

FIGURE IT OUT

APOLOGETICS

BOOK 2 - ORIGIN OF THE UNIVERSE

Dr. David Newton

HARBOR VIEW PUBLISHING HOUSE
SANTA BARBARA ⌘ CALIFORNIA

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ISBN: 979-8-89342-896-4

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*"Be perpetually ready to make
an 'apologia' [a legal defense or
reasoned argument] to everyone
who asks you to give a 'logos' [word]
for the hope that is within you, yet do
this with gentleness and reverence"*

1st Peter 3:15

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ACKNOWLEDGEMENTS

During the summer of 2023 I taught a 12-week series on Apologetics at Calvary Chapel Santa Barbara. Turning my notes into a book resulted in over 450 pages. Would potential readers readily take on a book of that size? Thanks to everyone who gave me feedback that it would be much preferred to have a series of 12 smaller paperback books – one covering each of the 12 Apologetics topics. People could easily find the topic they have interest in and the entire series could fit on a desk or bookshelf as a ready-reference about foundational Apologetics issues.

Thanks to Bret Shellebarger who first approached me about teaching a series on Christian Worldview, which turned into the Apologetics study. Thanks to senior pastor Tommy Schneider for his encouragement to go deep on each topic, and then inviting me to do the first teaching at the Calvary Wednesday midweek service. Many thanks also to the 120+ who signed up online for the Summer series and faithfully attended Monday evenings - and for all those challenging Q+A sessions after each topic.

Big thanks to Jef Richardson for video-recording all the Monday evening teachings - and to Kevin Hurtado and Sam Shellebarger who filled in and covered for Jef the two times he was unable to make it. Readers can view the 12 video-teachings that correspond to these 12 Apologetics books at my YouTube channel **Figure It Out** @NewWaveDave1977.

Thanks once again to Jenny Yarbrough for another great job designing book covers for this Figure It Out series – just like her graphics work on my other FIO books and the www.NewtonFIO.com website. Thanks also to all those who did proof-reading and editing. And many thanks always to my family for your love, prayers, and support of my teaching ministry.

FOREWORD

We cannot teach, much less defend, what we do not know. Apologetics is for every Christian because it addresses the questions a typical skeptic uses to challenge the claims of Christianity. While speaking around the nation at secondary schools, churches, and college/university campuses one concern is obvious: Biblical literacy is rare, as increasing numbers of people are choosing to follow the ways of the world. Many who grew up in Christian environments do not know what they believe or why they believe it. At a time when God's Word and name are challenged and ridiculed [even in places founded upon Judeo-Christian values], many well-meaning believers struggle with how to articulate and defend their beliefs. For this reason, Dave Newton's book series on Apologetics is both timely and important. These excellent resources are packed with wisdom from Newton's decades of teaching the Bible and defending the faith. Each short book is well-researched, easy to follow, and provides logical, reasoned answers to one of the twelve most common objections to Christianity. Dr. Newton's use of compelling statistics, analogies, and stories prove why Christianity is true and has withstood the test of time. Whether you are new to the faith, a mature Christian, or still trying to answer life's biggest questions, this Apologetics series will further equip you to defend your faith with all your heart, soul, mind, and strength. I have no doubt you will return to this resource time and again to find great information to explain a reason for the hope within you.

Science is a valuable tool for how things work, yet science alone cannot answer the important questions: *"Why are we here?" "What is the origin and meaning of life?"* The Naturalist Worldview claims everything has a random and undirected cause. But when pressed to explain the origin

of life, “expert” scientists often posit theories that lack evidence, make little sense, and require a great deal of faith. They “believe” we live in a godless universe. Products of a random, unguided, evolutionary process, and life has no meaning or purpose. Despite the evidence pointing to a Creator-Designer for life on Earth, the Naturalist Worldview continues to permeate culture and undermine the Biblical Christian Worldview. Asking skeptic: ‘*Show me evidence to support naturalist dogma*’ is a very effective way to defend your faith. Dr. Newton asks more than a dozen of these difficult questions and provides images, statistics, charts, and other resources to reinforce a great case for the deliberate, finely-tuned, *meaningful process* of creation that could only have been orchestrated by a Designer-Creator functioning *outside* of physical space-time. Rather than accept theory as fact, or adopt what’s popular as truth, Dr. Newton thoughtfully debunks six so-called “Axioms” of science in textbooks and classrooms - from Darwin’s evolutionary tree, to lightning that struck a primordial pool resulting in cells and DNA randomly bursting forth as the origin of life of Earth. Weighing the evidence and addressing theories directly, this book will strengthen your belief in an intelligent God who is the origin *and sustainer* of life - including you [Colossians 1:16-17].



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How the Scriptures, History, and Experience Can Shape Our Prayers.

INTRODUCTION *to* APOLOGETICS

What exactly is Apologetics? A great starting place is in Acts chapter 17 where Saul is on the Areopagus [Mars Hill] just below the Acropolis in Athens, Greece. There he had a dialogue with skeptical Epicurean and Stoic philosophers. I have been up on that rock outcropping many times over the years and always love to read Acts 17:16-34 out loud, which is also engraved right there on a large stone placard. It is Paul's teaching about the *Unknown God* and his defense of the Christian faith within the pantheism of that First Century Athenian culture. Apologetics comes from the Greek word **apologia** [ἀπολογία] meaning "a verbal defense, a reasoned argument". Peter used this [1st Peter 3:15] when encouraging his readers to ALWAYS be ready to give an **apologia** about the Logos, regarding the hope within you, to anyone who would ask.

The 12 booklets in this FIO Apologetics series each examine one topic in the context of the questions a typical skeptic asks about the Christian faith, and how to reply with a well-prepared, thoughtful, rational, logical, reasonable response – information to equip you for such conversations. The primary focus is to provide my readers with content that is easy to remember and easy to explain. However, there are three caveats. First, everything in these booklets faces significant challenges, concerns, and oftentimes outright ridicule because no matter what position you have there will always be those who oppose it. Challenges will come from outside Christian circles and Christian thinkers, but [sad to say] they also come from within Christian circles and Christian thinkers. I can guarantee that all I present in these 12 volumes will have philosophers, theologians, pastors, and scholars who will thoroughly disagree with my position.

Second, rarely if ever does a great Apologetics response convince the skeptic to change a position. But reasonable-logical-rational-thoughtful responses can help remove the stereotypical way that people often think about conservative Christians - that we are unreasonable, illogical, irrational, close-minded, not very thoughtful. And third, the Bible will not be my primary source of defense because skeptics will say, "I don't believe the Bible, what else have you got?" I will utilize Scripture as I go deeper into each topic and cover solid evidences that align with facts.

