

Holograms, Light ... and the Word of God

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Introduction... In view of our special guest appearance of Frank DeFreitas, and his splendid presentation of holographic images of ancient biblical artifacts in light, it is most appropriate that we consider the phenomenon of light itself. Just as the original creation received the radiant glory and power of the Creator expressed as light, the future eternal ages will enjoy the resplendent radiance of God Himself, for

"...the city had no need of the sun, neither of the moon, to shine in it:
for the glory of God did lighten it, and the Lamb is the light thereof" (Rev. 21:23);
"Who only has immortality, dwelling in the light" (I Tim. 3:16).

I. Holograms as beautiful illustrations of the Triune God

Technical journals describe Holograms as true three-dimensional images. While viewing the image you can move your head and actually see it in a different perspective. This movement includes revealing part of the image that was hidden at another viewing angle. *Holos* comes from the Greek, meaning "whole, complete, entirety." And a phenomenal feature about Holograms is that "every part contains the image of the complete object!" It is no wonder that physicist Dennis Gabor received the Nobel Prize in 1971 for inventing holography.

The science of holography is termed "lensless photography," because it is not an image focused ON film. It is, instead, an "interference pattern" or "conjunction pattern" of two different sources of light AT the film. The film is the agent giving the image tangible expression when illuminated in natural light from a specific direction (56 degrees being the optimal angle).

Typically, in producing a hologram (1) a pure laser reference beam (that has not been modified in any way) is combined at the film with (2) coherent light from the laser that is object reflected and recorded at the film. The recorded "conjunction pattern" actually contains much more information than is seen in standard photography, and enables the viewer to see a true three-dimensional image that exhibits parallax. Unless the viewing angle is correct, nothing is seen other than a blank (to the eye) film plate.

As an illustration, the application to spiritual matters is obvious. God the Father is represented by the pure, coherent laser reference beam, unmodified in any way:

"Every good gift and every perfect gift is from above, and cometh down from
from the Father of lights, with whom is no variableness, neither shadow of
turning" (James 1:17).

God the Son is represented by the conjuncting coherent laser light that is reflected and combined at the film with the reference beam: the God-man who walked in full physical dimension among men. "[B]eing in the form of God...equal with God...found in fashion as a man" (Phil 2:5,6), He is "the Light of the world" (John 9:5):

(Phil 2:5,6). "He that hath seen me hath seen the Father" (John 14:9).

God the Spirit is represented by the film plate as the Agent making the "conjuncting image" viewable:

"When He, the Spirit of Truth is come He shall glorify me: for he shall receive of mine, and shall show it unto you" (John 16:14).

The Scriptures are represented by the correct viewing angle through which the image is properly seen:

"The entrance of the Word giveth light" (Ps. 119:130),
"In thy light shall we see light" (Ps. 36:9).

The Hologram illustration further parallels the Scriptures in that each Gospel relates a correct image of Jesus, but each is viewed from a different vantage point:

...*Matthew* was primarily written to Israel, showing Jesus as the **King of the Jews**,
...*Mark* was primarily written to the Gentiles, showing Jesus as the **Faithful Servant**,
...*Luke* was primarily written to the Greeks, showing Jesus as the **Perfect Man**,
...*John* was primarily written to New Testament believers, showing Jesus as **Son of God**.

Yet, in *each* of the four Gospels **all aspects of the other three are included!** "For God, who commanded the light to shine out of darkness, hath shined in our hearts, to give the light of the knowledge of the glory of God in the face of Jesus Christ" (II Cor. 4:6).

II. Light and Portraits of Christ¹

This brings us to relationships using physical light that we experience throughout our lifetimes. Light can be broken up into the individual colors of the spectrum. Taken individually, they are red, orange, yellow, green, blue, indigo, and violet. More commonly referred to as ROY G BIV.

