

[Click PART B.10.3. For
Explanation of Title Page Photo.](#)

LIGHT:

Einstein

$$E=mc^2$$

VS.

Newton

$$G = (m_1 \times m_2) / d^2$$

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LIGHT:

Einstein vs. Newton

A Challenge To $E=mc^2$ and Factual Observations On Gravity and Light.

By

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Subjective to Future Revisions

| | | |
|----------------|--|---------|
| INDEX: | PREAMBLE | Page 3 |
| | INTRODUCTION To Einstein/Eddington Problem | Page 4 |
| PART A. | E = mc^2 IS IN CONFLICT WITH SCIENTIFIC FACTS | Page 4 |
| | 1. A Primary Concern | Page 4 |
| | 2. Multiple Factors Affecting Energy | Page 5 |
| | 3. Inherent Energy in A Cup of Coffee | Page 5 |
| | 4. Scientifically Accepted Principles | Page 5 |
| | 5. Debunking Of Specific Einsteinian Concepts | Page 7 |
| PART B. | SCIENTIFIC FACTS: LIGHT RELATING TO GRAVITY | Page 7 |
| | 1. Identification Of An Issue | Page 7 |
| | 2. Light Passes Through An Opening In An Object | Page 7 |
| | 3. Light Passes Around An Opaque Object | Page 9 |
| | Example 1; Example 2; Example 3 | |
| | 4. Light Passes Through A Transparent Object | Page 11 |
| | 5. Illustration And Explanation | Page 12 |
| | 6. Light Passes Toward An Opaque Object/Mass | Page 14 |
| | 7. Simple And Complex Every Day Observations | Page 15 |
| | 8. Verification Tests | Page 16 |
| | 9. The Rainbow | Page 17 |
| | 10. Laser Light | Page 19 |
| | 11. Electromagnetic Forces And A Challenge | Page 20 |
| | 12. Critique on Eddington's Observation and Conclusion | Page 21 |
| PART C. | CONCLUSIONS On Light And E = mc^2 | Page 23 |
| | 1. Firm Conclusions On Light | Page 23 |
| | 2. Tentative Conclusions On Light | Page 23 |
| | 3. Valid Conclusions On E = Mc^2 | Page 24 |
| | 4. Invalid Conclusions On E = Mc^2 | Page 24 |
| | 5. The Worst 20th Century Scientific Blunders | Page 24 |
| | 6. Philosophical Implications | Page 24 |
| PART D. | CONCLUSIONS On Light, Gravity, And The Universe | Page 25 |
| | 1-3. Genesis Of The Universe: A Summary Description | Page 25 |
| | 4. Genesis Of The Universe: A Schematic Diagram | Page 26 |
| | 5. Gravity Is The Engine Of Rotating Objects | Page 27 |
| PART E. | FAMOUS LAST WORDS | Page 28 |

$$E = mc^2?$$

Preamble.

P.1 Facetious Scenario:

A teenage boy and girl sit on a sofa, at opposite ends (five feet apart). Every five minutes, they reduce the distance between them by one half. How long before they touch?

P.2. Three Scientific Questions:

1. Can space be infinitely dissected – small?
2. Can matter/mass be infinitely dissected – small?
(Since atoms are not the smallest substance, can their protons, neutrons and electrons be dissected?)
3. Can time be infinitely dissected – small?
(N.B.: Time is not really an entity: Time is a systematic correlation of moving mass in space.)

P.3. Questions of P.2. raise the question: Can mathematical reality be actual material reality?

If so, the so-called “scientific” premise: “Reality must be observably verifiable,” must be abandoned, for on the endless continuum of space, matter and time, very little is verifiable to humans, which proves: Of ultimate importance is not the humanly observable reality, but a reality, which is beyond knowledge, maybe even the tradition, identified as the spiritual realm of God, particularly the Biblically revealed divinity, the only true God.

P.4. Our understanding of physical matter and space has grown beyond the imagination of our ancestors, yet the closer we get to understanding matter and space, the more we must acknowledge, that regardless of advances and discoveries, the gap between our intellectual understanding and absolute truth, is as unfathomable as ever. The more we discover the seemingly endless complexity of our universe, the more we must admit that even the best scientific minds have passed the threshold of scientific verifiable knowledge. At best we are entertaining theories, in some cases personal Einsteinian scientific pipedreams.

P.5. Matter and space may be subject to physical laws, even be predictable according to laws, yet time is as elusive as ever. The modern concept that time is a commodity (time is money) diminishes our understanding of time. We see the entire universe, in a straightjacket called time. We are so focused on time that we no longer see the eternal, which is beyond time.

P.6. Yet philosophical search for truth – true science leads us to appreciate ultimate truth, which never can be rescinded or altered, which is not subject to revision. This absolute truth, to be truth, of necessity must be from a source that is greater than narrow-minded flawed human brains, which are limited in time, suffer from megalomania and obstinately reject the Eternal.

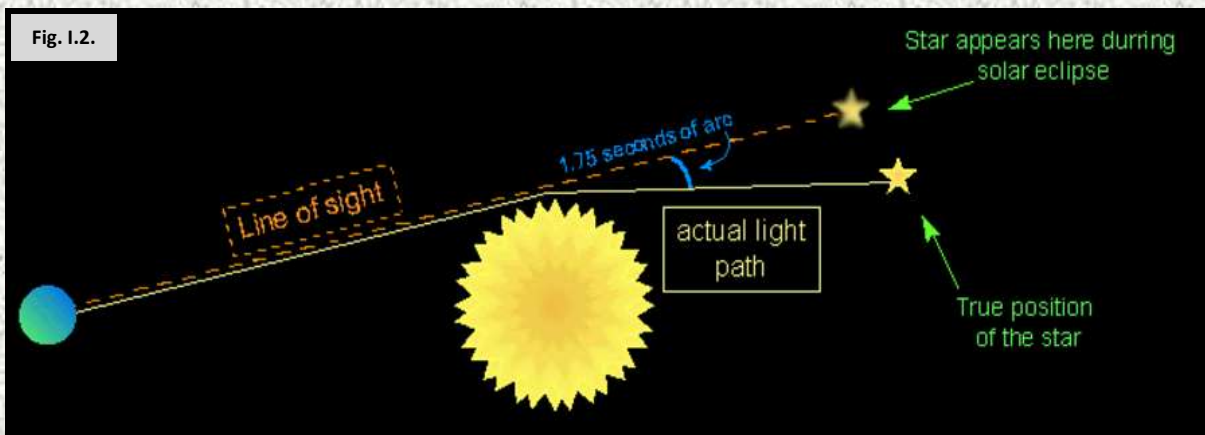
P.7. The truth is not something that we formulate or define. Scientific truth is eternally true; and eternal truth is scientific. Truth is an ever-existing reality, which can be infinitely researched and dissected ad infinitum, without ever diminishing or destroying it.

P.8. Scientific truth supersedes human realms of mind. The universe is so big, like its creator, it is beyond observation and comprehension. At best we may be privileged to discover a part of truth. There is only ONE, who can say, as He did, “*I AM THE WAY, THE TRUTH AND THE LIFE.*”
(John 14: 6)

$E = mc^2?$

INTRODUCTION.

- I.1. **Einstein was a theoretical physicist, which is contradictory, for physicists deal with physical facts.** At age 26, within one year (1905), with theoretical ‘thought experiments,’ not physical verification, no proof, Einstein charted his theories of the universe. As may be expected, Einstein’s was not taken serious. Only after Eddington’s photos of the 1919 solar eclipse, did Einstein attain notoriety. Many are still trying to prove that Einstein was right, which is not really a sign of objective science. Relativity and $E = mc^2$ may have been helpful to Einstein and others in early theoretical considerations, but $E = mc^2$ and relativity is in urgent need to be re-aligned with the observable repeatable physical facts, presented herein.
- I.2. **An Independent Summary of Eddington’s Observation, Figure I.2.** (cf., Part B. 12.)
N.B. **1.75 seconds of arc** is $.000486^{\text{th}}$ of 1 degree; whereas sketch shows ~ 10 degrees of arc, which is an exaggeration of $(3,600 \times 10 / 1.75) 20,571$. In other words, the \pm factor of error in observation is not in consideration; the Eddington/Einstein conclusions are unsubstantiated and meaningless.



- I.3. **Eddington, the atomic bomb and a television fantasy, “Beam me up Scotty,” publicized $E = mc^2$.** But in respect to $E = mc^2$ and relativity, Einstein admirers warp physical scientific laws of mathematics and geometry. They ignore scientific laws and observable facts that are presented herein, which illustrate irreconcilable inconsistencies between Einsteinian conclusions and facts.

PART A. $E = mc^2$ IS IN CONFLICT WITH SCIENTIFIC FACTS.

- A.1. **A Primary Concern: The concept that mass, according to $E = mc^2$, has latent energy defies science;** it contradicts established physical principles, the scientific law: “Energy can be neither created nor be destroyed; however, it can change from one form to another.” Energy, at rest in mass, is not a force, like electromotive force and the force of gravity, which have the “ability to perform work.” Energy is an entity and a factor to be considered, only when it actually performs work – when it is transferred. For mass to have energy, to be able to do work, mass must first be put into motion. In other words, mass, which is at rest, absorbs energy. For $E = mc^2$ to be of merit, the \pm factor of E must be acknowledged. Contrary to Einstein, in $E = mc^2$, E has a negative value, mass requires energy to put m into motion. Contrary to public misconceptions:

$$E = mc^2 \text{ actually is: } E = (mc^2) \text{ times } -1$$

A.2. Multiple Factors That Affect The Energy Of Moving Substances, Including Light.

The amount of energy inherent in an object, a substance – mass, is the cumulative product of a multiplicity of factors and vectors that are proportional to matter_m, size_s, density_{dn}, temperature_t, direction of movement_{dm}, speed_{sp}, and electromotive forces_{emf}, even location_{loc} relative to any other entities, which exert or exerted extrinsic energy_{ex}. In short:

E comprises $E_{(m, s, dn, t, dm, sp, emf, loc, ex)}$

A.3. Inherent Energy In A Cup Of Coffee: An Ordinary Application Of Energy.

1. The energy seems threatening highly, if the coffee is boiling hot.
2. The energy is harmless and possibly useless to its owner, when the coffee is cold.
3. The energy may be high, if the coffee cup falls from a window sill, off a high building.
A precise calculation of the energy of this falling coffee is utterly complex, considering:
 - a. The magnetic field of each falling dipolar H₂O molecule in the coffee interacts with the magnetic field of the earth, even the magnetic fields around the conductors, which induce an electro-magnetic field (be it residential appliances, or adjacent 100,000 volt transmission lines).
 - b. Said interactions are directly linked with the speed of acceleration, as the speed of the falling coffee is caused to increase geometrically by the force of the earth' gravity, at a rate of 27 feet per second.
 - c. Said above interactions depend even on location; for respective to location, the falling coffee in the cup would rotate, like water in a flushed toilet bowl, clockwise, or counterclockwise, relevant to latitude in Southern and Northern hemispheres.
4. Additional factors, of which the ordinary lay observer is likely to be totally oblivious:
 - a. Speed of earth's rotation on its axis (at the equator is 1,666 km per hour) is a factor.
 - b. Speed of rotation around the sun at approximately 30,000 meters per second is a factor.
 - c. Spiraling towards the center of our galaxy is a factor.
 - d. Our galaxy moving toward collision with another galaxy is a factor.
 - e. The expansion of the universe is a factor, and other as yet unknown factors.

Einsteinian thought, $E = mc^2$, ignores all of the above, and contends that the energy of light is in a unique idiotic category of its own, relevant to an observer's personal vantage point, irrespective of factual universal considerations. Consequently, Einstein can speak of enigmatic warped Space-time. (cf., Note D.4.2.)

A.4. List Of Scientifically Accepted Principles: Laws That Govern Energy Of Physical Realities:

Energy is neither created nor destroyed, but is transferable and may be transmitted from substance to substance. Such transferring energy comprises four main categories:

1. **Physical energy** comprises the interplay of mass, gravity and motion. (Newtonian Laws)
 - a. **Energy is released** as objects approach each other, as mass meets mass.
 - i. Only convergence, that is, colliding things, 'coming together' releases energy.
 - ii. E.g., Turbines capture the energy of water falling towards the earth's center of gravity.
 - b. **Energy is required** to separate objects from object, mass from mass.
 - i. Separation, moving things apart, splitting mass, requires energy.
 - ii. E.g., The energy of gun powder is required to expel a bullet from a gun.
 - iii. E.g., Much energy is required to have "lift off," separation from earth's gravity.
2. **Electric energy** is regulated by electro-motive force of magnetic charges (Lorentz Force Law),
 - a. Right Hand Rule of Magnetism.
 - b. Left Hand Rule of Magnetism.
 - c. A deficiency of electrons, i.e., an electropositive charge.
 - d. A surplus of electrons, i.e., an electronegative charge.N.B., Solitary electrons in "s" electron orbitals determine magnetism of atoms and molecules.

A.5. Debunking Of Specific Einsteinian Concepts.

