object flows were studied and discussed from a holistic perspective, treating them as unit objects, leading to some debatable arguments.

We specifically define unit objects and unit object flows to study individual objects and groups of similar objects separately, in order to further understand the nature of existence and time.

World Line Graphic Expression of Unit Object Flow: The Propagation, Existence and Historical Trajectory of Unit Object Flow in Spacetime

The world line graphical representation of unit object flow is completely different from the world line representation of the aforementioned unit object.

Fig. 4 below shows observations and studies of multiple sample photons emitted by StarA at different times. StarA in the figure continuously emits photons into the surrounding space. The photons emitted at different times form a vast ball of light centered on StarA, filled with countless photons. Four sample photons are selected and are named Photon-150, Photon-100, Photon-50, and Photon-Now.

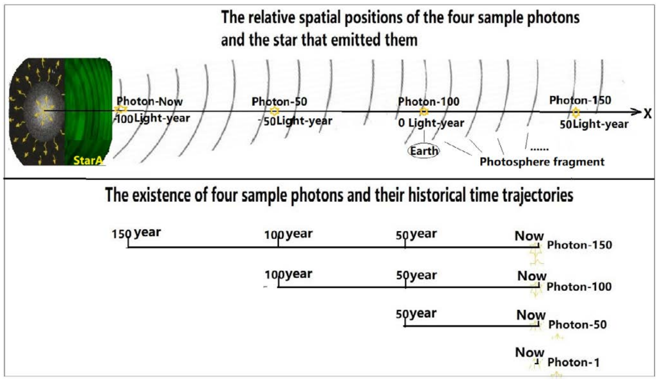

Fig. 4 Preliminary study of the distance and historical time trajectories of four samples of a unit object flow (here, the photon stream of StarA).

The image on the left of the upper frame in Fig. 4 represents a star A located 100 light-years from Earth. Assuming that star A is 200 years old, within the ball of light it continuously emits in all directions, draw an X-axis in one direction. This axis is densely packed with photons emitted by StarA at various times. The Earth where is the observer's position, is used as the coordinate origin. Four of these photons, emitted at different times—150 years ago, 100 years ago, 50 years ago, and now—are selected as sample photons and are named Photon-150, Photon-100, Photon-50, and Photon-Now. The upper frame of Fig. 4 shows the evolution of Photon-150's position. When this photon was emitted from StarA 150 years ago, it was at Photon-Now's position in the diagram. Fifty years later, it was at Photon-50's position, and Photon-100 appeared at Photon-Now's position, and so on. Finally, these four sample photons are now at the "Now" positions shown in Fig. 4.

In this unit photon flow, each unit photon rolls forward from the present moment to a new position at the next moment, while the old position is occupied by the later moment emitted photon from Star A. That is, after the unit photon rolls forward to the next position, the old position is filled by the later emitted and arrived unit photon. This is totally different from the progress of a single unit object.

The historical trajectory time of the unit object flow is shown in the time trajectory diagram in the lower frame of Fig. 4. For each unit photon in the unit photon flow, its historical trajectory and "Now" moment of existence are no different from those of normal unit object events. From this figure we can see that it is not easy to combine time and distance together to draw in one time-space figure. Interested readers can refer to our try, and other related work (1-11).

Compare the above description in Fig.4 to the famous light cone in Fig.5 below:

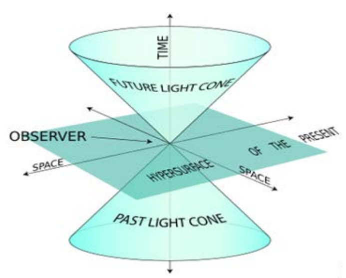

Fig. 5. The latest image of a light cone from Wikipedia (11)

Simply compare this diagram with the previous unit object flow diagram 4, where the observer is at the "present" position, namely, Earth's location. For StarA observed from Earth, only the light emitted by StarA 100 years ago can illuminate Earth at the "present" moment; other past and future light cones do not exist. Of course, there are many problems with this, so we won't address them one by one.