My position for this entire series states there are just two competing worldviews. This book introduces the **Naturalist Worldview** opposite the **Biblical Christian Worldview**. The former is inherently atheistic [there is no God and everything happens by random accidental iterations over long periods of time]. The latter is inherently theistic [there is a God who designed-created everything]. But in today's Apologetics debates, there is also a **Theistic Evolutionary Worldview** that attempts to blend the prevailing scientific paradigm that everything in the universe results from billions of years of random evolution and natural selection – and this is the process God used after He provided the starting-point elements and chemical compounds. His process of evolution facilitated everything to iterate, mutate, transition, and survive or die-out by random probability occurring over the course of billions of years. However, the same math that renders the Naturalist Worldview untenable, also undermines all the premises and processes of Theistic Evolution, so I have chosen to not treat this as a distinct, third Worldview worth examining more closely.

Providing sound, logical, and thoughtful *apologia* of the Christian faith reminds me of my work as an expert witness in legal cases, where I have been hired by various law firms to provide testimony for either a plaintiff's or defendant's legal case about negative economic impacts, business

valuations, financial loss from breach of contract, failure to perform, or outright fraud. My summary report lays out the logic of all the supporting evidence and rationales related to the issue that bitterly divides the two parties – to bring an unbiased and objective *verbal defense, a reasoned argument* - based on the evidence reviewed. That is my *apologia*. There are usually several other “expert witnesses” hired by the opposing legal counsel who submit perspectives that directly contradict my professional opinion. My “expert witness” approach is the same for this series on Christian Apologetics – to provide perspectives and evidence for anyone responding to the skeptics who challenge the credibility of Christianity.

The 12-volume series covers the most common questions asked about Christian faith – and how best to respond with confidence using rational, logical thought-processes with reliable common sense evidence. Each book tracks the on-going dialogue between a skeptic of Christianity and a well-informed, well-equipped believer who is able to confidently reply with a defense backed by sound logic and verifiable evidence. Each booklet concludes with a bibliography of Additional Resources where readers can find more information on each Apologetics topic. As you can imagine, it is virtually impossible to cover every topic or question that can be raised. But this series examines the twelve most popular issues you are likely to encounter, and provides solid answers for the skeptics. May this series become a trusted resource you go back to time and again regarding the foundational rationales for the hope within you, with the page-edges frayed and folded over from regular use as you dig in and learn to master the underlying Apologetics of your own Christian faith.

- Dr. Dave Newton
December 2023
Santa Barbara, California

BOOK 2

ORIGIN OF THE UNIVERSE

The predominant theory today in science about the origin of the universe is the Big Bang.

- John C. Mather [Astrophysicist]

The Big Bang theory says nothing about what banged, why it banged, or what happened before it banged.

- Alan Guth [Physics Professor at MIT]

In the beginning God created the heavens and the Earth.

- Genesis 1:1

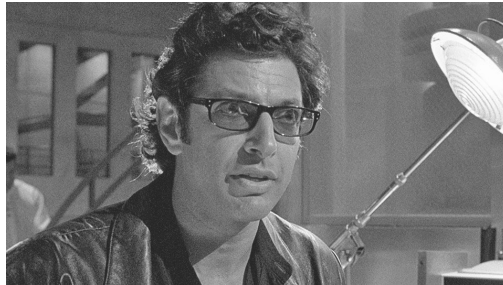
Did you notice in the first two quotes above that Dr. Mather and Dr. Guth both refer to the Big Bang as **theory**. That is a very important point when engaging a skeptic in dialogue about the origin of the universe. Book-1 in my Figure It Out Apologetics series dealt with the topic of Worldview as the lens through which you see and interpret the physical world. In Book-2, I will address the question about the origin of the physical world above us, and all around - the universe, the sun, moon, planets, stars, galaxies, and comets that fill the night sky - and this blue planet called

Earth, came from where? from what? and how did that happen? This is a foundational issue directly related to Worldview, and sets up Book-3 in this series to examine the Origin of Intelligent Life. In the 1973 science-fiction comedy movie *Sleeper*, Woody Allen's character famously states, *"I believe there is intelligence in the universe, with the exception of certain parts of New Jersey"*. [I can include that because I was raised in north Jersey, just across the Hudson River from New York City.] While we



chuckle at this quote, the implications for intelligence in our universe are profound and far-reaching. Everything we see in our physical realm is either the result of accidental random-chance over billions of years of natural processes OR it was all intentionally, purposefully designed and created by a much higher-order Intelligence than humans. This opens up the fundamental question of whether there is any proof that God exists. The origin of the physical universe provides an intriguing set of questions between the Naturalist Worldview and the Biblical Christian Worldview. Is the evidence compelling to support random chance as the very best explanation for the origin of the universe? Book-1 in this Apologetics series provides a detailed examination of the statistical probabilities for complex mechanisms, organisms, and systems-information arising solely by accidental iterations occurring unintentionally over billions of years. The results clearly demonstrate that such natural processes are clearly

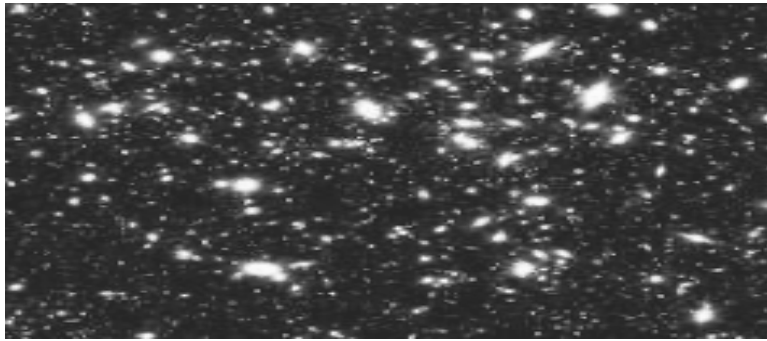
“impossible” to even conceive of, let alone be the basis for explaining the origin of the physical universe all around us. Is it then logical and rational to deduce that there *has to be* a Creator and Designer who is the originator of the physical universe. The Biblical Christian Worldview ‘sees’ the natural world through a lens-perspective that everything in the natural world is all truly amazing. And yet, the Naturalistic Worldview also makes statements that while everything is truly amazing, that output just shows that given enough time anything can happen. If you watched the Jurassic Park series you will remember the character Doctor Malcolm and his statement, “Life breaks free, life expands to new territories, painfully, perhaps even dangerously, but in the end life finds a way”. When you consider that you know Jeff Goldblum's character is in essence capturing



the mind of the Naturalistic Worldview that attributes everything to random chance without any purpose or intent, and believes “there is no God”. As noted in Book-1 on Worldview, the Naturalist loves to use that same phrase, that with enough time anything can happen. But the basic mathematical probabilities do not allow for that. Does the Naturalist like the odds of winning the Powerball [one chance in 292 million]? Here in Book-2, we will consider the Macro realm of the universe, the galaxies, solar systems, and the Earth-moon tandem. In Book-3 we will examine the Micro realm of the unique setting for life on Earth – plants, animals, insects, organisms, humans – all relative to modern Darwinian evolution.