When viewed through the "Bible Spectroscope" each color can be matched with its associated reference in Holy Scripture. The BIBLE is the SPECTROSCOPE or PRISM which diffracts seven color pictures or portraits of CHRIST (Psa. 119:130):

¹ Frank DeFreitas, *Personal Correspondence*, March 20, 2016 (www.holoworld.com); 100 hours with your Bible, Merv Rosell, 1952.

1. **RED**: for his **REDEMPTION** (Blood) Rev. 5:9; 1 Pet. 1:18-19; Gal. 3:13; Rom. 3:23

And they sung a new song, saying, Thou art worthy to take the book, and to open the seals thereof: for thou wast slain, and hast redeemed us to God by thy blood out of every kindred, and tongue, and people, and nation (Revelation 5:9); Forasmuch as ye know that ye were not redeemed with corruptible things, as silver and gold, from your vain conversation received by tradition from your fathers; But with the precious blood of Christ, as of a lamb without blemish and without spot; (1 Peter 1:18-19); For all have sinned, and come short of the glory of God; Being justified freely by his grace through the redemption that is in Christ Jesus (Romans 3:23-24)

2. **ORANGE**: for his **JUDGEMENT** (burnished brass) 1 Pet. 2:22-24; Ex. 38:1

Who did no sin, neither was guile found in his mouth: Who, when he was reviled, reviled not again; when he suffered, he threatened not; but committed himself to him that judgeth righteously: Who his own self bare our sins in his own body on the tree, that we, being dead to sins, should live unto righteousness: by whose stripes ye were healed. (1 Peter 2:22-24); And he made the altar of burnt offering of shittim wood: five cubits was the length thereof, and five cubits the breadth thereof; it was foursquare; and three cubits the height thereof. (Exodus 38:1)

3. **YELLOW**: for his **DEITY** (Yellow-Gold of his Deity) Col. 2:9; John 1:1-5, 9, 5:18

For in him dwelleth all the fulness of the Godhead bodily (Colossians 2:9); In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men. And the light shineth in darkness; and the darkness comprehended it not. (John 1:1-5); Therefore the Jews sought the more to kill him, because he not only had broken the sabbath, but said also that God was his Father, making himself equal with God. (John 5:18)

4. **GREEN**: for his **HUMANITY** (Green is Earth's Color) John 1:14; Phil. 2:7-8; Heb. 4

And the Word was made flesh, and dwelt among us, (and we beheld his glory, the glory as of the only begotten of the Father,) full of grace and truth (.John 1:14); But made himself of no reputation, and took upon him the form of a servant, and was made in the likeness of men: And being found in fashion as a man, he humbled himself, and became obedient unto death, even the death of the cross. (Philippians 2:7-8)

5. **BLUE**: for his **ETERNITY** (Heavenly Color) 1 John 5:11-13; Col. 1:15-19; Heb. 1:8

And this is the record, that God hath given to us eternal life, and this life is in his Son. He that hath the Son hath life; and he that hath not the Son of God hath not life. These things have I written unto you that believe on the name of the Son of God; that ye may know that ye have eternal life, and that ye may believe on the name of the Son of God. (1 John 5:11-13); Who is the image of the invisible God, the firstborn of every creature: For by

him were all things created, that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: all things were created by him, and for him: And he is before all things, and by him all things consist. And he is the head of the body, the church: who is the beginning, the firstborn from the dead; that in all things he might have the preeminence. For it pleased the Father that in him should all fulness dwell (Colossians 1:15-19); But unto the Son he saith, Thy throne, O God, is for ever and ever: a sceptre of righteousness is the sceptre of thy kingdom. (Hebrews 1:8)

6. **INDIGO**: for his **SUFFERING** (strange color) Isa. 53:3-4; Lu. 22:44; Matt. 27; Lu. 23

He is despised and rejected of men; a man of sorrows, and acquainted with grief: and we hid as it were our faces from him; he was despised, and we esteemed him not. Surely he hath borne our griefs, and carried our sorrows: yet we did esteem him stricken, smitten of God, and afflicted. (Isaiah 53:3-4); And being in an agony he prayed more earnestly: and his sweat was as it were great drops of blood falling down to the ground. (Luke 22:44); Additional Reading: Matthew 27 and Luke 23 7.