A further point requires discussion: these descriptions are all about the "light" emitted by celestial bodies, not the celestial bodies themselves. A celestial body cannot move at the speed of light. So, focusing only on "light" without discussing the celestial body that emitting this "light" cannot correctly describes the relationship between space and time. What is the significance of the light cone?

Three-dimensional light images, such as the light cone, cannot represent anything in the universe that is not "light." All light originates from a light source. Does studying light mean that we can study all light sources? What if Li Si doesn't emit light?

Compare the above description to the orbit of the unit Earth around the Sun in Fig. 6 below. In its orbit around the Sun, the unit Earth always exists only at a single point on its trajectory. But the Sun's countless photons always filled with the whole surrounding space.

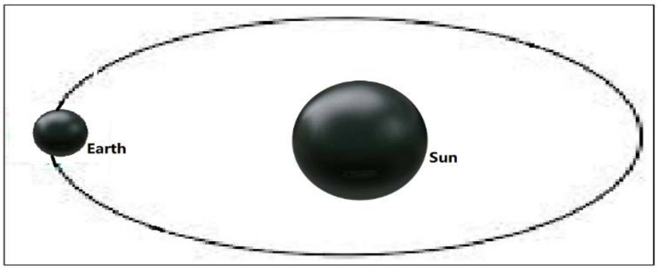

Fig. 6 There is only one Earth at any given moment in the Earth's orbit around the Sun

This is the fundamental difference between unit objects and unit object flows: a unit object has only one real moment of existence, namely "Now", while a unit object flow is composed of a large number of unit objects that exist at every moment, emitted at different times and last very long time.

By the way, talking about the spacetime, the space is an empty location host everything. How can an empty space have time? The unit object located in the space has time, not space itself has time.

The Speed of Light of Celestial Bodies from the Perspective of Unit Object Flow

Let's assume that the speed of light measured in the laboratory is correct and a constant.

But can we guarantee that the measured speed of light from celestial bodies after traveling over vast distances of tens of millions of light-years will remain constant?

The focus here is on the measurement of the speed of light from celestial bodies. What is the observed speed of light obtained by observing celestial bodies? Therefore, we also need to understand a little bit about the measurement mechanism of astronomical telescopes.

The total time involved to output an image of a celestial object is counted from the time the celestial object emits its light to the moment when a computer resolves an image of the object

In modern astronomical observations, information from extragalactic galaxies and distant celestial bodies must be

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received by various telescopes, and most of them must be processed by computers before observation results can be obtained. These results are basically presented in the form of images.

The **observed image** is the effective output information obtained by the telescope after receiving the information light from the celestial body provides, and its processing by computer. The time used for resolving the observed image is the total time the entire process takes.

Because photons emitted by distant celestial objects cannot be perceived until they pass through a telescope, we are essentially unable to directly measure the far away speed of celestial image formation. Therefore, while we can accurately measure the time from emission to reception of a single photon or a group of photons within a finite period of time (e.g., a day, a year, a decade, etc.) in the laboratory, we cannot directly and accurately measure the total time it takes for the light emitted by a celestial object to reach the computer and output an image. We do not measure the total time T required for the final information to be received by the telescope and processed by the computer. If this time T changes, the redshift value of the celestial light, the observed speed of starlight, and so on will also change (Fig. 7).

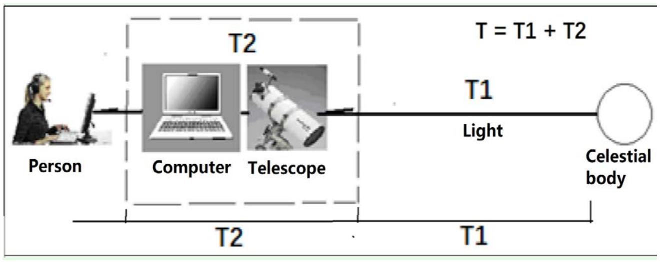

Fig. 7 The light from the celestial body reaches the telescope after T1 time, as input information, and after T2 time processed by the telescope and the computer, the image is finally output at time T.

In fact, any celestial information must be transformed into an image that can be understood by humans before it can be truly "seen". The time T2 spent by the telescope and the computer framed by the dotted line is very important in the analysis of the light propagation speed of the celestial object.