Basics Of The Universe

Consider the photo below. In 2003, it was estimated there were some 200 billion galaxies in the observable universe. Before the Hubble Space Telescope, when looking at the night sky, it was assumed each point of light was a single star [a sun]. Now we know these were not stars, but are each galaxies comprised of billions of individual stars. Those galaxies are



now categorized as being either: 1] Spiral, 2] barred-spiral, 3] lenticular-elliptical, or 4] irregular galaxies - based on their shape and composition. Fast forward just 17 years to 2020 and astrophysicists have updated that estimate to **2 Trillion** galaxies in the observable universe. And that term "observable universe" defines all that is seen with telescopes; however, it is now believed that the universe continues well beyond what can be seen. Today, the brightest astrophysicists have published in the leading contemporary journals that they believe the universe is **47 billion light-years** from end-to-end. Pause for a moment and consider that number. A light-year is traveling at the speed of light for one year [Earth time], so 365 days continuously moving at 186,000 miles per second [292,792 km per second]. How much distance is that? Traveling at the speed of light, a person would cover 6 trillion miles in one Earth-year. For comparison, the farthest planet in our solar system is Neptune, and that is 2.823 billion miles from Earth. Six trillion miles is 2,125 TIMES the distance from Earth

to Neptune. That means Neptune is actually not that far away from Earth, only .00047 light-years [relatively close measured by the speed of light].

Here's our Milky Way. Beautiful isn't it? It is absolutely fascinating that it is home to some 400 billion individual stars. Astronomers estimate those 400 billion stars have around 100 billion total planets orbiting them. Once again, that **estimate** is a **hypothesis** within their **theory** of galaxies



[but of course that have no way of actually knowing for certain the true number of suns and planets]. The diameter of the Milky Way galaxy is 105,700 light years. That means if you wanted to go from one side of the Milky Way spiral all the way to the other side, traveling at the speed of light [186,000 miles per second], it would require 105,700 Earth-years to get across our own galaxy. And this is just one galaxy from an estimated 400 billion galaxies in the “observable universe”.

On the top of the next page is a very interesting galaxy seen through the Hubble telescope. Prior to Hubble’s precision and clarity, this would have been viewed as a single star. Now it is a hi-resolution composite image of what is known as a *Giant barred-spiral galaxy*, and has been named NGC 6872. Remember the diameter of the Milky Way is 105,700

light-years. The diameter of this barred-spiral formation is 522,000 light years, which means it is just over **5 TIMES** the size of our Milky Way. It is



just sitting out there in space, and before the updated view through Hubble spectroscopy, people thought it was just another single sun.

Precision From An Explosion

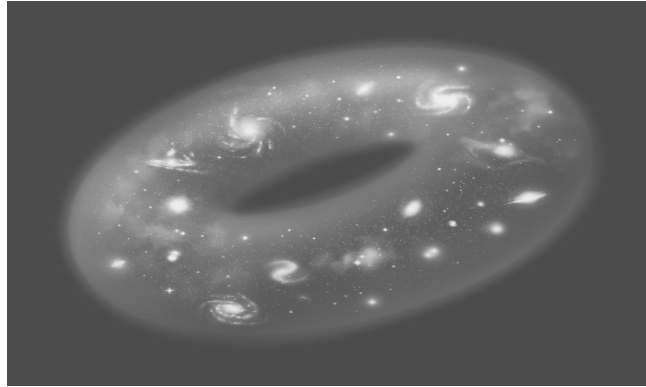
The Naturalist Worldview says there was in fact a beginning to the physical universe – an event called the Big Bang. If you get any science textbook on astrophysics, biology, chemistry, or life sciences there will always be some sort of prelude, some introductory chapter, that will talk about when and how The Big Bang happened exactly 19.8 billion years ago. There was a “singularity” the science term for massive amounts of energy compressed into a tiny subatomic area, and then all of a sudden



it exploded, releasing massive energy and all the foundational bases for the elements that comprise our periodic table. The first question has to be, "Where did all those elements come from in the first place?" "From where in space did they originate in so many different compositions?" "Were they eternally pre-existent just hovering and waiting for the right time to explode?" If God is going to be moved out of the formula and process-flow, the Naturalist has to explain everything from an atheistic perspective, such that it all happened randomly and **accidentally** without any purpose or intent. But even more concerning is the question, "Have you ever seen the results of an explosion?" It is typically a mess scattered all over the place and devoid of any order or organization. "How then does this massive explosion result in what appears to be this finely-tuned order and organization?" The physical universe has been observed and documented to function within consistent and finely-tuned mathematics for vectors, spin rates, volume and shapes of spheres, trajectories and orbital resonances, gravitational fields and light reflectivity [albedo].

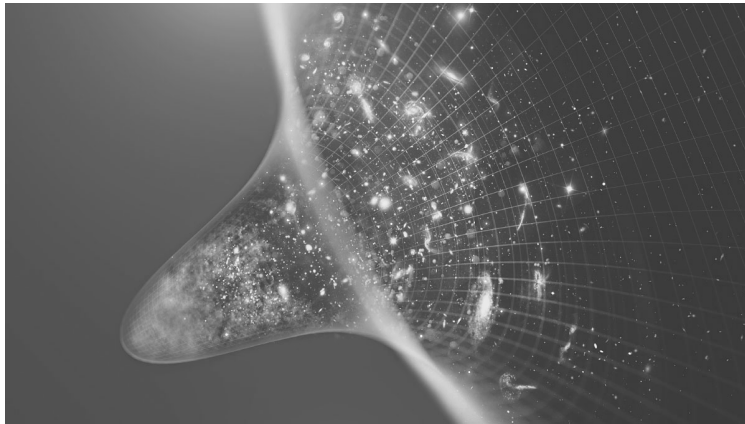
These have now been consistently observed and chronicled as part of the axioms that make up Newtonian physics within Natural Law. But they came from an explosion? The only other natural science position other than the Big Bang is called the Steady-State **Theory** – that from a starting point of matter, it has just been gradually over time creating continuous additional new matter which accounts for the apparent expansion that seems to be observed in the physical universe. An interesting article from August 2021 reported that astrophysicists appear to be equally divided in their opinions about whether the universe is finite or infinite. The latter group believes there is evidence showing the universe is expanding much faster than previously thought. This leads right into that same question commonly referred to as the "observable universe", and

what lies beyond the edge of what we can observe in the physical universe? Realistically, we can only guess what is beyond. This has led to a new **theory** that has come out in the last few decades, that the universe is Torus-shaped – like a big doughnut without any edges [see below].