$E = mc^2$ is diametrically opposed to above summarized universal scientific physical laws; thus assumptions, based on $E = mc^2$, are flawed theoretical, fictitious theater: “*Beam me up Scotty.*”

1. **The introduction of Einstein’s original statement on Special Relativity** (Zur Elektrodynamik bewegter Körper, Electrodynamics of Moving Bodies, 1905) proposed to solve an apparent problem, which Einstein claimed to resolve by imaginary solutions. But the problem, introduced by Einstein, is not a problem at all; for it has a perfectly scientific solution according to the Right and Left Hand Rules of Lorenz Force Law, which Einstein obviously did not consider.
2. **An insurmountable Problem:** If $E = mc^2$ would be true; if mass could be changed to light, which supposedly has no mass, then “*m*” would have to become zero. If “*m*” could be changed to the energy of light, if “*m*” could be reduced to zero, then the mathematical formula would self-destruct for $0 * c^2 = 0$. If it were true that mass can cease to exist and be changed into energy, which according to $E = mc^2$ may be reconverted into mass again, then such regenerated mass would have to be regenerated “*ex nihilo.*” What is the definition of this mass, which supposedly is produced ‘*out of nothing*’ by *E*? What is the constituent of this reorganized mass? As far as we know, radiating energy of light is primarily heat, and an enabler of various electro-chemical reactions, notably photosynthesis, and the initiation of a flow of electrons by photoelectric cells.
3. **Einsteinian thinking considers “Space-time” as a reality**, whereas time is neither entity nor substance. According to scientific laws, the universe comprises ever progressive interactions, which have a history, but no memory. The only things that matters in the physical universe, are predictable applications of invariable law and order. The universe has no memory; it has no future concerns; we have a memory, and may have reason to fear the future. Einsteinian Space/Time is an exclusive product of the human mind. (cf., Note D.4.2.)
4. **Einsteinian thought experiments are ludicrous non-scientific nonsense**, which if taken seriously would unravel the universe. For if it were true that time (i.e., passage of events) is measured differently by a moving object than by an object at rest, then planet Earth, which orbits around the Sun (at approximately 30,000 meters per second) would never return to its annual starting point; then the earth would eccentrically spiral out of synchronicity with the earth’s age-old consistent orbit around the sun. Similarly, the moon (earth) would be at a different age relative to the earth (sun), for the moon (earth) travels around the earth (sun) at great speed, when the earth (sun), relative to the moon (earth), is at rest. (Relativity, if consistently applied, is utter nonsense. Cf., Note D.4.2.: Time could be retarded, only if the collective universe would artificially and collectively shrink; and time could be advanced, only if the collective expansion of the universe could be collectively advanced.)
5. **Einsteinian thinking is self-destructive, for it does not recognize universal law and order.** It insists of viewing everything from an opinionated, personal, self-centered perspective. It even warps and denounces Euclidean geometry, where a triangle comprises the shortest distance between three points – all because Einstein and others, do not recognize the true characteristics on light, as illustrated next in PART B.
6. Certainly self-respecting scientists are aware of the above facts. Thus promotion of $E = mc^2$ may be (1) deliberate disinformation by Nuclear Power Brokers, (2) at best, $E = mc^2$ is a television fantasy, “*Beam me up Scotty,*” or (3) a mere useful ploy by university professors to secure funding for theoretical research, in order to gain notoriety
7. **$E=mc^2$ and Relativity in Philosophical Perspective – A Different Kind of ‘Thought Experiment:’**
From a human perspective, the universe is unimaginably complex, large beyond description, yet detailed beyond finding out; and everything moves at incredibly fast speeds (cf., A.3.4. “Cup of Coffee.”); also, time, energy, space and numbers seem to be without limit. To comprehend the evolving universe, to make independent objective all-inclusive observations of its history and true conclusions about its future, an observer needs all the attributes of the self-revealing Biblical God; the observer would have to have absolutely no limitations, be omniscient, and have the omnipotent ability to be eternally omnipresent.

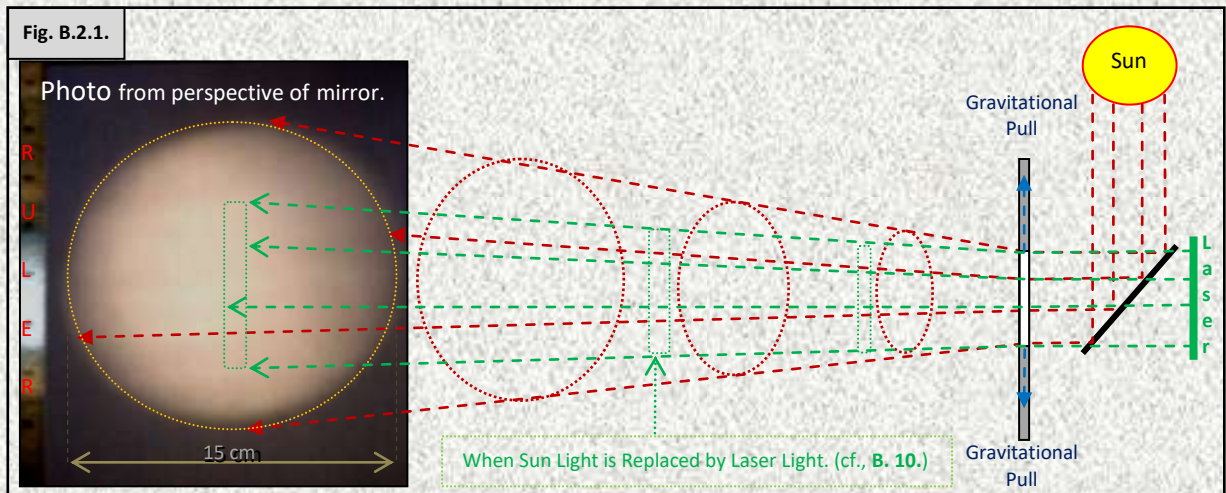
PART B. SCIENTIFIC FACTS: LIGHT RELATING TO GRAVITY – NEWTON’S LAW.

B.1. Introductory Identification Of The Issue, And Preliminary Conclusion.

When the author was a child (<10), he made a fascinating discovery. He was in the hayloft of a barn. Direct sunlight entered through narrow cracks between roof tiles. He was dazzled by his observations. Why was the beacon of sunlight, which entered through a narrow crack in the roof, transformed into a perfect circle on the floor? Why did the dust particles in the hayloft, like barn flies and jumping beans, dance in the beam of light? After a lifetime of observations, the author concluded: *“Light responds to the force of gravity and exerts a gravitational force upon itself, because light comprises sub-atomic particles, whose gravitational force, which when in free-fall, like a raindrop, a star, a planet, traveling through space, results in bundling, spheres with the smallest possible surface area.”* Presented below are the author’s observations and specific studies on light.

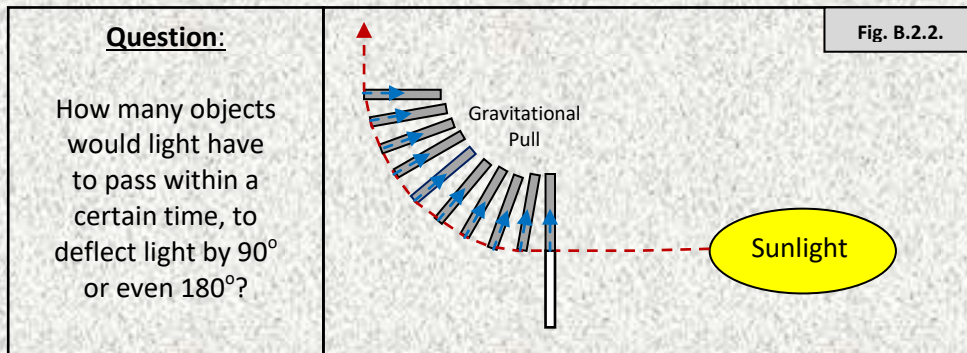
B.2. Interplay of Gravitational Forces, when light passes through an opening in an object.

After six decades, the author duplicated a controlled “barnyard experience” (cf., B.1.) The author cut a rectangular (2 by 25 mm) opening into sheet metal. He secured the sheet metal vertically. With a mirror he reflected sunlight on to the sheet metal opening. He measured off a distance of 50 feet (15.25 m), where he placed a sheet of paper, to take a picture of light coming through the opening.



Note:

- i. Light from sun / mirror is attracted / defused by the gravitational force of sheet metal.
- ii. Within 50 feet (15 m) the cross section of a light beam is altered by its own inherent gravitational force from being rectangular, to elliptical, to circular.
- iii. Within 50 feet (300,000,000/15 meters, i.e., 1/15,000,000 seconds) a beam of light can be deflected, in part, by 3 inches (7.5 cm).
- iv. But the deflection differs from Huygens Principle, for as many other observations indicate, the correct emphasis is not on ‘deflection from’ but ‘gravitation to.’



Conclusion: Mass/gravity of any substance interacts gravitationally with the substance of light.

B.3. Interplay Of Gravitational Forces, When Light Passes Around An Opaque Object.

B.3.1. Example 1: Straight Lines, such as wires, deflect light and effective magnify.

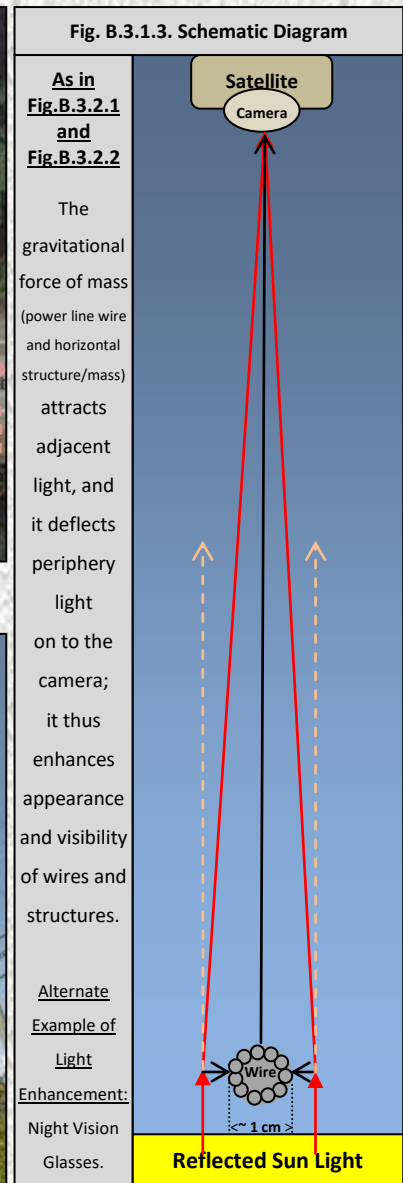
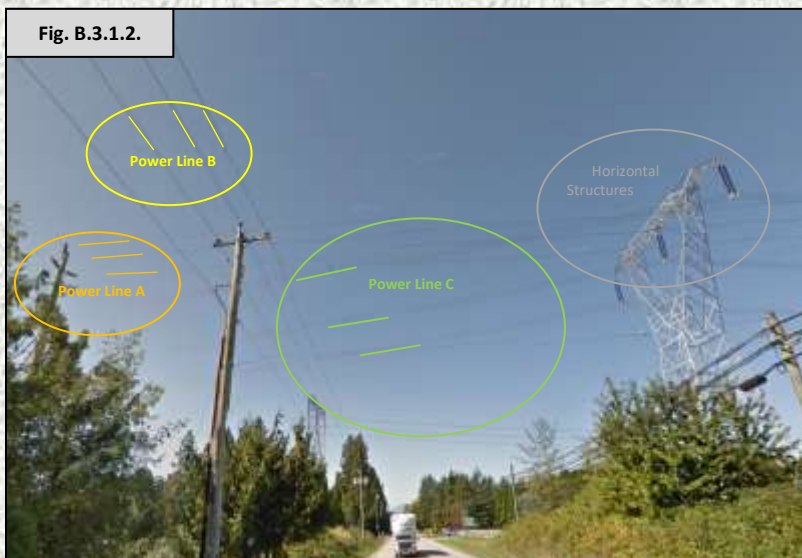
The author used to assume that human vision connects ‘missing links’ between visible points that are virtually in a straight line, because he observed that objects, like electric power lines, though too small in diameter to be seen, nevertheless, can be seen at great distances. When testing this concept, by scrutinizing Google Satellite Images, the author noticed that a camera simply captures what it objectively ‘sees.’

- a. Thus, because of the magnifying effects of bent light (as also subsequently illustrated (Fig. B.3.2.1., and B.3.2.2.)), very small objects, which are in a relatively straight line, like electric transmission lines, can make clear pictorial impressions, even at extreme distances. (Height of satellites: 100 to 1,400 km).
- b. But objects, which have irregular outlines, like leaves on branches, irregularly diffuse the magnifying effect, which obliterates their outline. This blurring effect makes them indistinct and therefore less noticeable.