In *Fig. 7* below, T1 is counts as the first batch of photons emitted from the celestial body, and travels at the speed of light until they reach the telescope. T2 is the time required for the telescope to receive subsequent batches of photons — if integration is required — plus the time required for the computer to receive, process and resolve, as output, the incident light information.

In the following discussion, for the sake of simplicity, we simply mention that it takes total time T for the telescope to process the light, which includes the time used by the telescope and computer.

In astronomy, so far, when analyzing information related to the speed of light propagation of celestial bodies, the time T2 spent by the telescope has never been considered. But in fact, any celestial information must be truly "seen" after being transformed into an image that we can understand. The time T2 spent by the telescope and the computer framed by the dotted line is an important variable in analyzing the light propagation speed of a celestial body. Recall as well that only by using telescopes can we determine the value of the redshift that the celestial object exhibits.

In this way, light is emitted from the celestial body, processed by the telescope, and finally resolves as useful information or a visible image. The total time required can be simply calculated by the following formula:

$$T = T1 + T2 \qquad (1)$$

The total time T required for this transmission is not the same as the time T1 required for the photon to travel from a galaxy to the telescope.

T is the total time from when the light starts traveling to the moment the computer resolves, as output, a visible image. T1 is the time it takes for the photon to travel from the celestial object to the telescope. The total time also includes T2, which is the time spent by the telescope and computer in resolving useful information or a visible image.

We can describe this situation in another fashion. For example, a company that provides courier service sends out a parcel to a customer, and 24 hours later the customer receives the parcel. The delivery event has ended, and the courier company's work has been completed. But the client has not yet received in hand the desired product; it is still wrapped. This stage is equivalent to T2, the photon from the celestial object having arrived at the telescope, but the photon arrival information has not been extracted into an image or other useful information for storage or use. To calculate the full amount of time it takes for the process to conclude, one must also consider the time it takes to unwrap the package.

If the customer immediately opens the package after receiving it, then the process consumes a relatively short period of time, perhaps only a few seconds. In this guise, the time it takes the customer to open the parcel is equivalent to the time it takes the observer to extract the information required from the photons received. This holds, of course, for any number of photons that reach the telescope, and that satisfies the minimum amount of energy required to process, resolve, and output an image or images. Now the time it takes to process an image of a celestial object can be quite brief, but some time is involved.

Similarly, when processing telescope optical information from afar, the observer can encounter a delay, perhaps because the information was too weak for the telescope to respond to, requiring more time given to observation. In this respect, uncertainty enters the process — the time T2 it takes to obtain the image takes longer than expected.

The sensitivity of the telescope to light also greatly influences T2. The more sensitive to light a telescope is, the shorter the time it will take for the telescope to resolve an image of the celestial object.

For telescopes with the same sensitivity, the attenuation effect of celestial distance is more obvious. This does not affect the time T1(the time it takes for the light to travel to the telescope), but it does influence whether the telescope can adequately respond to the photons it captures in time; that is, T2.

Therefore, including T2 in the factors that affect the red shift value can explain the large variability in the Hubble constant.

As shown in *Fig.7*, the total time it takes, from a star emitting light to its resolution, as an output image, by a telescope, is called the **Image Transmission Time T** of the celestial light. It consists of two parts: T1 and T2. T1 is the time it takes starlight to travel from the star to the telescope. T2 is the time it takes to process the image the telescope receives and the computer works up. This, the main object of our study, helps us to understand possible new causes of redshifts exhibited by celestial bodies. To obtain what we need here, we mainly consider the calculation of T2 below.

The calculation of the propagation time of this image takes into account the following conditions:

A) Within a limited time interval, only a limited number of photons can be emitted by the celestial bodies, so it can be considered that the celestial body emits light waves in batches;

B) During the propagation process, starlight weakens in intensity, according to the attenuation law, measured by the inverse square distance between the telescope and the star.

The above two points are to consider the changes in light intensity that occur when the celestial light transmission reaches the telescope.

C) The telescope requires a certain number of photons that accumulate to a defined level to initiate a visible response.