As such, the universe has no vertices of any kind. If you were traveling in a Torus-shaped universe you would never hit an edge. Everything would seem parallel as you move through it. And if you had enough time, you would have to travel **47 Billion light years** to get “across” the universe. However, there would be no end to this journey. The **hypothesis** notes that if you set out on your mission to go across the entire universe, your perceptiveness would always be that the universe just keeps going and going and going. It would appear to be endless, perhaps then infinite. However, if you did continue the trip for 47 billion light years, you would actually end up making a full circuit through that Torus [doughnut] shape. Then you would be shocked to find that you had actually come back to the same place where you started – even though your course perspective is that you never turned and were always traveling in a straight trajectory. Of course this **theory** cannot be observed or empirically tested. Yet it is now one of the prevailing bases for explaining the size of the universe.

Below is another computer simulation of what astronomers believe the universe looks like in its function. At the lower left-hand corner is where the universe had its beginning point – the Big Bang – and ever since that



that cataclysmic event, it has been mushrooming out from its original singularity. This is based on scientists looking at Cosmic Microwave Background [CMB]. In all kinds of articles scientists love to say that CMB is the residual leftover radiation [energy] from the Big Bang. It points to the perception of flat geometry in any relative space you might be in the universe. Here is an example. Two rocket ships are cruising side-by-side 100 meters apart, both traveling at the same speed [whether 30,000 miles a second or 186,000 miles a second at the speed of light]. They would always be parallel to each other and would never cross paths. They would seem to go on forever in that flattening-expanding universe giving the impression that the universe is infinite. But here is something that drives a lot of the Naturalist physicists crazy. No matter where you are in the this fanning-out universe, the CMB temperature is always the same minus-454° F [minus-270°C]. That is a BIG problem, because if in fact everything came from a single starting point [singularity] then matter that is far out, and matter that is a little closer, and matter that is even

closer throughout this ever-spreading universe, should all have different temperatures because they are all on different paths toward their current observable locations. How then can they possibly have the exact same temperatures everywhere?

Space then appears to be expanding no matter where you are located. If you went out 20 light years to some distant star or planet and set up your telescope, the universe would appear to be expanding – same as if you had your telescope here on Earth. We cannot empirically test that. The on-going expansion of the universe creates a huge debate among physicists – and not just Christians vs. Naturalists. The debate continues throughout astrophysics. Does the perceived expansion just keep going, or is it changing pace? Is it slowing down? The basis of **entropy theory** is that we are actually seeing the universe slowing down over time – that after the Big Bang happened, and all elements/matter shot out into these various planes, the universe is now contracting backward. It is fascinating to read these papers, but not possible for me to comment on every possible topic going on in modern astrophysics. The universe is fascinating and pretty amazing! Did all of the complexity of matter, stars, galaxies, space, light, energy all just happened by chance from a single explosion, based on a Naturalist Worldview? Or is there good evidence that there is more likely a Designer-Creator for this finished product?

Speed Of Light

Over the past three decades, I have read a lot of really great articles and talked to several very credible physicists who explained the proposal made by some that the speed of light may in fact not be constant over the centuries and millennia. *Big Think* sponsored a special symposium called “Surprising Science” [March 25, 2018]. It starts with the underlying assumption that light traveling through a vacuum has been recorded at

186,000 miles per second [299,792 km per second] and that is the little 'C' in Einstein's **theory of relativity** – it is a universal constant. As such, energy 'e' is equal to mass 'm' times the speed of light squared C^2 . But just a little over 400 years ago, Johannes Kepler [1600] and after him René Descartes [1640] were the leading scientists of the day. They wrote that the speed of light is *instantaneous* – and that was the prevailing paradigm until 1677 when Olaf Roemer timed the eclipses of Jupiter's moon IO and proposed a formula to calculate the speed of light based on the time needed to cross the diameter of Earth's orbit. Christiaan Huygens did that math and came up with 131,000 miles per second. James Bradley [1729] confirmed Roemer's work that the speed of light appeared to be a constant. In 1906 Albert Einstein published his **General Theory of Relativity** that hinged on the speed of light being constant. The 1958 Nobel Prize was awarded to Pavel Cherenkov. He did a test within a nuclear reactor that when electrons were going through water they went through *faster than the speed of light* coming out of the nuclear reactor. When an aircraft goes faster than the sound barrier we call it a 'sonic boom'. Based on Cherenkov's work they termed this a 'luminal boom' because electrons went faster than the speed of light.

Barry Setterfield and his associate Norman Trevor used Roemer's formula from 1677 and got 307,600 km per second +/- 5400 km [slightly slower than Huygen's result]. In 1875, Harvard scientists measured the speed of light at 299,921 km per second +/-13 km. That was then the new norm until 1983 when the National Bureau of Standards lab used a laser to arrive at 299,792.4358 km per second +/- just three one-thousandths km. That is now the official rule for the speed of light. But some scientists have proposed that it may in fact be slowing down since the 17th Century. This is of course a very controversial topic to review that would have major repercussions on a wide range of astrophysics and Natural Law.

Another controversy is ***inflation theory*** where many physicists now say that right after the Big Bang happened, in “*less than one trillionth of a trillionth of a second*” [that is not a typo], the universe doubled in size and then immediately doubled in size again. This ***theory*** is necessary to explain why galaxies are upwards of 47 billion light-years away [end-to-end] if the entire universe is only 19.8 billion years old. Think about it. That kind of acceleration is MUCH faster than the accepted constant for the speed of light, and yet this is a popular position astrophysicists today, that *everything* was moving out much faster than the speed of light immediately after the singularity explosion at the Big Bang.

Today, physicists also know that distant galaxies appear to be moving *faster than the speed of light* away from us. This has given rise to the ***theory of dark energy*** – that is what is making them go faster, that we’re observing them at a speed *faster than the speed of light*. Another ***theory*** is called ‘*quantum entanglement*’ [many teenagers get involved in this when they cannot get their stories straight with mom and dad]. Einstein actually called quantum entanglement “spooky action at a distance”. This means that when there are two particles that become entangled, one can actually *travel instantaneously* over to its partner anywhere in the universe – similar to Descartes’ *instantaneous*, which is much faster than 186,000 miles per second. The entire physics community is still discussing and debating these models and concepts. But consider once again Setterfield’s and Norman’s review of the speed of light over the years, because the only other way for potentially faster than the speed of light is the wormhole. It is also a ***theoretical*** concept. If you could fold space-time, one point on this plane and another point in a different plane could be folded over onto each other, such that a rocket could literally go from point A to point B much faster than if it had to travel the distance at some speed. This would obviously allow incredibly fast transportation,

but it is not that the motion is faster than the speed of light, only the end result [instantaneous connecting of the two points].