1. Google Satellite Image, 52469 Yale Road, Rosedale, B.C. (From > 100 km above ground level)



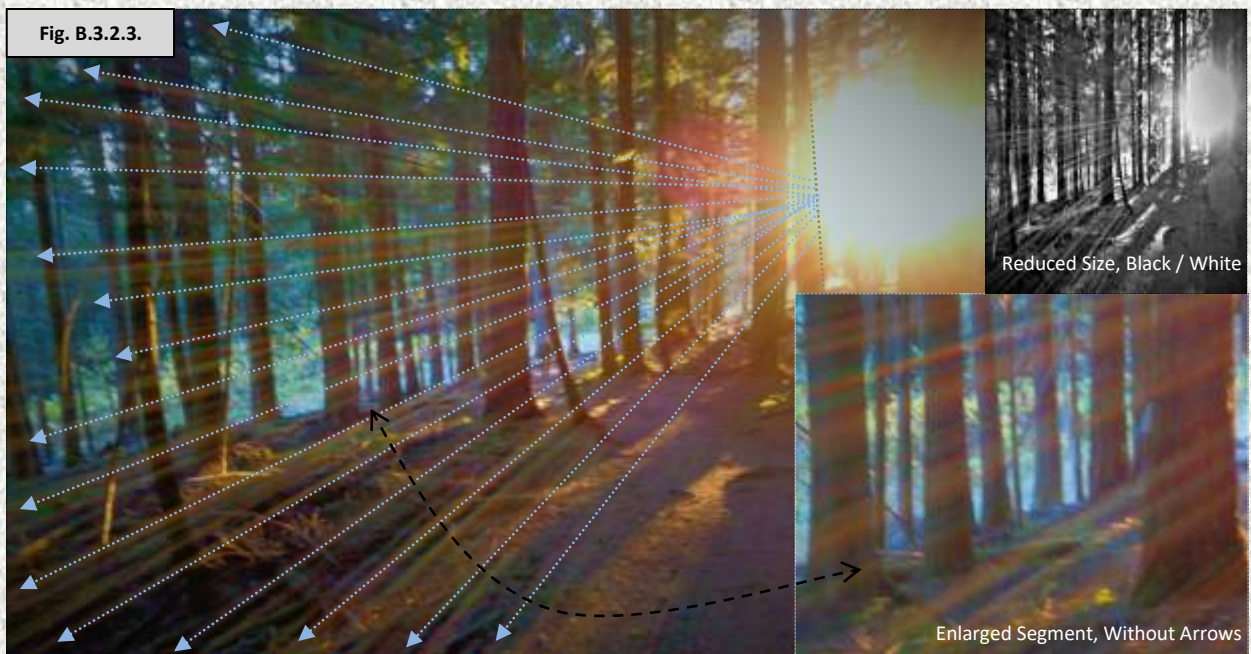
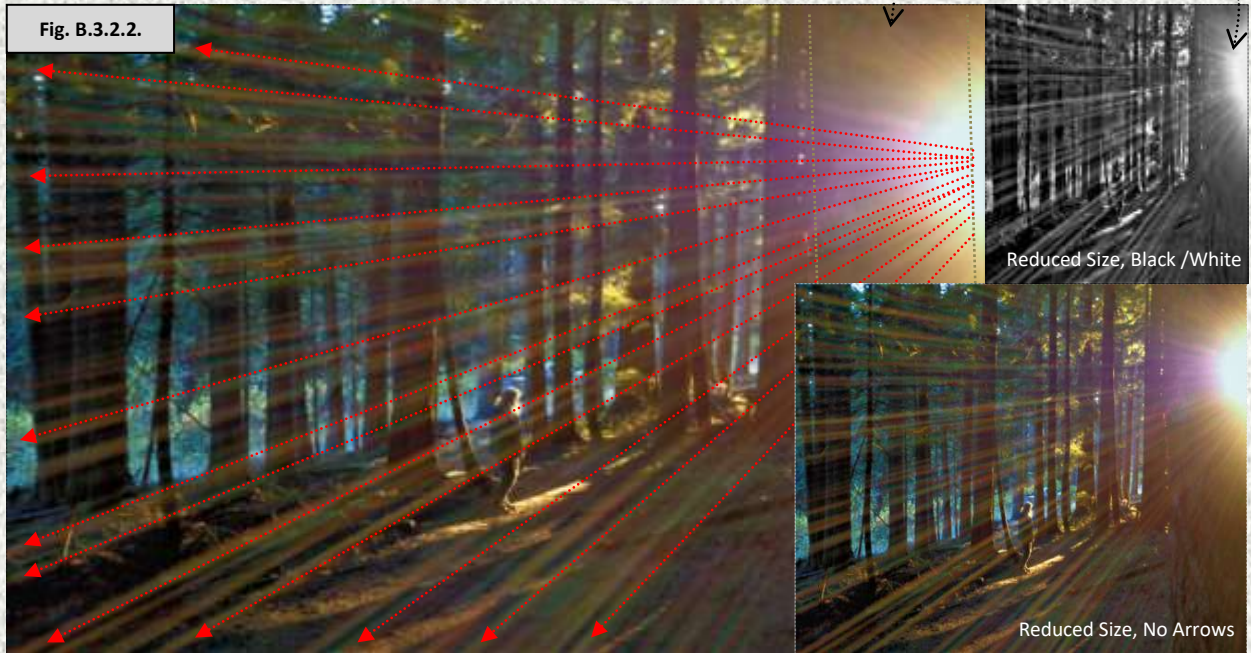
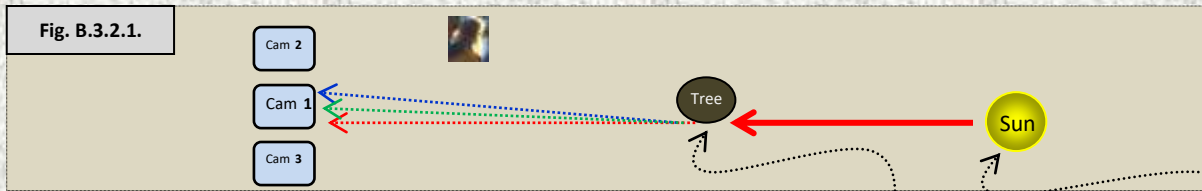
2. Google Street View of Yale Road, Rosedale, B.C. (@ 10-25 m)



Apparent reality is not necessarily reality: Objects with linear perimeters deflect light more obviously than irregular shapes.

B.3.2. Example 2: Edge of opaque object deflects different wave lengths of light differently.

Enchanted Forests are often regarded as myths. The author discovered a factual Enchanted Forest (at Chilliwack, BC, on Elk Mountain Trail). Note, from two vantage points, the author witnessed the phenomena twice, which nobody heretofore recorded, (Fig. 3.2.2. and 3). Only when his camera was in position Cam 1, could he take pictures of an Enchanted Forest. The Enchanted Forest disappeared, if he moved his camera as little as 1-2 cm to positions Cam 2 or Cam 3 (Fig. 3.2.1.). (The person in the picture did not see it.)



Conclusion: As a water droplet gravitationally deflects lights and produces a rainbow, the edge of an opaque objects gravitationally deflects light, and may produces an Enchanted Forest.

B.3.3. Example 3: A combination of opaque and solid straight objects magnify light deflection



N.B.: Instead of having a shadow on the wall, there is intensity, a concentration of light. Because the gravitational force of a solid mass interacts with the gravitational force of light and permanently alters and deflects the direction of light, is visibly noticeable within a distance of less than ten feet. The deflection is accentuated by light passing through the double pane glass. (For explanation of the effects of the glass, see explanation below in B.5.)

Mass/gravity of any substance interacts gravitationally with the substance of light.

B.4. Interplay of Gravitational Forces, when light passes through a transparent object.

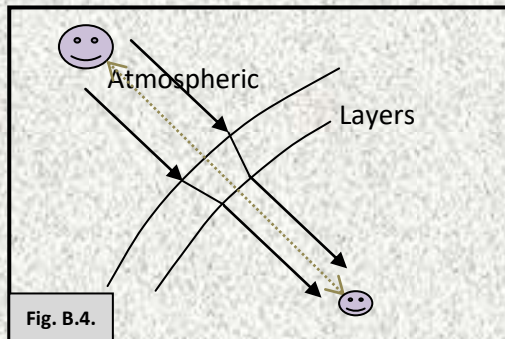
As 15 year old boy, the author noticed that from top of a building (the church steeple in Ulm, Germany, 161 Meters high) people down below on the streets looked like ants. Also, when now standing in front of his home in Rosedale, B.C., the author notices that looking up to the mountain side, 5-7 Kilometers away, he can distinguish individual branches on trees; but from up above looking down, he can barely find the location of his home. Why?

Answer:

Light gravitationally responds to differing densities of mass differently. The mass of layered air in the spherical atmosphere of the earth acts like a magnifying lens, when looking up. When looking down, the mass of layered atmosphere acts like a de-magnifying, lens. The mass of layered air interacts with the mass of light and causes a deflection of light, because light in the atmosphere is bent according to the principle, fully explained below in B.5., which causes inaccuracies in GPS devices that need correction factors. (Some individuals report that Einstein's formula $E = mc^2$ allows for correction of these inaccuracies in GPS devices, when $E = mc^2$ has absolutely nothing to do with this issue.)

Deflection of Light in Atmospheric Layers.

This illustration (and B.5.) also explains why the moon appears to be larger near the horizon, than at zenith. This illustration is extremely significant, when we realize that the 'Atmosphere of Space' is primarily light, which has mass.



Conclusion: Mass/gravity of any substance interacts gravitationally with the substance of light.

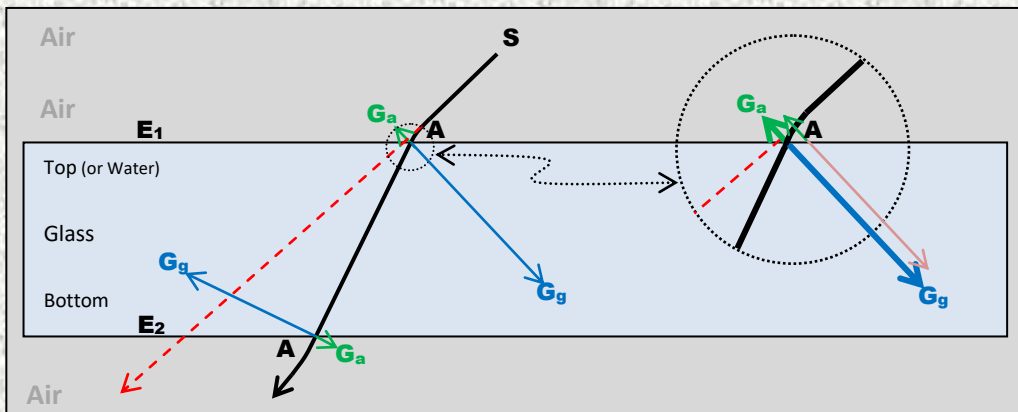
B.5. Interplay of Gravitational Forces, Explanation / Illustration, When Light Passes Around An Object.

1. **The geometry of Optics** is publicly defined. This illustration states the reasons why light is deflected.

Fig. B.5.1.

Description and Illustration of Gravitational Forces Affecting Light (With Enlargement):

1. As indicated by black arrow, light travels from Source, **S**, through air.
2. As indicated by red arrow, the direction of light in glass is altered, because
 - a. At point of entry, **E₁**, the gravitational pull of air, **G_a** (vector, density/mass .001), is smaller than the gravitational pull of glass, **G_g** (vector, density/mass 2.4), by a ratio of .001 to 2.4.
 - b. At point of exit, **E₂**, the gravitational pull of glass, **G_g**, is greater than the gravitational pull of air, **G_a**, by a ratio of 2.4 to .001.
 - c. The smaller the angle, **A**, the greater the effect of the gravitational pull. This angle is effectively altered by using convex or concave surfaces of lenses.

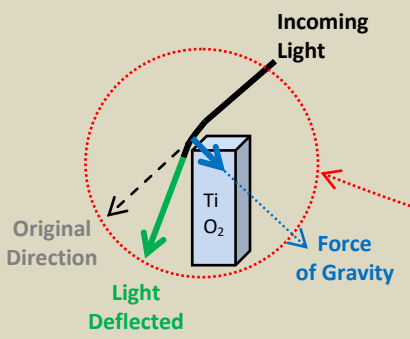
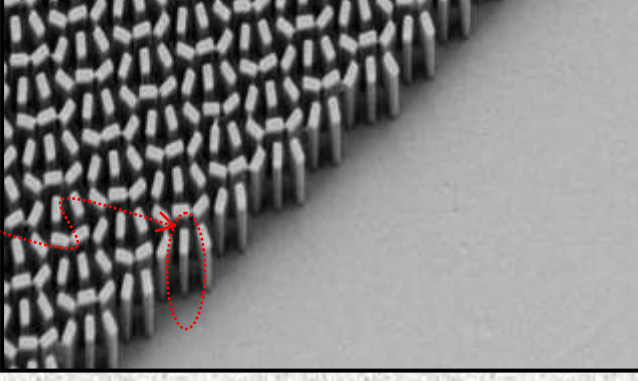
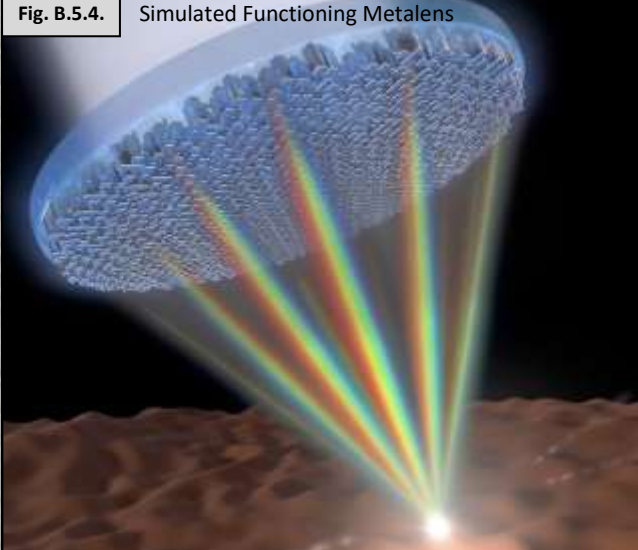


Conclusion: Mass/gravity of any substance interacts gravitationally with the substance of light.