7. **VIOLET**: for his **ROYALTY** (the royal purple) Isa. 9:6-7; Eph. 1:20-23; Rev. 5:11-13

For unto us a child is born, unto us a son is given: and the government shall be upon his shoulder: and his name shall be called Wonderful, Counsellor, The mighty God, The everlasting Father, The Prince of Peace. Of the increase of his government and peace there shall be no end, upon the throne of David, and upon his kingdom, to order it, and to establish it with judgment and with justice from henceforth even for ever. The zeal of the LORD of hosts will perform this. (Isaiah 9:6-7); Which he wrought in Christ, when he raised him from the dead, and set him at his own right hand in the heavenly places, Far above all principality, and power, and might, and dominion, and every name that is named, not only in this world, but also in that which is to come: And hath put all things under his feet, and gave him to be the head over all things to the church, Which is his body, the fulness of him that filleth all in all. (Ephesians 1:20-23); And I beheld, and I heard the voice of many angels round about the throne and the beasts and the elders: and the number of them was ten thousand times ten thousand, and thousands of thousands; Saying with a loud voice, Worthy is the Lamb that was slain to receive power, and riches, and wisdom, and strength, and honour, and glory, and blessing. And every creature which is in heaven, and on the earth, and under the earth, and such as are in the sea, and all that are in them, heard I saying, Blessing, and honour, and glory, and power, be unto him that sitteth upon the throne, and unto the Lamb for ever and ever. (Revelation 5:11-13)

III. Light as the awesome display of the power of the Triune God

Marcus Chown elaborates on Einstein's formula equating energy, mass, and their relationship to the speed of light: "The physicists' symbol for the speed of light, "c," is a big number – 300 million meters [186,000 miles] per second. Squaring it- multiplying it by itself- creates an even bigger number. Applying the formula to *1 kilogram of matter* shows that it contains 9×10^{16} joules of energy- enough to *lift the entire population of the world into space!*" (Chown pp.114-115).

When we bring this down to the Bible and to the creation of the world we must realize what an astounding amount of energy it took to create from nothing the world and the universe. The Son of God as the agent of creation spoke the whole universe into existence. We are awed by the vast and incredible power display of the word of God both to create the universe and to sustain it to this present moment (Jn. 1:3; Heb. 1:3). In the Hebrew language, “word” is “*devar*” and “things” are “*devarim*.” After all these centuries “word” and “created things” have a very close connection. When God speaks, things happen.”²

IV. Light as an instrument in God's control over His universe

One of the stunning discoveries about light (and electromagnetic radiation throughout the universe) came with the introduction of quantum physics and quantum mechanics. This discovery had to do with the Dual Nature of light: light can travel as either a *particle* or a *wave*! Physicist Lambert Dolphin writes that "all forms of EM radiation can be described mathematically as consisting of streaming photons...The concept of 'wave-particle' duality is well established by experimental evidence."³

Professor Christopher Cagan of the University of California made a very insightful observation. He wrote that the dual nature of light provides the Creator the opportunity to *alter the course of universal events at His own discretion* by directing the function of light (and all radiation) in His preference as *either a wave or a particle*!⁴

This essentially means that at the very foundation of the structure of all matter and energy the Creator has the *potential and option to re-arrange its relationship* with all other matter and energy. Mysteries such as *God's ability to alter situations in answer to prayer* may thus be easier for us to understand.

V. Light illuminating the character of Jesus to the believer

It is impossible to overemphasize the importance of the life and person of Jesus Christ. Scriptural light and personal illumination reveal our very intimate relationship with Him:

To the *artist* He is the *One Altogether Lovely* (Song of Sol. 5:16).

To the *architect* He is the *Chief Cornerstone* (I Peter 2:6).