Alan Montgomery did a computer regression model simulation of all the different ways over the years that the speed of light has been measured, starting with Roemer in 1677. They get slower and slower as you move closer to today. Some argue the measuring instruments became more sophisticated and that's why we see more precision with Montgomery. The regression formula for "C" [the speed of light] starts at a base of 299,792 km per second and then has descriptive-coefficients between the base and the various faster measurements over the centuries. His model found that all the error terms were uniform [homoscedastic] which lends credibility to his regression-formula. The descriptors for "C" were not autocorrelated with each other, which also adds to the credibility of the model and meets crucial hurdles to get this published in the scientific community. However, the nonlinear decay rate and velocity resembles a nonlinear cosecant curve [do you remember trigonometry?] starting with Roemer's 1677 measurement [at 110,000 miles per second] and more than 100 subsequent light-speed measurements.

"Results compatible with Setterfield, but unexpected from conventional physics, and agreement of statistical physical evidences, provide ample grounds for pursuing physical mechanisms to explain the very likely decrease in the velocity of light."

- Alan Montgomery [1994]

If you have a background in higher-level multivariate statistical research and regression analysis, Montgomery's results are sound in both process and interpretation of the results, and provide a quite reasonable basis for questioning whether the "C" measured within the last 100 years must be assumed to be constant over the life of a very old universe.

If Montgomery's trend-curve is accurate, it means the speed of light "C" was 30% faster 2,000 years ago at the time of Christ compared to today. Go back another 1,000 years to King Solomon in 1000 BC, the speed would then be twice as fast as it is today. Another 1,000 years to the time of Abraham around 2000 BC, "C" would have been four times as fast as it is today. And if you take it out to 3000 BC, it would be even faster. This would have significant impacts on HOW science measures the age of the universe, our solar system, and more importantly, Earth. All of modern physics' axioms depend upon the speed of light being a universal constant at 186,000 miles per second for 13.8 billion years - the exception being for *Inflation Theory* to explain CMB and big distances.

The implications are mind boggling. Much faster historical speeds for light would literally change our entire perception of the universe and how things literally function on the physical dimensions. It of course remains very controversial as it could literally undermine all of modern physics. What do you think the typical response is to anyone who actually talks about this idea of light-speed slowing down? The scientific community treats such with ridicule, disdain, and disbelief that someone would even entertain the idea. Yet they are fine with allowing the universe to double in size, and then double again, within *trillionths of a second* after the Big Bang? Avi Loeb said in his December 8, 2022 article, *The Sky's The Limit On The Speed Of Light*, space can expand so rapidly that it would separate two distant observers *faster than light* away from each other. It is similar to Jesse Emspak's April 2103 journal article, *The Speed Of Light May Not Be Constant*, in which he confirmed, "*A non-constant speed of light means the estimates of the size of the universe might be off . . . it might change as one alters assumptions about how elementary particles interact with radiation*". For now however, modern astrophysicists still worship at the altar of a fixed speed of light.

Competing Worldviews

The Biblical Christian Worldview sees the universe and says, "Wow, isn't the universe amazing, there must be a Creator-Designer to have such precision in the dynamics, otherwise, it should all be chaos and disorder" [but it isn't, instead it's ordered]. But wait just a minute. The Naturalist Worldview also says, "Wow, isn't the universe amazing" and then they do something different and quite profound. They attribute the universe to: "*Given enough time anything can happen*". This kind of Natural Law uniformitarianism means everything has always been exactly the same for billions of years without any change. The big Apologetics question is then, either Natural Law is god, or God put Natural Law in place to sustain the creation. Natural Law could either reflect the mind of the Creator-Designer, or it means there is no need of a Creator-Designer.

Prior to the 1900s, the majority of scientists worldwide were creationists [sample below]. You can read their many publications and learn that they

- <i>Newton</i>	- <i>Pasteur</i>	- <i>Linnaeus</i>	- <i>Maxwell</i>
- <i>Pascal</i>	- <i>Kepler</i>	- <i>Boyle</i>	- <i>Lord Kelvin</i>
- <i>Faraday</i>	- <i>Lister</i>	- <i>Joule</i>	- <i>Lord Raleigh</i>
- <i>Cuvier</i>	- <i>Brewster</i>	- <i>Agassiz</i>	- <i>Woodward</i>

viewed their scientific endeavors in planetary-astronautics as *discovering the amazing miracles of God's creation*. However, by the late 1800s [full details reviewed in Book-3 of this series], a huge shift had taken place in the underlying philosophical perspectives of many scientists to move away from any recognition of a Creator God, and toward the emerging perspective that everything happens ONLY by Natural Law and uniform natural processes over time. This form of thinking laid the foundation for Charles Darwin [with Alfred Wallace] to surmise a brand new idea *On The Origin Of Species*, published in 1859 [see Book-3 for more on this].

The Solar System

Having looked at the big picture of the universe and galaxies, let us examine our solar system. You of course recognize this neighborhood.



While this is a nice way to draw the sun and eight planets, be reminded they are all far too close in their orbits relative to the size of each planet. There's Mercury, then Venus, Earth, then Mars, Jupiter, Saturn, Uranus, and Neptune. Consider now the true proportions. From the sun to Earth the distance is 93 million miles. If the sun was a basketball, Earth would be a tiny dot 2.2 millimeters in size - smaller than a 9-point font dotting an "I" [did you know that one million Earths can fit inside the sun?]. To fully grasp the correct proportions, if the sun is a basketball, that 2.2 mm dot would be orbiting 27 meters [88 feet] away. The rest of the planets are then proportionately this far from the 'basketball' Sun:

Mercury	11 meters
Venus	21 meters
Mars	44 meters
Jupiter	149 meters
Saturn	275 meters
Uranus	1/3rd of a mile
Neptune	1/2 a mile away.

If somebody wanted to build a 3D scale-model that was proportionate it would require an open field at least a half mile across so that the one-third of an inch Neptune is a half-mile away from the 'basketball' Sun.

One very popular challenge to Apologetics is the ***Nebular Hypothesis*** - that supposedly all of the planets originated within the sun. The sun was spinning and spewed out some heavy metals, which coalesced, rolled into spheres and cooled as they accidentally fell into individual orbits around the sun. In 1734 [just 300 years ago], this was the dominant, generally-accepted scientific view for the origin of the solar system, and remained so for about 250 years. Emmanuel Swedenborg came up with this idea. He was also a mystic who used to do seances at his home, believing he could communicate with the dead. He also believed he could time-travel in the spirit. Others after him, like Immanuel Kant [1755] and Pierre Laplace [1773] embraced this ***hypothesis*** that 4.6 billion years ago an interstellar cloud [*nebula* in the Greek] collapsed and flattened out into a disk, with a proto-sun rapidly spinning in the center. The centrifugal energy ejected smaller chunks of metallic ore and rock that became the four small inner planets, while the larger residuals become the four large outer planets. No purpose, no intention, all by accident.