2. Verification of Figure 5.1. by the Metalens Principle.

The above principle and facts also apply regardless, whether the gravitational pull is exerted by water glass, or any other mass. Although the principle was not theoretically understood, it has had commercial applications for centuries in the manufacturing of glass lenses (e.g., telescopes, microscopes). A new revolutionary application of this principle is in lens-less *Metalenses*.

A flat thin *Metalens* (Fig. B.5.4.) comprises a multitude of opaque particles of mass, which are strategically shaped and positioned on a transparent substance (e.g., Titanium Oxide Nanoparticles on glass in Fig. B.5.2. and Fig. B.5.3.) so as to deflect rays of light; that, as the passing light is subjected to a designed gravitational pull, a magnifying effect is collectively produced. (Advantage of Metalens over glass lenses: Effects on high/red and low/blue energy light are equalized. See below, B.8.2.1. on page 17 ff.)

| | | | |
|--|--------------------------------|--|--|
| <p>Fig. B.5.2.</p> | <p>Principle of a Metalens</p> | <p>Fig. B.5.3.</p> | <p>Uniquely Shaped and Secured Titanium Oxide Nanoparticles.</p> |
|  | |  | |
| <p><u>Examples of Solid Substances that have mass and exert a force of gravity on light:</u></p> <ol style="list-style-type: none"> 1. Electric Wires: . . . Fig. B.3.1.1. 2. Tree Trunks: . Fig. B.3.2.2.; B.3.2.3. 3. Plastic Window Frame: Fig. B.3.2.3.2. 4. Water and Glass: . . . Fig. B.5.1. 5. Titanium Oxide: . . . Fig. B.5.2. . . . B.5.3.; B.5.4. 6. Thin Branches on Trees: Fig. B.5.5. | | <p>Fig. B.5.4. Simulated Functioning Metalens</p>  | |



B.6. Interplay of Gravitational Forces, when light passes toward an opaque object/mass.

An anomaly that may be observed at sundown, of a first quarter moon. (E.g., August 3 and 4, 2014)

Logic: The horizon, H_1 , of a First Quarter Moon is at a 90° angle to **Line A** between moon and sun. The horizon of earth, H_2 , is at a 90° angle to plumb lines P_L on earth. At sun set, the radial lines, **A** and **B**, may be expected to point radially at the same position of the Sun (**A**). But there is an inconsistency, for earth's mass and gravity deflect sunlight. Deflected **Line B** indicates the actual path of light, which creates an illusory invisible Phantom Sun, seemingly below the horizon.

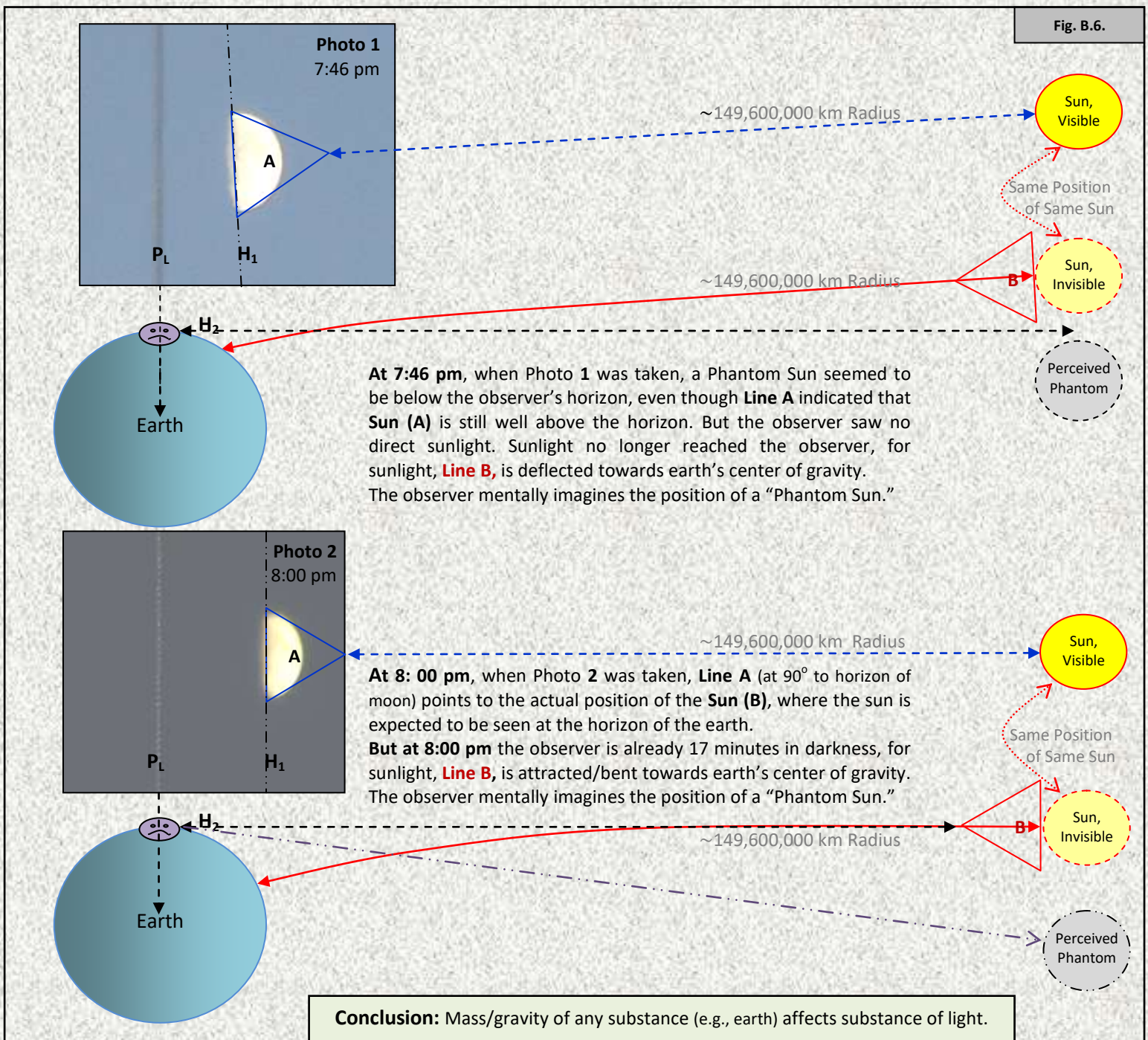
Data: Official Time of Sunset at Vancouver, B.C., August 4, 2014, 7:49 pm. PST.

Official Time of Sunset at Rosedale, B.C. (130 km East of Vancouver): August 4, 2014, 7:43 pm. PST.

Photo 1 and 2 of Moon and of plumb line P_L . (P_L is plumb line string, 2 meters in front of camera lens.)

H_1 is the horizon on the photo of the moon. (Compared with H_2 on earth, the plumb line P_L , and lines **A** and **B**.)

H_2 is the horizon, as seen by the observer on earth, at a 90° angle to the plumb line.



B.7. Interplay of Gravitational Forces with Light: Simple and Complex Every Day Observations.

1. **The outline of a shadow is never perfectly sharp and distinct.** It is shaded and gradually fades from light to darkness. If light passes through a gap of two objects, such as index finger and thumb, their shadows can be observed on the floor or a wall. As the gap between index finger and thumb is progressively narrowed, at a certain point, the shadow of the index finger and the shadow of the thumb jump to meet each other, even though index finger and thumb are still separated and do not touch. Why does light not seem to pass through this open space?

Conclusion B.7.1.

Light has mass, which is subject to the gravitational pull of adjacent material objects, such as finger and thumb. Even though finger and thumb are still apart, light appears not to pass through this open space. At close range, the gravitational force of light and of the fingers is great enough to interact. The fingers, having a greater mass than a ray of light, attract the light, deflect, and defuse it, to the extent that within the distance of approximately one meter a shadow appears – light no longer passes through this narrow gap.

2. **The distance between the eyes and a printed page is increased,** up to the point that the printed page is just far enough away from the eyes that it can no longer be read. Then the gap between upper and lower eyelids is narrowed until the lids almost touch. Consequently, as the letters, which were previously too far away to be read, appear slightly enlarged and become readable again. (The same can be observed, looking at an alarm clock, without glasses.)

Conclusion B.7.2.

As the eyelids are gradually closed, light is deflected by them. The gravitational pull of the eyelids deflect the light, which has a magnifying effect, making the letters readable.

3. **Hold the thumb of a partially open fist against the nose, and look through the center** of the fist. Close the fist tightly to alter and adjust the opening at the end of the fist (little finger) until very small opening remains. When properly adjusted, the letters on the removed printed page appear enlarged and readable, as if a telescope were used. Also in conformity to observation B.7.1., the irregularly shaped opening in the fist becomes a rounded peep hole.

Conclusion B.7.3.

In the previous observation, B.7.1., the deflection of light occurred only toward the upper and lower eyelids; in this observation, deflections occur in a circular manner. Therefore, the resulting enlargement is better, and has a telescopic effect.

4. **Particularly on bright sunny days light flickers at a distance,** just on the horizon of desert sand. The same phenomenon may be seen on highway pavements, the hood, or the roof of a car.

Conclusion B.7.4.

When light passes through a medium, which has a low density, such as air, and the path of light is virtually parallel to a substance, which has a high density, such as rock or metal, the gravitational pull of the high-density material so distorts the light that the image, which originally reflected the light, is no longer recognizable. Like a flying rock, skipping on the surface of water, the mass of light bounces up and down, creating a flickering effect. As a result, the eye sees no longer a clear image of the object, which reflected the light; the eye sees the reflection of pure light. (For similar reasons, differing densities in the atmosphere cause stars to flicker.)

5. **Fill a rectangular glass aquarium with water up to the brim.** At the top right corner of the aquarium, insert a straight rod half way into the water; the rod should be at a forty-five degree angle to the surface of the water and the front wall of the aquarium. It should also be parallel to the side (right) wall of the aquarium. Position one of your eyes to point "A" that above the water you see only the end of the rod. When you do, the rod appears to be bent upward on top of the surface of the water; below the surface of the water, the rod appears to be bent downward. If a fish is at the end of the rod, the eye is tricked into seeing two fishes. Move the position of the eye to the left and parallel along the rim of the aquarium. As the eye is progressively further removed from the rod, the apparent upward and outward deflections of

the rod is progressively increased. If a fish is at the end of the rod, the distance between the “two” apparent fishes corresponds to the distance between the rod and the eye.

Repeat the above experiment, B.7.5. This time place the rod vertically at a ninety degree angle into the water. Position one of your eyes directly in front to the rod. When you do, the rod may appear longer than it actually is; but it is not deflected horizontally. Now tilt the vertically positioned rod, to the left. As you do, the rod appears to be dissected at the water’s surface. The rod below the surface appears to have shifted to the left. If you tilt the vertical rod to the right, the shift below the surface of the water appears to the right. If the glass aquarium is not filled with water to the very top, the rod appears to be dissected and appears to have shifted not only at the water’s surface; the rod appears dissected and has shifted also where the light passed through the glass of the empty aquarium only.

Conclusion B.7.5.

Light passes from an observed object towards the eye. When light travels at an angle of less than ninety degrees through the contact zone of substances with differing densities (air, glass, or water), a deflection occurs, because at the transition point, the medium with the higher density exerts a higher gravitational pull upon the light than the medium with the lower density. Therefore, the gravitational pull exerted on a beam of light is altered at that point, and deflects the movement of light towards the substance with the higher density. This deflection of light is directly proportional to (1) the angle, at which the beam of light, traveling from the rod to the eye, passes through the point of contact, and (2) the effects of different densities (water, glass, air, and their corresponding difference in mass) creates differing gravitational effects.

6. **To understand the previous observations better, and to visualize how the force of gravity** is manifested on a molecular and sub-atomic level: Place water into a glass tube and observe the concave formation of the water surface. Observe mercury in a glass tube and note the convex formation of the mercury surface.

Conclusion B.7.6.

The gravitational force between any two molecules of water is less than gravitational force between one molecule of glass (SiO_2 , Molecular Weight 64) and one molecule of water (H_2O , Molecular Weight 18). Therefore, the higher density of glass exerts a higher gravitational force and pulls water toward glass. To the contrary, the gravitational force between two molecules of mercury is greater than gravitational force between one molecule of glass and two atoms of mercury (Atomic Weight 400). Therefore, mercury appears to be repelled by the glass.