To the *astronomer* He is the *Sun of Righteousness* (Mal. 4:2).

To the *baker* He is the *Bread of Life* (John 6:35).

To the *banker* He is the *Hidden Treasure* (Mt. 13:44)

To the *builder* He is the *Sure Foundation* (Isaiah 28:16).

To the *carpenter* He is the *Door* (John 10:7).

To the *doctor* He is the *Great Physician* (Jer. 8:22).

To the *educator* He is the *New and Living Way* (Heb. 10:20).

To the *farmer* He is the *Sower and the Lord of Harvest* (Luke 10:20).

To the *believer* He is the *Son of the Living God* (Mt. 16:16).⁵

² Ibid.

³ Lambert Dolphin, *What is Light?*, Physicist Website

⁴ Christopher Cagan, *From Darwin to Design*, Amazon

⁵ Harold Wilmington, *Wilmington's Guide to the Bible*, Tyndale House, Wheaton, IL, 1981 p. 609

In a universal dimension He sheds light on *who He is* in offering himself to the whole world. In John's Gospel He calls himself the "**I AM**" seven times:

"I am the **Bread of Life**" (6:35).

"I am the **Light of the World**" (9:5).

"I am the **Door**" (10:9).

"I am the **Good Shepherd**" (10:11).

"I am the **Resurrection**" (11:25).

"I am the **True Vine**"(15:1).

"I am the **Way**" (14:6).

Dr. Henry Morris wrote: "Light is the most fundamental and important form of energy, and energy includes every phenomenon in the physical universe."⁶ All this energy and power are resident in the electromagnetic spectrum of light spoken into existence by Jesus Christ on Day One of Creation. He is the awesome and powerful Creator of the universe.

⁶ Henry M. Morris, "In Him is No Darkness," *Evidence for Creation*, icr.org

ABOUT:

CARL BAUGH is the Founder and Director of the Creation Evidence Museum of Texas in Glen Rose. He is the scientific research director of the world's first hyperbaric biosphere, simulating earth's atmospheric conditions before the world-wide flood of Noah's day. He is the discoverer and excavation director of sixteen dinosaurs, including Acrocanthosaurus in Texas and Diplodocus Colorado. In 1990 he was co-director of an expedition searching for the Ark on Mt. Ararat. After forty years of research in this area, he directed the construction of a 25-foot (1/20 scale) replica of the Ark now in the museum, and holds a U.S. Patent on the gofer wood process. Carl Baugh lectures internationally on evidence for scientific creation on television and radio, and in schools, churches and various organizations. He stands firmly FOR the Biblical account of creation.

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FRANK DeFREITAS had his laser and holography studio / lab in Allentown, Pennsylvania for thirty five years. Since 1983, he provided presentations, workshops, outreach programs and services to: The Smithsonian Institution, Wash. D.C. (The Hirshhorn Museum & Ripley Education Center); The Franklin Institute, Phila; Stevens Institute of Technology; Liberty Science Center, NJ; The Discovery Center of Science and Technology, PA; Lehigh University Physics Dept.; University of Pennsylvania Museum of Archaeology and Anthropology; MENSA (2x keynote address: 2000, 2017); California Institute of Technology (CalTech/JPL); Northampton Community College; LehighCarbon Community College; Allentown Art Museum; Rodale Press; WFMZ-TV; NASA / Northrop Grumman; Georgian Court University Physics Dept.; AT&T; Lucent Technologies; U.S. Navy; Fuji Film Corp.; Dupont; the Urban Systemic Initiative (NSF); and many elementary, middle and high schools. National Science Foundation-funded programs; scouts; home school groups; corporate events; birthday parties; and teaching the very first online class for holography through America On Line in 1995.

He is an elected member of Sigma-Pi-Sigma; the National Physics Honor Society; American Institute of Physics; for his work in laser and holography educational programs. He stands firmly FOR the Biblical account of creation.

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