But there are major physics problems with this ***theory***. The sun accounts for 99.86% of all the mass in the solar system. The 8 planets together have just 0.14% of the mass. How did these ejected clumps of metals perfectly align into 8 planetary orbits? Another problem is that 99% of the angular momentum is in the planets, all sharing a single plane relative to the sun's equator. How could that happen by random chance? The sun has massive proportional gravity. If it was ejecting planets they would not get very far away. We observe solar flares rising up from the sun, but they are immediately drawn right back in again because of the immense

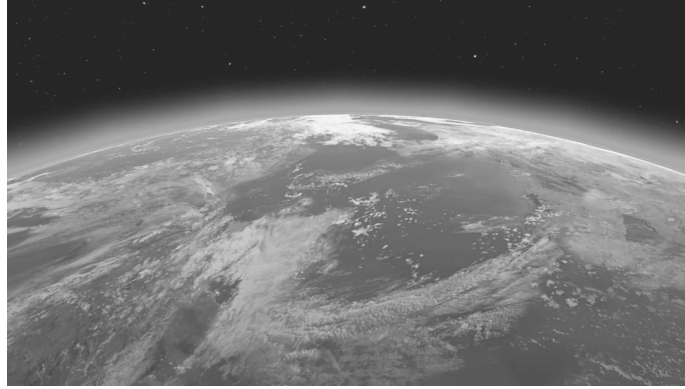
pull of gravity. The sun is 25% helium and 73% hydrogen. How could it have spewed iron, calcium, silicon, magnesium, and uranium that formed planets? And why does the inner 140 million miles section from the sun have just 4 small planets, while the 4 larger planets begin their orbits at almost a half billion miles away, and go out as far as 2.8 billion miles? That alignment contradicts the functions of gravity and mass. Modern physics also cannot answer how random ejections of minerals from the sun all ended up with four pairs of spin-rates that are 98.9997% the same: Mercury perfectly paired with Venus, Earth with Mars, Jupiter and Saturn, Uranus and Neptune? And the axis tilts of the planets are all within 98% of each other? If they were randomly spit out of the sun, why are they all spinning in paired rates, on the exact same plane, with similar axis tilts? And why is the ecliptic orbital plane for all 8 planets just seven degrees off the equatorial plane of the sun? That could not occur from random unintentional discharges of hot minerals from the sun. And finally, why are they all spinning in the same direction along with their moons?

Donald Wesley Patton, in his 1988 book *Catastrophism* posits it would take our solar system 180 million years to make one full trip around the Milky Way. If Earth has been around for 4.6 billion years, that means it should have already made 25 trips around our galaxy. Our sun, Alpha Centauri, and Sirius are all in the same line on the 'second' arm of the Milky Way spirals. Why then, after 25 trips around the galaxy, are these stars in the same positions if there has been that much time-movement?

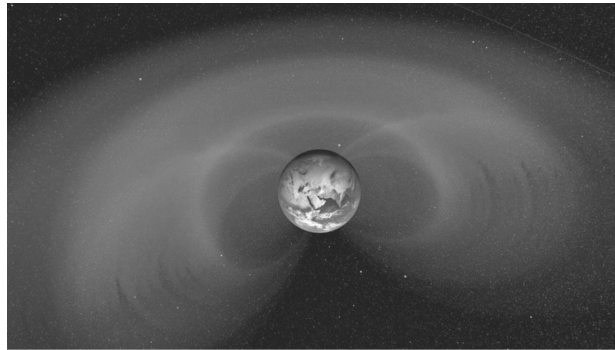
Planet Earth

The third planet from the sun is comprised of 71% water – with 97% of that in the oceans and 3% in fresh water. Average temperature is 59°F. The axis is tilted just over 23°. The blue atmosphere is 21% oxygen and

78% nitrogen. The troposphere goes up 9 miles above the surface – the stratosphere 31 miles, then comes the ionosphere, and then outer space.



Dozens of secular/atheistic Naturalist astrophysicists say it appears to be “finely-tuned” to support life. Below is a computer rendition of Earth’s Van Allen belts. Why are we the only planet in the solar system that has



this protective barrier circling our planet in our magnetosphere, where it traps high-energy radiation particles, shielding Earth from solar storms and solar winds that would kill life and damage all technology? In our stratosphere we also have a layer of ozone that absorbs and scatters solar UV radiation. The other seven planets are continuously hit by radiation. Humans landing and working on Mars would develop cancers from mutations in their DNA, immune systems, the degrading of soft-tissue, along with cataracts, and severe negative impacts to the nervous system.

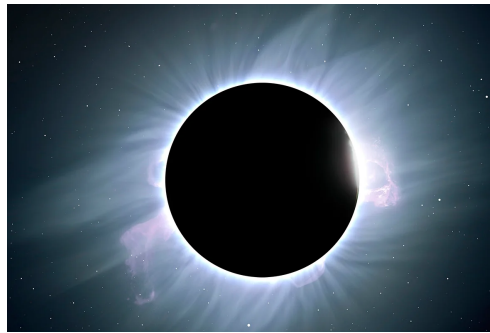
These health risks are even greater out in space, where astronauts will face exposure to very high levels of galactic cosmic radiation [GCR]. The same happens, and even worse, on the other six planets, but none of those harmful radiation effects happen on Earth. Is that by accident too?

Below is the Earth-moon tandem. The moon is just one-quarter the size of Earth and orbits 239,000 miles away. It rotates at the exact same rate as its orbital motion, so it appears that the same hemisphere is always in



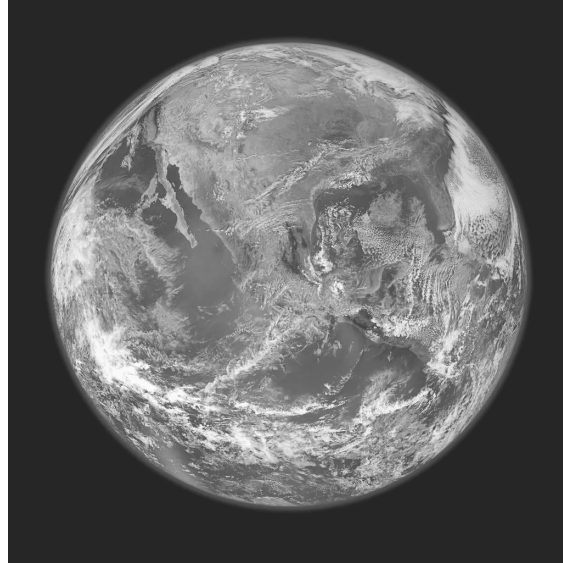
view from Earth - with a dark side and a light side. Why is the moon positioned at such a distance and in that orbital mode? By accident? The moon moderates Earth's access-wobbles, keeping our planet steady on our 23° axis that gives us 24-hour days. It also helps stabilize our climate and manages our ocean tides with such precision, we can actually predict tides on any given day based on where the moon is. The Naturalist View posits that the moon is actually a chunk of Earth that broke off during our planet's violent volcanic era millions of years ago. Other astrophysicists propose the moon was aimlessly drifting through space, and then Earth's gravity captured it into orbit. Others say it happened when a small planet collided with Earth millions of years ago, and the resultant debris formed into a sphere. Still others say that while Earth was coalescing after being ejected from the sun, and the moon formed simultaneously as a molten mass of dust particles, gases, and various liquid metal ores.