7. **Return to the “hayloft” experience and question of B.1.:** Why did the dust particles of the motionless air of the hayloft, like barn flies erratically and unpredictably move about in the beam of light?

Conclusion B.7.7.

When light bombards, or is arrested by an impenetrable object, whether that is a dust particle, an icicle, or a sunbather’s back, the energy of the moving mass of light is transferred to the mass, which obstructs the light. The observation of this phenomenon, moving dust, is the basis of the Brownian Motion Principle, as the energy of light is transferred to solid objects, sufficiently enough to set them into motion.

8. **A Surveyor’s Report:** With a transit level, the surveyor tried to survey a rectangular plot in a wooded area. But no matter how meticulous he was, he could not complete the rectangle, he could not return to the exact starting point. Why?

Conclusion B.7.8.

The supposedly straight line, charted by the surveyor’s transit level, was not straight; for it is deflected by gravitational forces of tree trunks, branches, even leaves in the wind. (The Surveyor’s Report served as an incentive to devise the subsequently described verification tests.)

B.8. Verification Tests.

1. Verification 1: The author stretched and secured a thin string (~30 meters) between *Points A and C*. Half way between *Points A and C*, at *Point B*, he erected a piece of PVC pipe (10 cm diameter) vertically at right angles to the string; the pipe touched, but did not interfere with the string. Then he tried to look from *Point C*, directly above the string, towards *Point A*. Whoa, *Point A* could not be seen, for at *Point B*, the gravitational force of the pipe, attracts the light coming from *Point A*, and ‘hides’ *Point A* that it cannot be seen from *Point C*. The string can only be seen from *Point C* to *Point B*. To be able to see *Point A* from *Point C*, the observer must move ~.5 cm over to *Point C₂* – that rays of light are removed from the gravitational force of the pipe.

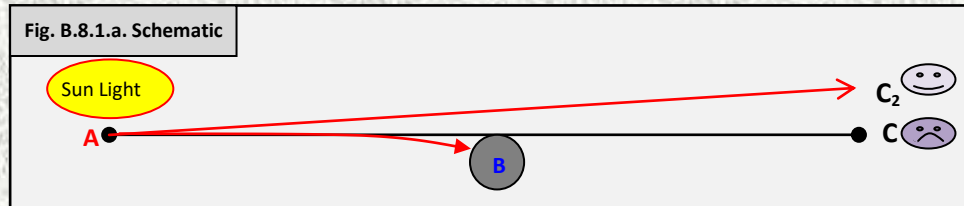
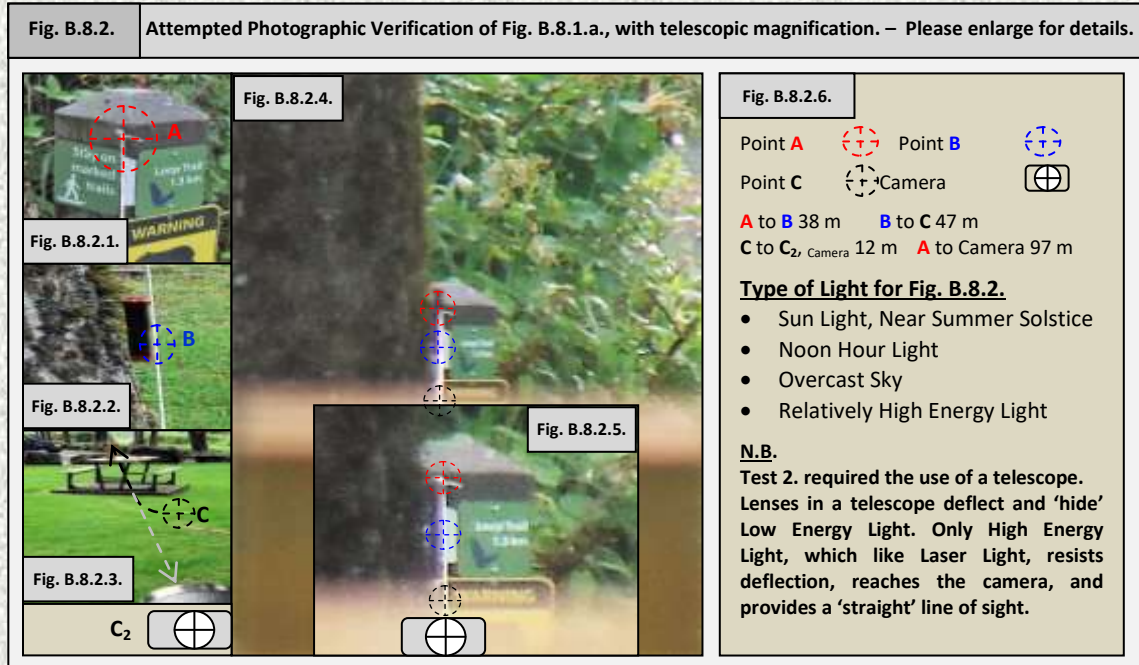


Fig. B.8.1.b. Photographic Verification of Schematic Fig. B.8.1.a., without telescopic magnification. – Please enlarge for details.

| | | |
|---|---|---|
| <p>Fig. B.8.1.b.1. Point A of Fig.B.8.1.a.</p> <p>String</p> | <p>Point A </p> <p>Point B </p> <p>Point C </p> <p>Camera C₂ </p> <p>A to B 10.7 m</p> <p>B to C 17.0 m</p> <p>C to C₂ 3.0 m</p> <p>A to C₂ 30.7 m</p> | <p>Notes on Fig. B.8.1.b.2. and Fig. B.8.1.b.3.</p> <ul style="list-style-type: none"> • Early Morning Sun Light, Near Summer Solstice • Clear Sky • Relatively High Energy Light <p>Notes on Fig. B.8.1.b.4.</p> <ul style="list-style-type: none"> • One hour after sunset • 60 Watt Incandescent Light Bulb 1 m From Point A • Very Low Energy Light |
| <p>Fig. B.8.1.b.2. Photo from C₂ with Enlargement</p> <p>String</p> <p>C₂</p> | <p>Fig. B.8.1.b.3. Photo from C₂ with Enlargement</p> <p>String</p> <p>2 cm</p> <p>C₂</p> | <p>Fig. B.8.1.b.4. Photo from C₂</p> <p>Enlargement of Phantom, Mirage of Bent Light, Apparent as Photographic Imprint</p> <p>A</p> <p>C</p> <p>C₂</p> |

2. **Verification 2:** To confirm and expand Verification 1., the author increased the distance between *Points A* and *B* to 38 meters, and the distance between *Points A* and *C₂* to 97 meters. Again, as in “Verification 1.” a string confirmed that *Points A, B,* and *C* were perfectly aligned. When through a telescope, he took a picture of *Points C, B,* and *A,* whoa, instead of the increased distance magnifying gravitational deflection, *Point B* could be seen superimposed upon *Point A.* Light, which was reflected from *Point A,* appeared to be unaffected from the gravitational force of mass at *Point B.* (Instead confirming Verification No. 1., he discovered something new.)



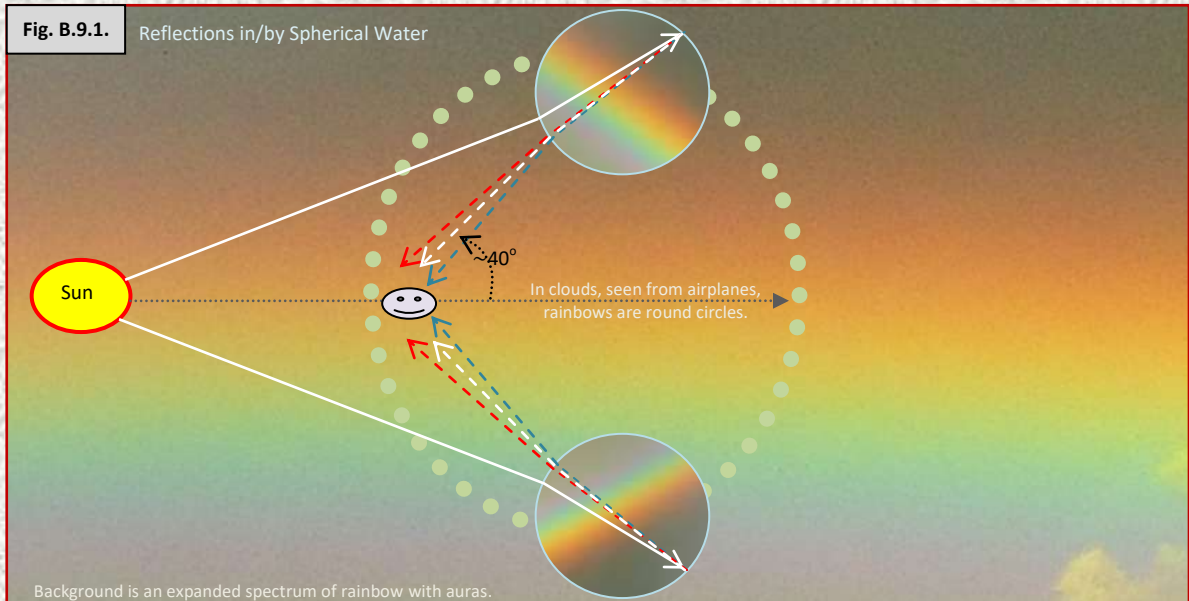
Preliminary Conclusion:

1. Light is not a homogeneous entity, but comprises more than one subcomponent. Low energy light, subcomponent **L₂**, is more readily affected by the deflecting gravitational force at *Point B* than high energy light, subcomponent **L₁**. But the eye (the camera behind the telescope) recognizes primarily **L₁** (laser-like light), because **L₂** light is diffused by glass lenses beyond recognition, which creates a conundrum: The more we magnify to be specific; the more we lose sight of low energy light, a fact which is magnified and distorted even more so by telescopes in space exploration. (Our understanding of the universe, based on telescopes, is not only called into question, more than likely it is wrong, for through telescopes we see primarily high energy light; we do not see dispersed low energy light; we see distortions.)
2. Also, faint blurred white light, which appears to be on the left side of *Point B* is a phantom mirage of low energy light, subcomponent **L₂**; but it is not at *Point B* at all; it only registers as such on the photographic camera image. (cf., Fig. B.8.2.; Fig. B.12.3.; and B.12.4.)
3. **Verification 3:** The author removed the right lens from his glasses and retained the left lens. Then he compared the vision of right and left eyes. He confirmed that, thanks to the force of gravity, with glasses (telescopes) we see everything from a distorted artificial perspective.

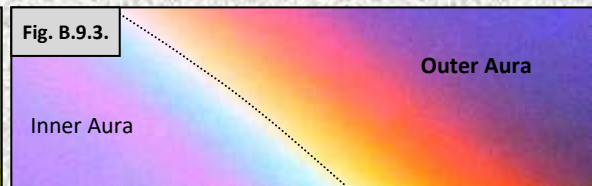


B.9. The Rainbow – A Simplified Schematic Description Of A Complex Scenario.

A rainbow is a cumulative effect, the multiple consecutive deflections of innumerable unique rays of light, coming from a central source of light, which behaves predictably according to the principles, as observed and illustrated above. The following illustration visualizes the route of rays of light: (1) from sun, (2) entering a spherical water droplet, (3) being reflected off the mirror-like inside of a water droplet, (4) being deflected on exiting the droplet, (5) possibly being reflected of yet other droplets (as in double rainbows), before (6) reaching the observer’s retina or camera.



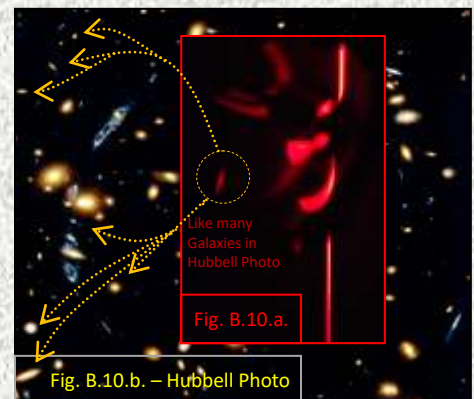
The rainbow is only the meeting point of an Outer and an Inner Aura (Fig.B.9.2. and 3.). The line of demarcation between Inner and outer Aura is White Light (enhanced in Fig. B.9.3.). Once light is thus segmented, it is irrevocably changed and never the same as original sunlight. (N.B. There is a big difference of color between photographic pictures, taken in clear sunlight, and sunlight that is filtered by clouds.) Furthermore, what astronomers automatically assume to be a Doppler shift easily could be a gravitational deflection from white light to light into the red Outer Aura or the blue Inner Aura.



B.10. Laser Light. (cf., Fig. B.2.1.)