D) When the photons entering the telescope are too weak for the telescope to respond to, astronomers commonly attenuate their observation time to suit their needs, with adequate response times varying with different telescopes.

Obviously, after the light of a celestial body reaches the telescope, the image transmission speed changes with **the image processing time, and the image processing time changes with the sensitivity and response time of different telescopes.** By examining the entire process of starlight from emitting to the resolution and output of images, we have obtained the original rough mathematical model of the new method of calculating the cosmic redshift. This new model contains Hubble's law and can explain phenomena that Hubble's law cannot.

There is no need to argue about the speed of light, because the speed of light is set. However, **neither the speed or light nor an alteration in the frequency** of light is of concern here. Rather it is an alteration **in the intensity** of light that causes variations in redshift values. This perspective obviously differs from Hubble's law, which is modeled after the Doppler effect. It is a new way for us to explain the phenomenon of cosmic redshift observations – and follows the same principle that red shift value changes are due to the weakening of the light intensity in the K-Correction that astronomers use as a matter of course.

In modern astronomical observations, the observation integration time is used arbitrarily, but the used integration time is not included in the processing results, and these are directly classified into redshift values. In fact, the farther the celestial body is, the weaker the light intensity transmitted to the telescope, the larger the observation integration time required by the telescope, and the larger the redshift value. Here, the changing of the redshift value is not caused by the receding movement of the celestial body C, but is caused by the variation of the distance between the telescope and C. The variation of the distance causes the change of the input light intensity, thus changing the redshift value.

Observations, such as those made by the Hubble telescope, were used to measure the redshift value of distant celestial bodies. Did NASA scientists consider in their calculations the time it took the telescope to process the photons received into visible images formed by computer? No.

Is there a possibility that the red shift is caused by the integration time required by the telescope and the output (an image) by computer? Of course there is. Perhaps the redshift exhibited by celestial objects is not caused by their recession from an observer in an ever-expanding universe, but by the telescope itself in its processing of weak information.

We will continue to discuss all the details related to.

The above shows that the speed of celestial body observation images slow down as the distance between the telescope and the celestial body increases. In fact, the time lag of the information about the celestial body obtained when people observe the celestial body with a telescope is also called the speed of the unit starlight flow of the celestial body slows down. The observation speed of the starlight of the celestial body received by the telescope is completely different from the constant speed of light mentioned by Einstein. In fact, it is not entirely appropriate to call this speed the starlight observation speed of the celestial body, because the observation process not only involves the relative motion of the celestial body and the earth, but also the output observation results caused by the differences in the observation instrument itself. The time for the output observation results of the observation instrument with high sensitivity is shorter. Therefore, the factors including the observation instrument should also be considered in the observation results obtained from the telescope. (4) discussed this issue in great detail and gave the complete relevant mathematical model. Interested readers can refer to it, or I can write it into another related paper discussing mathematical models.

The Difference Between Unit Object and Unit Object Flow

A unit object flow is composed of multiple similar unit objects moving continuously forward.

Unit photons emitted by celestial bodies, and unit water molecules in rivers are typical examples of unit object flows.

If the distinction between unit objects and unit object flows is not clearly be understood, it is easy to confuse the two concepts and make incorrect interpretations of certain phenomena.

When we view a celestial body as a unit object, it obeys the laws of time that govern the existence of unit objects, existing only in the "Now" moment. However, when we consider it in conjunction with the unit photon flow it emits, a shift occurs that confuses our senses and thoughts. The light emitted by a celestial body can persist for billions of years, so its unit photon flow also exists for billions of years; yet each individual photon still exists only in the "Now" moment.

Conclusion

The idea that a unit object exists only in the "Now" moment is a fascinating one. It allows us to view many issues from a different perspective and to understand the essence of time and existence. From an application perspective, we also briefly proposed to explain the phenomena of observed star light speed (this is the actual star light speed obtained by people), redshift, etc. from the perspective of unit object and unit object flows. Our initial research is only preliminary and crude. We look forward to seeing more follow-up research about this topic.

Competing Interests

Authors declare that they have no competing interests.

Data and Materials Availability

All data are available in the main text

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