Perhaps you have seen a solar eclipse. The image of the moon perfectly covering the sun with just a thin corona of light on its border is beautiful. However, no one has an explanation for why the sun and moon exist in the very same angular-plane relative to Earth. The sun is exactly 400 times wider than the moon, while being 400 times farther away, so that



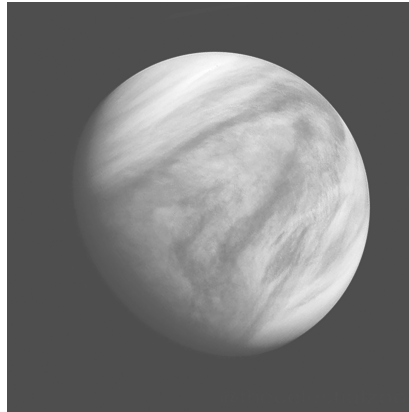
when we look up at them, they perfectly overlap. None of the other 289 moons in our solar system have similar relative proportions with the sun. The positioning of Earth as the third planet from this intensely hot star, with its specific moon functions, Van Allen radiation protection, precise axis tilt, moderate surface temperatures, and several other features, has prompted hundreds of scientists to propose that there appears to be a sort of *Anthropic Principle* unique to this one planet – not only in this solar system, but very likely anywhere else throughout the universe. The Earth's position from the sun results in exact temperatures to insulate the atmosphere and stabilize water. If Earth were just a little closer by less than one percent [900,000 miles] it would be too hot and there would be no life. If Earth was a little farther away from the sun by less than one percent [just 875,000 miles] that would be the end of all the oceans, lakes, rivers, and springs – they would all be frozen solid. That would be the end of our water cycles and there would be no life. It seems that everything is literally in a perfect "sweet spot" relative to the sun, as it

rotates and creates days and nights, with a perfect and stable gravity for life. Really big planets like Jupiter and Saturn have heavier gravity, while a small planets like Mercury have light gravity. Earth's perfectly balanced

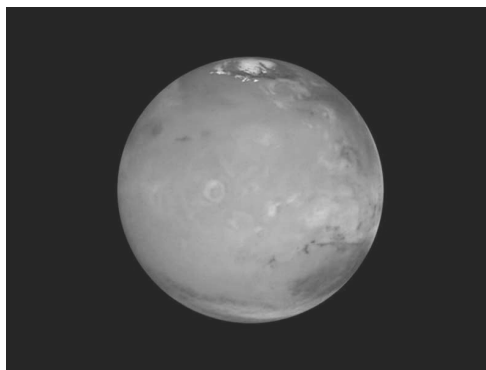


magnetic field comes up from its magnetic south and north poles. It has temperate zones around its equator and stable mean sea levels. Since 1990, I have lived about 9 blocks from the Pacific Ocean, and when I walk on the beach it is amazing to consider that this massive ocean just stays there in place. It does not go out further from shore, and it does not come in and over the 101 freeway. I can walk alongside its stable mean sea level and enjoy the waves crashing. Earth has green chlorophyll with oxygen and carbon dioxide cycles that constantly replenish the air. It has continuous water recycling system. It orbits in a safety zone away from asteroids. This sun is a perfect age and temperature to support life, as it fuses hydrogen into helium at its core. It is not a Dwarf-Star, that would burn up its hydrogen so fast it would have 100 times the brightness of our sun, making life impossible on Earth. And it is not about to succumb to gravitational implosion as a black hole, neutron star, or white dwarf.

Let's take a look at our two closest neighbors, Venus and Mars. This will give you a better appreciation of the unique profile of Earth in sustaining



water and life. Venus [above] is just one-third closer to the sun compared to Earth. But that closer proximity results in a 900°F surface temperature that can melt lead. At night it drops to minus-279°. The gravity is close to Earth [about .91 G's], but it has a dense thick atmosphere that is mostly carbon dioxide and sulfuric acid. And it is completely devoid of water, so there is no life. The other close neighbor Mars [below], is 50% further away from the sun. It has a very thin atmosphere of carbon dioxide and



argon that allows intense levels of solar particle radiation at the surface. The high temperature in the summer time at the equator gets to 70°F, but after sunsets it drops to minus-100°. At the poles, it gets down to as

low as minus-195°. Mars is covered by over 43,000 impact craters that are at least three miles wide. This is what happens when positioned further from the sun and closer to the asteroid belt. It is completely devoid of water. The icy-white poles are frozen carbon dioxide. When that dry ice melts, it just evaporates and does not flow like water.

Finely-Tuned Precision

Dr. Martin Reese, the UK Astronomer-Royal, has famously proposed that the solar system, and specifically the Earth, appear to be fine-tuned to support life. He points to six scientific measurements that defy accidental random chance to be in such precise order and positioning. I remember them as **NOEL Q-D**. If these were just slightly different - a bit smaller or a little larger - there would be no life. These six metrics have to be in line with each other or they cannot together support life. **N** stands for the ratio of electromagnetic force to gravitational force. Slightly smaller and we would have a very short-lived universe that would not have any planets. **O** is for the Greek Omega that measures the ration of mass density to critical density in the universe. It should be 1:1, but if gravity was stronger the universe would collapse before any life could occur. If gravity was weaker we would never have any stars forming of any kind. **E** is the strong nuclear force. A bit lower and only hydrogen exists, with no complex chemistry throughout the entire solar system. But if it gets a little higher, then there is no hydrogen - so it has to be at this exact fine-tuned level. **L** is for Lambda, known as the *cosmological constant*. If it was slightly larger, space would be expanding much too fast so there would be no stars, planets, or any kinds of astronomical structures. **Q** is the ratio of the *gravitational energy to mass*. Slightly smaller stars would not form. A bit larger, stars could not survive and would break apart. Finally, **D** represents our spatial three-Dimensions, which is perfect and

required for life. With two or four Dimensions, life would not exist. These six constants have to all exist together at the same time for there to be life. The probability of all six being in this exact alignment to support life is one chance in 10^{34} . That is beyond the realm of reasonable/plausible. Three of my favorite pioneers on a finely-tuned physical world include *Fitness of the Environment* by Lawrence Henderson [1913], Robert Dicke who in 1961 wrote that “gravity and electromagnetism are perfectly fine-tuned for life”, and Fred Hoyle’s 1984 book, *The Intelligent Universe*.