All previous examples in PART B. verify that light responds to gravity. But it should be noted, light does not react consistently to gravity, as is most obvious in the differing deflections of a rainbow. Three examples of high and low level gravitational responses by high energy and low energy light:

1. Squint eye lids that low energy light is deflected and high energy light reveals eye lids clearly.
2. If wearing trifocal glasses, when “squinting,” visual blurs of adjoining sections of trifocal eye glasses are reduced to seeing clear and distinct lines, because eye lids, absorb low energy light; but laser-like high energy light segment of light penetrates past squinting lids and registers on retina. (This principle applies in “hair lines” in scopes and transit levels.)
3. Even laser light is most definitely deflected by gravity as shown in Fig. B.10.a. (Red Laser Light is angularly passed through a trifocal lens and photographed on a wall, three meters away; presented against backdrop of enhanced Hubbell Photo of “Galaxies,” Fig. B.10.b.)



B.11. Light Electromagnetic Forces And A Challenge.

Whereas, the facts, referred to above (cf., PART B.), illustrate that light responds to the force of gravity, and exerts an inter-gravitational force, there are indicators that light also responds to electric charges, even though light seems to be completely unaffected by electromagnetic lines.

1. **Light interacts with electric charges.** It even reacts to positive and negative electric charges:
 - a. Aurora Borealis and Australis are obvious indicators: The Aurora Borealis shows a predominance of a greenish color (cf., Fig. B.11.4.). The Aurora Australis is more likely to be reddish.
 - b. Elemental metals have a barely distinguishing difference in color: But positively charged ionic metals, particularly the Platinum Group Metal salts, and transition metal hydroxides can be extremely colorful. (More examples: Intense purple iodides, green and blue copper hydroxides.)
2. **Atomic electric charges of elements correlate with opaque and translucent objects.** Atomic solid metals, which have an electron configuration that has at least one negatively charged electron in the outer electron shell, are opaque. On the other hand, light can pass only through solid substances, which are non-metals that have an 'electron deficiency,' e.g., quartz/silica/glass (SiO_2), which seems to suggest that light has an intrinsic electric charge.
3. **That light has an electric charge is confirmed by the fact that light can replace electrons** from certain metals, so much so, that the process has commercial applications in photo electric cells.
4. **White light is presumed to be a balanced presence of all colors; green is a mixture** of yellow and blue – the absence of red. Please note that the color green is virtually absent in a rainbow, which is the result of gravitational deflection. Apparently, the color green is noticeable to human eyes, only when light is affected by electric charges, such as the Aurora Borealis (Fig. B.10.4.), the Aurora Australis, or the electric charges of certain ionic structures. (Be it: Green paint and/or ionic molecules in organic life, cf., Fig. C.6.6.)



5. **A Challenge** (To Those, Who Immortalize Einstein and as an Introduction To Subsequent B. 12.).

If the Einsteinian assumption is correct that the speed of light is constant, and light is not subject to gravitational forces and electric charges, which may change the speed of light, then light, once initiated, may be expected to continue infinitely.

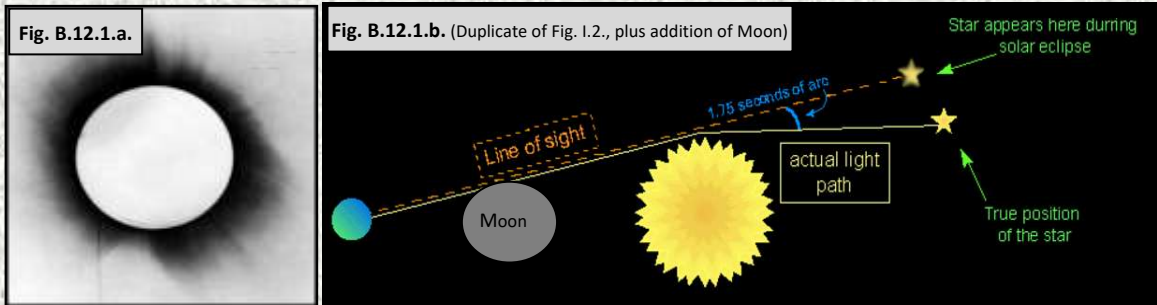
Proposed "Thought Experiment" To Test Einstein's Assumption On The Constancy Of Light:

 1. *An empty room has every surface area covered with perfect mirrors, and*
 2. *The room is illuminated by an internal source of light. Then*
 - i. *As long as the light is "ON," intensity of light in the room will progressively increase;*
 - ii. *When the light is turned "OFF," the room will eternally remain to be filled with light.*

(This author predicts that in reality (1) light does not intensify and (2) the room will be dark.)

B. 12. Critique on Eddington's Observation and Einstein's Conclusion. (Instead of far distant space, Einstein and Eddington would have been well advised to observe immediate surroundings, like the above backyard experiments.)

1. **Fig. B. 12.1.a. is Eddington's original photo, his only evidence, which made Einstein famous.**
Fig. B.12.1.b. is the conceptual "scientific (sic)" interpretation of Fig. B.12.1.a. (cf., INTRODUCTION I.2.)

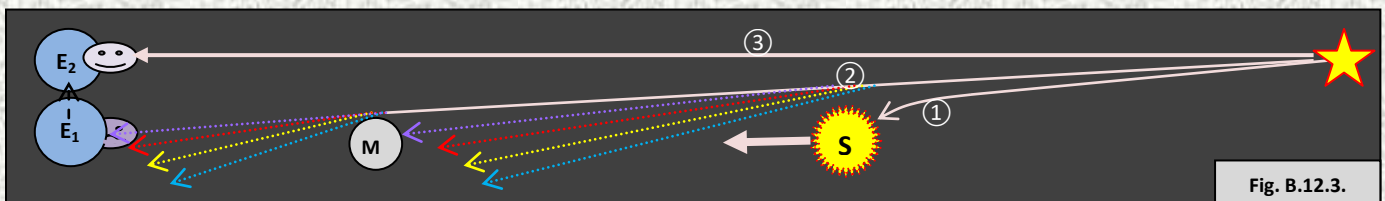


2. **Fig. 11.2. is a duplicate of an original Eddington photographic plate, the actual size of which is shown in relationship to human hands.** (N.B., Diameter of the sun is reduced to ~2 inches, or 5 cm.)



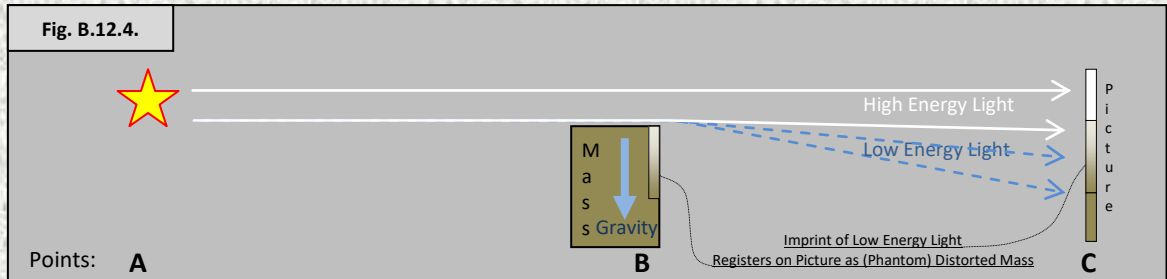
N.B.: The three dimensional interpretation (Fig. B.12.1.b.) is based on the two dimensional photographic plate (Fig. B.12.1.a.). The eclipsed sun is 149,600,000 km removed from the earth, and the sun's diameter is 1,390,000 km, which is hidden behind a 2 inch (5 cm) picture of the eclipsing moon. Hence Eddington's photo of the sun is on an approximate scale of 1 to 27,800,000,000. (i.e., $1,390,000 \text{ km} \times 1,000 \text{ m} \times 100 \text{ cm} / 5 \text{ cm} = 27,800,000,000$)

3. **When the author, tried to verify the "scientific (sic)" interpretation of Fig. 12.1.b., his test results were contrary to expectations, and therefore initially difficult to interpret.** (cf., B.6.; B.8.1.)
 - a. Light is not bent as the Einstein/Eddington report wrongfully suggests (Fig. B.12.3.).
 - ① Low and high energy light are initially pulled toward and absorbed by the sun (any object).
 - ② The star is not visible from the moving earth, when the line between earth and star approaches the periphery of sun and/or moon, because light is diffused beyond recognition; for constituents of light (sub-components) differ and are affected differently by deflecting gravitational forces. (High and low energy light is deflected in differing degrees.)
 - ③ The gravitational deflections, caused by sun and moon, are gradually reduced to virtual zero, as earth moves from position E_1 to E_2 (cf., Fig. B.8.1.b.2. and 3.)



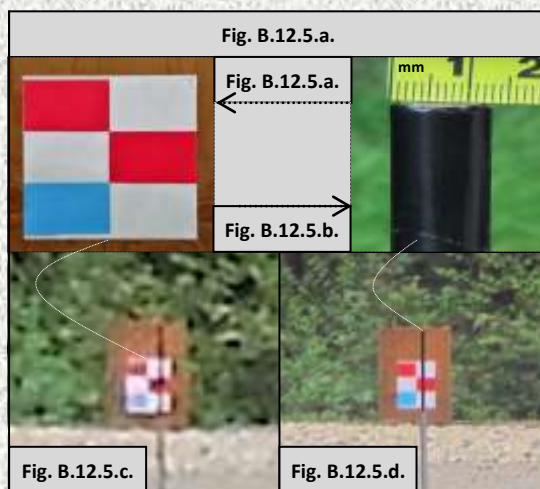
- b. The supposedly "**True position of the star**" (Fig. B.12.1.b.) is an un-confirmed hypothetical position, the product of wishful thinking. To report that one can confirm a three dimensional deviation of "**1.75 seconds of an arc,**" (i.e., $2,581^{\text{th}}$ of one degree) from an unseen object, exclusively on the basis of a two dimensional picture, which is on scale of 1 to 27,800,000,000, is nothing but calculated, preposterous lie and deception.
- c. The Einstein/Eddington experiment is prejudicial and ignores additional significant facts:
 - i. Huge erratic solar flares, and correlating force fields, which the light from said star would have to pass through, make observation and exact calculation absolutely impossible.
 - ii. The moon's gravitational effect, just above the moon's surface, is possibly even greater than the gravitational effect of the sun, at more than 10,000's kilometers above surface of the sun, for gravity is calculated inversely proportional to distance squared.

4. In defense of Einstein and Eddington, it must be said that their most sophisticated tools, according to today's technology, were ludicrously primitive. The above Einstein/Eddington observations relied exclusively on optical magnification, which creates the conundrum: "The more we magnify to be specific; the more we lose sight of low energy light," (cf. B.8.2.1.) which is diminished by optical filtering of low energy light; computer magnification must come to the rescue. The principle, herewith presented, is best introduced schematically. (Possibly Einstein observed this phenomenon, but not having computers, opted for perverted theoretical warped Space/Time concept.)



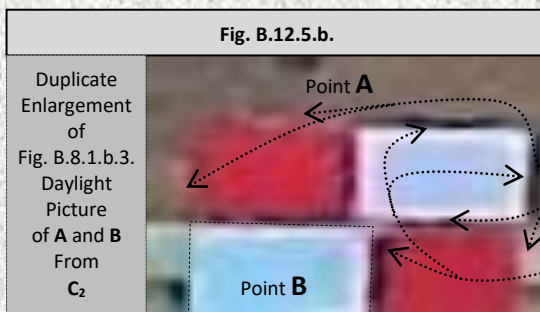
The principle of Fig. B.12.4. was previously introduced. (cf., Fig. B.2.1., Fig. 3.2., Fig. B.8.1.b.4., Fig. B.8.2.5.); it explains virtually everything, even why shadows have no clear edges. (If light passes also on opposite side of Mass, a double Phantom effect registers on Picture. cf., Fig. B.3.1.&2)

5. Pictorial Verifications of Schematic Fig. B.12.4. (Comparing Computer and Optic Enlargements.)



- Fig. B.12.5.a. Point A
- Fig. B.12.5.b. Point B
- Fig. B.12.5.c. Point C, Computer Enlarged Photo: Deflected Low Energy Light and High Energy Light.
- Fig. B.12.5.d. Point C, Clear Telescopic Photo: Screened Low Energy Light; Only High Energy Light.

Distances: A to B 40 meters
 B to C_{camera} 60 meters
 A to C_{camera} 100 meters



Distances for Fig. B.12.5.b. and Fig. B.12.5.c.
 A to B 10.7 m B to C 17.0 m
 C to C₂ 3.0 m A to C₂ 30.7 m

Low Energy Light Gravitational Deflections, Made visible by Computer Magnification. High and Low Energy Light Deflection results in "bundling," black, absence of light. (cf., B.1.)

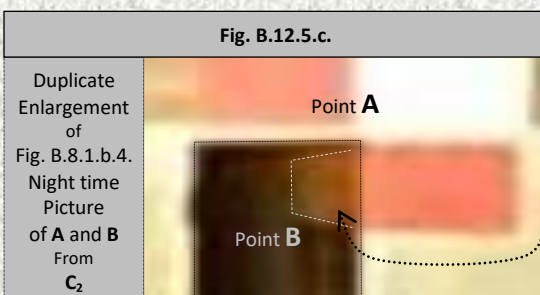


Fig. B.12.5.c. Picture is devoid of High Energy Light. Point A was illuminated at night by a 60 Watt light bulb that was 2 meters away. Phantom mirage, appearing on camera and retina, as if it was, on the dark side of Point B, 10.7 meters away.