Does the finely-tuned universe make sense? Does it have credibility and merit as a way to view the physical realm of the cosmos? Or can life then emerge under very different physical constants, and scientists have not yet figured out what those are? These questions have been explored in depth by Dr. Luke Barnes. He was a post-doctoral researcher at the Sydney Institute for Astronomy in Australia. He is the co-author with Geraint Lewis of the 2017 book, *A Fortunate Universe: Life In A Finely-Tuned Cosmos*, which makes a strong case that a finely-tuned universe makes good sense from the standpoint of modern physics. Barnes states that such fine-tuning is about explaining a wide range of observations throughout the physical universe using what he terms the “suspiciously precise assumption”. This is actually quite symptomatic of many physics theories that appear to be lacking or incomplete, and is quite common in contemporary cosmology and the field of particle physics. I also enjoyed reading Dr. Barnes’ 2021 conference paper that was presented at West Sydney University titled: “The Fine-Tuning Of The Universe For Life” in which he uses Bayesian Analysis [a statistical model I have taught to MBA students since 1984], whereby the degree of plausibility for one proposal is directly related to other proposed phenomenon. He argues that evidence of fine-tuning “should serve as the impetus to search for a

better theory, one which can account for the facts in a more natural way." But then he has to ask this subsequent question, *"What could naturally explain a life-permitting universe?"* In this context, attributing the universe to be a finely-tuned environment for life remains a much better explanation for how the solar system is configured and where Earth is located relative to the sun, other planets, and the asteroid belt. He evens has to inquire, *"Maybe we stop asking questions"* because the pre-supposition of Naturalism is that the natural world is all there is. My counter-position is that the multiple levels of precision and balance are clearly evidence of a Designer-Creator.

Summary

The origin of the physical universe is interpreted by your Worldview, and relates directly to the other eleven books in this Apologetics series. The case for the existence of God [see Book-1] carries over into explanations for the origin of the natural world around us. The universe, galaxies, our solar system, planet Earth, and the moon all exhibit fascinating beauty, design, and functional form. How did such obvious order come about from a random, accidental explosion purported to have occurred some 19.8 billion years ago? The Newtonians mathematics imbedded within observable natural law defies logic that such formulas and models simply happened apart from any intelligent intervention. The Biblical Christian Worldview provides a logical, rational, and thoughtful explanation for the observable order and precision clearly evident throughout the physical world. And yet, astrophysicists, chemists, biologists, and astronomers in the academy, government agencies, and private sector dismiss the idea of God as the Designer-Creator and ridicule anyone who does not fall right in line with the prevailing Naturalistic paradigms. When various substantive alternative theories are advocated [for example, gravitational

wells, fine-tuning, alternative approaches to the speed of light], these are immediately ridiculed as unscientific, non-empirical, and wishful thinking. However, the contemporary scientific community sees absolutely no problem in proposing its own theoretical hypotheses when more time is needed or additional factors are required to explain natural phenomena that seem to contradict logical, rational observation [inflation theory and dark energy]. While there are many components of modern science that can be empirically tested, significant issues and questions for the origin of the universe simply cannot be observed or tested. Science also needs ways to try and explain outcomes, even if they are more philosophical in content, or fanciful artists' renderings of what supposedly happened in the distant past. There is no way to test or observe the sun randomly ejecting elements to form planets. And there are no rational explanations for Earth's perfect-position to boast abundant water and life that is 100% unique from all other planets – other than to attribute it to blind chance.

The debate will continue, no doubt. And while natural science PhDs will continue to 'talk down' to anyone who dares challenge their being the official gate-keepers of true knowledge, standing firmly within a Biblical Christian Worldview does not mean arguing against empirical fact with religion and the Bible. There are many lines-of-reasoning that are sound in content, function, and outcomes that directly address inconsistencies in blanket scientific assumptions. Statistical probabilities and regression analysis yield objective, numeric checks and balances that stand up well compared to attributing everything in the past to "given enough time".

This line of reasoning about the Origin of the Universe sets up a logical segue into Book-3 in this series, where the Macro view of the expanse overhead moves to a Micro view of our planet teeming with incredible volume and variety of life. Book-1 exposed the errors of 'wishful thinking'

that a MacBook, or common dandelion, cells, and humans could ever occur as the result of unintentional natural mutations left to themselves for 19.8 billion years. As stated multiple times in Book-1, the math does not work! There is not enough time for even the most basic iterations and assumptions to result in complex functional forms. Similar logic also makes sense in developing an explanation for the Origin of the Universe. But a Naturalist Worldview that allows no room for a Designer-Creator has to contrive its own theories and hypotheses to get its desired result: unchallenged axioms that everything began with a massive explosion, and the output of that chaos doubled in size TWICE within trillionths of one second, and the outcome was not collateral damage and disorder, but observable evidence of the mathematical order of Natural Law.

The Biblical Christian Worldview interprets Natural Law as the evidence for a very high-level Intelligence that conceived of and brought about the physical universe. It confirms a much higher-order mind and intellect than humans. By contrast, the Naturalist Worldview believes Natural Law has always existed such that no Intelligent Designer-Creator is needed, and it IS the process-methodology that brought about the universe. It is imperative that my readers recognize that Apologetics is not so much about winning the argument during the course of an hour-long debate. In fact, it is very unlikely that you will convince someone of your position because you had a great 3-minute answer to a difficult question or issue. The main objective of Apologetics is to have a reasonable case for the positions you stand upon. There is no "quick fix" that changes the mind of the skeptic. Yours is to be calm, cool, collected, and above all else *confident* in the underlying bases for the factual evidence you bring to the dialogue. The topics related to the Origin of the Universe are MANY, and there are MANY challenging questions to which you will need great responses. I trust you will enjoy all the books in this Apologetics series.

Additional Worldview Resources from Dr. Newton's Library

- Fred Hoyle *The Intelligent Universe* [1984]
- Erik Lerner *The Bang Never Happened* [1992]
- Alister McGrath *A Finely-Tuned Universe* [2009]
- Alvin Plantinga *Dawkins Confusion: Naturalism ad absurdum*
[Books & Culture, March/April 2007]
- Stephen Myer *How Did The Universe Begin?*
5-part series at PragerU.com
- Lawrence Krauss *A Universe From Nothing* [2013]
- Victor Stenger *The Fallacy of Fine-Tuning* [2011]
- Richard Dawkins *The God Delusion* [2008]
- A.E.Wilder-Smith *The Scientific Alternative to Neo-Darwinian
Evolutionary Theory* [1987]
- Geoffrey Simmons *What Darwin Didn't Know* [2004]
- Mark Eastman *Creation By Design* [1996]
- Larry Witham *By Design: Science And The Search
For God* [2003]
- Michael Denton *Evolution: A Theory In Crisis* [1985]
Evolution: Still A Theory In Crisis [2016]
- Gerald Schroeder *The Science of God* [1997]
- J. Warner Wallace *God's Crime Scene: Evidence For Divinely
Created Universe* [2015]
- Victor Stenger *The Fallacy of Fine-Tuning* [2011]

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