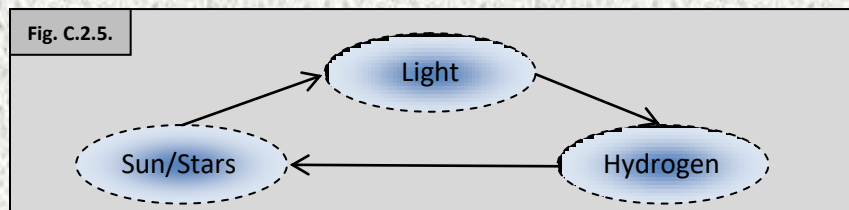
PART C: FIRM AND TENTATIVE CONCLUSIONS – On Light And $E = mc^2$.

C.1 Firm Conclusion on Light: Light responds predictably to gravity. Light and gravity are intricately linked; one can hardly understand one without the other.

1. Newton's Law, applied to a specific mass of light, can produce systematic scientific interpretations, which Einstein's weird bending of Space-time does not. (cf., Note D.4.2.)
2. Deviations from Newtonian laws in the universe (e.g., Rotations of Mercury in its proximity to the sun) must take into consideration Lorenz Force Law, and the electro-dynamic effects of countless numbers of rotating and orbiting electro-magnetically charged substances in the universe, which is effectively a complex dynamo. (cf. "[Saturn's Rings.](#)")
3. Light contains the same substance as mass, for mass and light exert and respond to the same force of gravity. However small the mass of light, even if seemingly infinitely small, the assertion can be made: *The universe/space is not a vacuum; it is filled with light/mass*: The 19th Century "*ether*" is light, which responds anywhere in space predictably as mass.
4. Light does not noticeably inhibit speed of 'slowly' moving objects in space, because bombardment by Brownian Movement has equal impact on all sides.
5. Neither energy, nor speed of light, is compromised as energy is transferred from substance to substance of equal mass, photon to photon. (cf., Newtonian Cradle.)
6. Substances that have differing amounts of mass absorb and transmit energy respective to mass; consequently light that is reflected from such objects has a reduced speed.
7. Since light responds to and exerts a gravitational force, the speed of light cannot be constant.
 - a. The speed of light is relative to the mass of its origin and the mass of light. (300,000 km per second, at best, applies only to high energy light, and only in our solar system.)
 - b. The speed of light may vary within light, corresponding to size/mass of low/high energy light.
 - c. As the mass of light appears to be infinitely small, the speed of light may be infinitely fast.

C.2. Tentative and Speculative Conclusions on Light.

1. Light is not an essence in and by itself; light comprises at least four sub-components:
 - a. The '*blue*' sub-component of light reacts most readily to the force of gravity.
 - b. The '*yellow*' sub-component of light requires a greater force of gravity to be deflected.
 - c. The '*red/ultraviolet*' sub-components require as yet greater forces of gravity to be deflected.
 - d. '*Laser*' sub-component' of light is most resistant to deflection by gravitation forces.
2. Since spectrographic analysis of elements is determined by their unique electron configurations, light must interact uniquely with electrons, and even more uniquely with the unique electron configuration of each element.
3. Light may even be an indicator of a fourth elemental state: Solid, liquid, gas, and light
4. Radio waves are likely vibrations caused by colliding mass, a form of radiation similar to light
5. The collective mass of all radiation, including light, constitutes un-accounted Dark Matter mass.
6. *Speculative Progressive Logic*. As hydrogen is the building block of elements, light may be the building block of hydrogen: Since light has mass and light fills the universe, since hydrogen is the predominant element of the universe, since hydrogen is extracted from the universe by the process that fuels the making of elements in sun and stars, which produces the very light that fills the universe, then slowing/colliding diminishing light in space may be the engine that cyclically re-produces hydrogen in a triangularly re-cycling universe.



7. *Question*: Are some faint distant galaxies really galaxies, or are they merely colorful "phantoms," i.e., dispersed low energy and/or high energy light of stars within our galaxy? (cf., Fig.B.10.a. and b.)

C.3. $E = mc^2$ is valid and has mathematical application provided it is correctly understood, where:

1. "E" is not a self-subsisting entity, but the product of mass and its velocity, which conforms to mathematical law and the Law of Conservation of Energy;
2. "c" is not a constant invariable speed (i.e., ~300,000 km/sec.), but any speed, infinitely small or large;
3. "m" is a substance that has actual mass, infinitely small or large.
4. Accordingly, the energy of any form of light is directly proportional to its mass and its speed.

C.4. $E = mc^2$ is invalid and has no application, when it is wrongfully assumed that:

1. "c" is the invariable speed (i.e., ~300,000 km/sec.), which is applicable in the entire universe.
2. "m" is annihilated to zero, and altered into the energy per se.
3. "E" is an entity in its own right, irrespective of mass, velocity, temperature, or other characteristics associated with matter and the transfer of energy.

C.5. The Worst 20th Century Scientific Blunders: $E = mc^2$, Big Bang, Warped Space/Time and Relativity.

1. Such assumptions are contrary to every known scientific principle and law that applies to the transfer of energy. (cf. A.4.1-4.) They diametrically oppose the Law of Conservation of Energy.
2. It is assumed, that according to $E=mc^2$, all the energy in the universe was released by highly concentrated mass, which was at rest (But: In this universe everything is in motion; nothing is at rest.)
3. The Big Bang did not produce energy. To put mass/light into motion requires energy ($E=mc^2 \times -1$).
 - a. Mass cannot and does not put itself into motion, as rocket scientists and children know:
 - b. Infants learn quickly that it takes energy to move things; falling/stopping things break/hurt. (Especially lumberjacks know that it requires energy to split wood – mass.)
4. The Big Bang Theory may indeed be fact; the error of the theory is that it supposedly derived the required energy from within itself, instead, as scientific principles stipulate, from an outside source – a "Provider," who, according to Biblical revelation, in Jesus name we may call "Father."
5. Relativity is the warped scientific base for modern moral decay: The only thing that matters is personal perspective, my opinion, 'Who cares about facts, or God?' 'What's in it for me?' which was the modus operandi in Einstein's life. (He craved personal security, glory, and sexual pleasure, was unaccountable to God, family, wife and children, smoked his own pipe and said, 'To Hell with the Japanese.')

C.6. Philosophical Implications:

1. **The co-relation between light and the universe reveals an infinite macrocosm and microcosm**, seemingly endless grandeur and never-ending details.
2. **Light comprises many infinitely complex things.** It is linked with the essence of the universe; it is the source of biological life; it has few perimeters; it can convey unbridled energy. Einstein is correct insofar as he connected light with energy, for light, like no other, has creative energy.
3. **Recognition that light has mass changes presently speculative concepts of the universe:** It is potentially a pivotal revolutionary step in the transition from theory to fact.
4. **What the eyes see, and what we think we see, can differ from reality.** 'I must see it to believe it' can be a catastrophic concept, for facts may seem to be phantoms, and phantoms may appear as facts. (E.g. At best, we see a delayed sunrise; and the sun set before its time.)
5. **Knowledge, which is based only on what we see, like "relativity," is only relatively true.** But relative truth dare never be equated with absolute truth, or actual facts. Truth is never relative. Truth constitutes eternal concepts, which are confirmed by invariable facts and principles – law.
6. **Ultimately light is more than a physical commodity;** it is a connecting link with philosophical, theological and spiritual dimensions. As we delve into the complexities of light, we enter both cradle and cathedral of creation, where the Biblical God said: "*Let there be light!*" And I respond:








PART D. CONCLUSIONS On Light, Gravity, and The Universe.

D.1. As discussed in the Preamble, there is no conflict with truth, science (knowledge) and the divine. But in reality, restricted human limitations cannot identify and comprehend the details of the infinite microcosm and macrocosm of space, matter and time. In consideration of all of the above, scientific theories, and revelation, *"Fiat lux – Let there be light!"* (Genesis 1: 3) Figure D.4.1. is a progressive plausible answer for the expanding genesis of the universe.

D.2. A Plausible Summary Description.

(See also Page 24, Schematic Diagram, Figure D.4.1.)

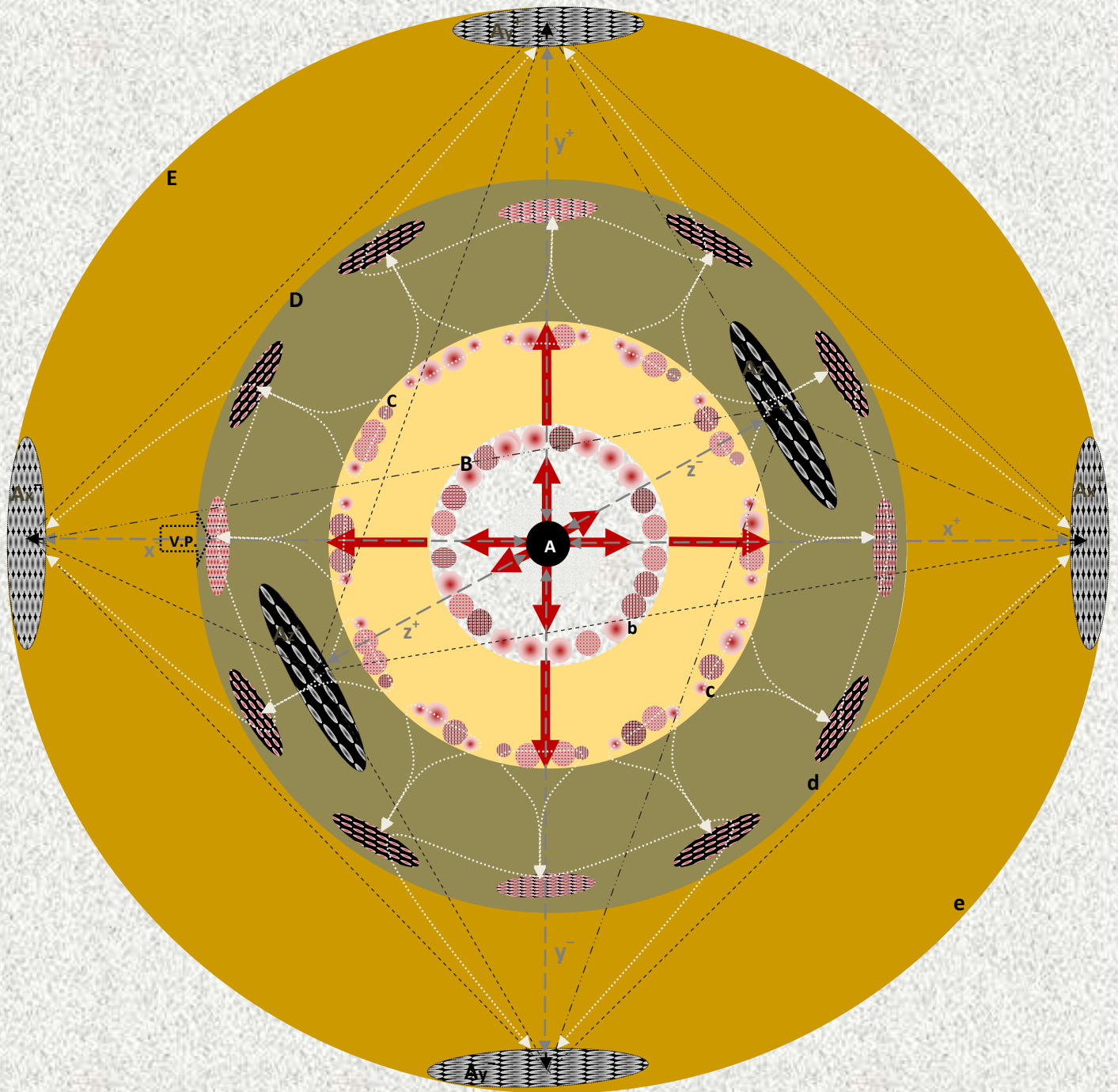
1.  Creation began at a source "A." (God making a Big Bang.)
 - a. Matter, initially as light, radiated three dimensionally, along axes X^{\pm} , Y^{\pm} , Z^{\pm} , and their countless coordinates.
 - b. As discussed in C.1. mass of light travelled, for example, along axis " $X^{-} \leftarrow A \rightarrow X^{+}$ " at a speed, as initiated by laws, conforming to laws of gravity.
 - c. Mass of light travelling along axis X^{-} and X^{+} separated from each other at this speed (speed of light) **times two**. (Contrary to Einstein, the speed of two moving objects is not restricted to a constant invariable speed of light; it can be double the speed of light.)
2.  At radius "B" inter-gravitational forces started to congeal and form 'celestial' objects: Asteroids, planets, moons, and/or stars.
3.  At radius "C" inter-gravitational forces started to form groups, and solar systems.
4.  At radius "D" inter-gravitational forces started to form galaxies. (Present status quo.)
5.  At radius "E" and at Axes X^{+} , X^{-} , Y^{+} , Y^{-} , Z^{+} and Z^{-} inter-gravitational forces will form super-galaxies, which effectively are mini-universes. As mini-universes progressively are further removed from central gravitational point "A," inter-gravitational effects will increase, and may terminate mini-galaxies as Black Holes and start all over again. (The implications of this can lead to utterly complex theories.)
6. The above, D.2.1.b.c., explains Dark Matter: The total mass of the entire universe, is greater than the mass total of our visible universe.
The reason being:
If our location in the universe is on Axis X^{-} , anything that is on Axis X^{+} is invisible for us, because it is moving away from us at twice the speed of light. Nevertheless, the force of gravity, caused by invisible substances that are on Axis X^{+} , is still in effect. (cf., Fig. D.4.1.Note)

D.3. Concluding Quotation from Preamble:

Scientific truth supersedes human realms of mind.
The universe is so big, like its creator, it is beyond observation.
At best we may be privileged to discover a part of truth.
There is only ONE, who can say, and He did say,
"I AM THE WAY, THE TRUTH AND THE LIFE."
(John 14: 6)

D. 4. Genesis Of The Universe: A Schematic Diagram

Fig. D.4.1.



Note D.4.1.

If a Vantage Point of the universe is on Axis X^- at v.p. , then for reasons stated above in D.2.1.c., all points, which are beyond Axes Y^\pm and Z^\pm , will be invisible and unobservable: **They are "Dark Matter."**

Note D.4.2.

Time:

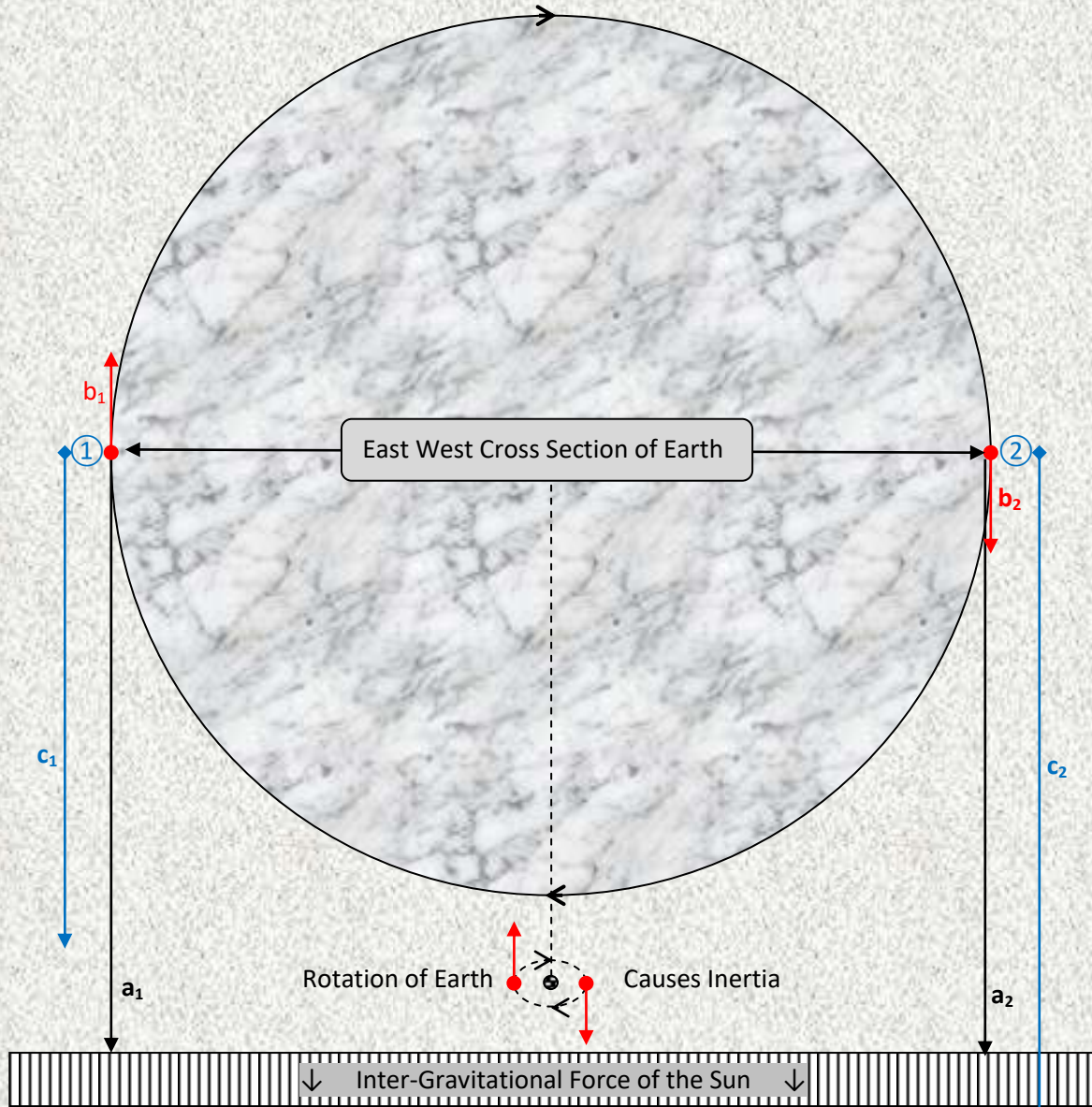
1. Time is not a physical entity in the physical universe.
2. Universal time is not based on the earth's rotation.
3. Time relates directly to a point's distance from 'A' and the respective difference in radius with other points.

D. 5. Gravity Is The Engine Of Rotating Objects In The Universe.

The center of gravity in the universe is Point "A" (D.2.1.); then there are countless inter-gravitational forces (D.2.2.). The interaction of gravitational forces of moving objects, which have mass, inertia and centrifugal forces, are such so as to cause mass (bodies of mass) to rotate on its own axis, as is illustrated in Figure D.5.1. ($G = (m_1 \times m_2) / d^2$)

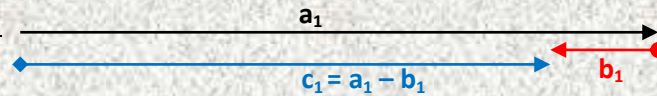
Fig. D.5.1.

Relevant energy vectors show that the earth's rotation on its own axis is speeding up.

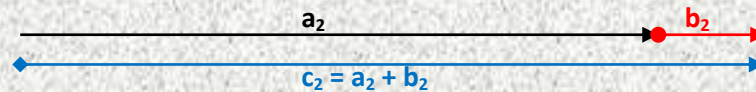


Total Values of Energy Vectors:

At Point ①:



At Point ②:



Conclusion:

- The resulting directional energy vector c_2 is greater than vector c_1 , which caused(s)
1. The earth to rotate on its own axis, and a progressive increase in speed of rotation;
 2. Consequently, centrifugal forces progressively increase, which
 - a. Progressively raises the ceiling of planet earth's atmosphere, which
 - b. Progressively causes global warming, until the earth is uninhabitable, like Mars.

PART E. FAMOUS LAST WORDS.

E.1. Einstein correctly pointed to the interrelationship between energy and light. Yet he overstated his case with his specific formula $E=mc^2$, which is (a) mathematical gobbledygook, because for **E** to be generated, **m** must be reduced to **zero**, but when **m** is **zero** the formula self-destructs; and (b) the concept of his formula ($E=m_0c^2$) militates against physical immutable facts. ([PART A.](#))

Yet Einstein's is a celebrity. There are primarily two reasons for this:

1. **The thinking of Einstein was a product of the popular philosophy of his time – Nihilism.** The term nihilism is derived from the Latin "nihil" (i.e., "Zero = 0"). Nihilism* is summarized in the dictum, "*There are NO (nihil) absolutes – everything is relative.*" As an opportunist Einstein gave the philosophy of nihilism a "scientific" spin, i.e. The Theory of Relativity. Nihilists praise Einstein as their Pop Hero: "*Yes! There are no absolutes! There is no absolute authority – no personal God! Everything is relative. Only my perspectives, feelings and convictions matter. Even scientific facts, space and time, are warped, for they appear as such to me.*" (Really?)

(*Nihilism is a self-contradicting conundrum; for how can one can make the absolutely true statement, "*There are NO absolutes*" if in fact there are no absolutes? Yet, nihilists always seem to be compelled on insisting that they are right.)

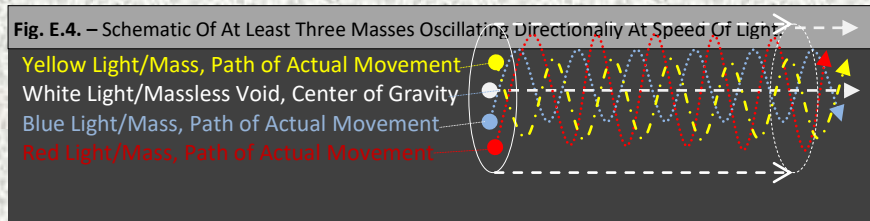
2. **Human beings have a propensity to enhance mythical heroes.** Especially Semitic people, who experienced the ravages of Adolf Hitler and Anti-Semitism, were in desperate need of a hero. Einstein fits the bill perfectly: Einstein was one of their own. Einstein escaped Hitler's clutches. Einstein outmaneuvered his foes. Einstein was smart. Einstein has become a mythical Super scientist and hero. Even his iconic appearance, his hair is used to portray him as a wizard: Einstein has become a Pop Hero. (E.g., On October 24, 2017, at Jerusalem, Einstein's memo: "*A calm and modest life brings more happiness than the pursuit of success combined with constant restlessness,*" sold for US \$ 1,560,000.00. Yet Einstein simply plagiarized King Solomon, *Proverbs 17: 1: "Better is a dry morsel with quiet than a house full of feasting with strife."* If the Bible says so, it with worthless. But if a Pop Hero Einstein says so, it is worth millions – really?)

E.2. A transfer of energy always comprises mass. Waves, devoid of mass, do not transmit energy. As in water, it is not the wave, per se, which transmits energy, but the physical wave-like moving mass of water, which transmits energy. Likewise is the transfer of atomic energy, electric energy, and chemical energy: Physical change and movement of substances within the nuclei of atoms, and movement or physical exchange of electrons' mass is a must. It is therefore inconceivable that light can transfer energy, which does not entail the physical movement of mass, be it infinitely small. The fact that light transmits energy is undeniable. (Human life can exist, because light transmits energy from the sun.)

E.3. As surely as apples fall from trees, mass exerts a gravitational force. The influence of Einstein and his proposal, $E=mc^2$, has so blinded the scientific world that it overlooked the observable examples, which this author displays in this presentation. By numerous examples the author illustrates:

1. Light behaves in a manner, which corresponds to the expected gravitational behavior of mass.
2. The mass of a visible object exerts a gravitational interaction on the directional movement of light, irrespective of the near infinitely smallness of the mass of light.

E.4. The center of gravity of a moving photon is in effect a massless void, due to the frequency of laterally moving masses. (Reason why polarized lenses can filter out certain light.)



E.5. An acknowledgement of above-listed facts radically changes our present concept of the universe. Space is not an empty void, as it appears to relativistic nihilists, who base their conclusions exclusively on what they perceive to be. The universe is like a living organism, which has no vacuum, only differing concentrations of mass, which is governed by an enigmatic force – gravity (God). Perhaps we finally reached the level of understanding that our Biblical ancestors had millennia ago: Creation and its creator is beyond human understanding. At best we can guess, marvel and worship.

- E. 6. **General Characteristics of Gravity and Magnetism** against the backdrop of an apparently endless paradoxical universe: Night sky photo of a section of the Northern Hemisphere, which seems to be a black void, but which is filled with light, that is controlled by gravity, even light so bright that the human eye must keep a safe large distance.

| | | |
|---|--|--|
| Fig. E.6.1. | <u>Theoretical Definition</u> of | Fig. E.6.2. Star A ₁ is part of the Big Dipper. A ₂ is enlarged A ₁ . |
| <u>GRAVITY,</u> <u>The Engine that Drives the Universe.</u> | | |
| <u>A. Whereas:</u> | | |
| <ol style="list-style-type: none"> 1. Electro-magnetic forces are caused by electro-magnetic lines that are formed by a spinning 'omnipresent' single electron in an s₁ orbital; 2. Electro-magnetic lines/forces have ± polarity, and cannot cross each other; 3. But when single electrons chemically combine to form an electron-pair, electro-magnetic lines and forces simply vanish. | | |
| <u>B. The author contends:</u> | | |
| <ol style="list-style-type: none"> 1. <u>Electro-magnetic forces and gravitational forces are virtually one and the same.</u> 2. Electro-magnetic forces do not simply disappear: They are no longer two-directional, polarized dipole; they are an unpolarized gravitational force that is three-directional along axes 'x-y-z'. As such, <ol style="list-style-type: none"> a. Gravitational forces can cross each other; b. As applicable, vectors of gravitational forces and inertia are cumulative. c. Simply altering electron configuration may: <ol style="list-style-type: none"> i. Switch electro-magnetism to gravity; ii. Switch gravity to magnetism; possibly iii. Even enable levitation and teleportation. 3. The ratio of electro-magnetic and gravitational forces in the universe is directly proportional to the ratio of polaric mass and non-polaric mass. 4. Since electro-magnetic and gravity forces can be employed to do work, without ever diminishing, it is logical to conclude that there is yet an ultimate force, which sustains them. | | |
| (Isaiah 40: 31) | | |

