

American Minute with Bill Federer

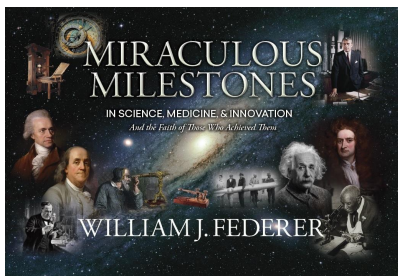
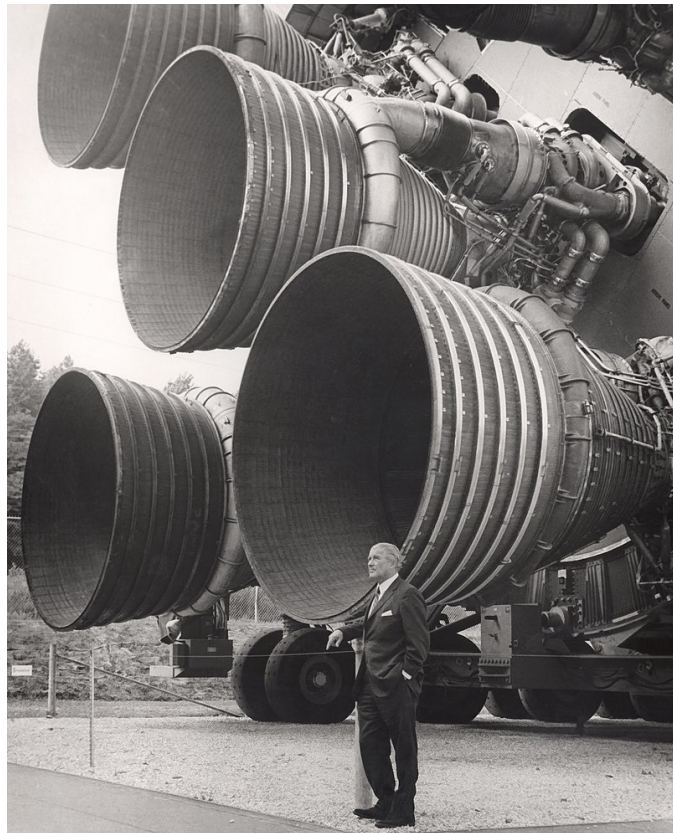
Rocketry & Space Flight: Robert Goddard & Wernher von Braun-"Vast mysteries of the Universe only confirms our belief in the certainty of its Creator"

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The "**Father of Modern Rocketry**" was American scientist **Robert H. Goddard**.

He ushered in the "**Space Age**" by creating the world's **first liquid-fueled rocket** ... [continue reading American Minute here ...](#)

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Goddard was born in 1882 and raised Episcopalian.

He wrote of a pivotal moment when he was 17-years-old, after having read **H.G. Wells'** 1897 science-fiction novel ***War of the Worlds:***

"On the afternoon of October 19, 1899, I climbed a tall cherry tree and, armed with a saw which I still have, and a hatchet, started to trim the dead limbs from the cherry tree.

... It was one of the quiet, colorful afternoons of sheer beauty which we have in October in New England,

and as I looked towards ... the east, I imagined how wonderful it would be to make some device which had even the possibility of ascending to Mars.

I was a different boy when I descended the tree from when I ascended for existence at last seemed very purposive ..."

He continued:

"The dream would not down ... for even though I reasoned with myself that the thing was impossible, there was something inside which simply would not stop working."

In 1919, he published a ground-breaking work titled "**A Method of Reaching Extreme Altitudes**," where a rocket would be guided by a gyroscope connected to steerable thrust to provide **three-axis control**.

In 1924, he married **Esther Christine Kisk** at **St. John's Episcopal Church** in Worcester, Massachusetts. **She faithfully assisted him** as his secretary, **recording his research and applying for patents**.

Goddard's team launched 34 different rockets between 1926 and 1941, setting records of 550 miles an hour and an altitude of 1.6 miles.

He received funding from **Charles Lindbergh** and the **Guggenheim family**.

The press ridiculed him during his life, as **Ronald Reagan** explained to the **National Space Club**, March 29, 1985:

"In **Dr. Goddard's** case, *The New York Times* claiming **rockets would never work in the vacuum of space ridiculed his effort.** 'He only seems to lack the knowledge ladled out daily in high schools,' the *Times* editorialized."

Only after the successful launch of Apollo 11, decades after **Goddard's** death, did *The New York Times* published a **short correction**, July 17, 1969:

"Further investigation and experimentation have confirmed ... that **a rocket can function in a vacuum** as well as in an atmosphere. *The Times* regrets the **error.**"

After his death in 1945, appreciation for **Goddard's** work increased so much so that **NASA** named the **Goddard Space Flight Center** after him in 1959.

He was posthumously inducted into the **International Aerospace Hall of Fame**, 1966, and the **International Space Hall of Fame**, 1976.

Robert Goddard stated:

- "Every vision is a joke until the first man accomplishes it; once realized, it becomes commonplace."
- "It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow."
- "Set goals, challenge yourself, and achieve them. Live a healthy life ... and make every moment count. Rise above the obstacles, and focus on the positive."

President Reagan continued his address to the **National Space Club**, March 29, 1985:

"Personally, I like space. The higher you go, the smaller the Federal Government looks ..."

He continued:

"Robert Goddard, our American rocket pioneer ... exemplified the ingenuity, the perseverance of individuals who make lasting contributions to their fellow countrymen and to mankind.

Dr. Goddard persevered for decades of intense research and development. ...

... But due to the efforts of **Dr. Goddard** and other individuals of vision and tenacity, America is now on the edge of a new era.

By standing on the shoulders of giants like **Robert Goddard**, this generation is moving forward to harness the enormity of space in the preservation of peace ...

American freedom was once **protected by musket and ball**. Today scientific advancements are changing the way we think about our **security** ... If you'll pardon my stealing a film line: 'The force is with us' ..."

Reagan continued:

"We have used and will continue to use space to make ours a safer world ...

Space technology has already revolutionized communications and is assisting everyone from farmers to navigators ...

Space, like freedom, is a limitless, never-ending frontier on which **our citizens can prove that they are indeed**

Americans.

Dr. Goddard once wrote a letter to H.G. Wells in which he explained:

'There can be no thoughts of finishing, for aiming at the stars, both literally and figuratively, is a problem to occupy generations, so that no matter how much progress one makes, **there is always the thrill of just beginning.'**

Well, let us hope that Americans never lose that thrill ... **God bless you all."**

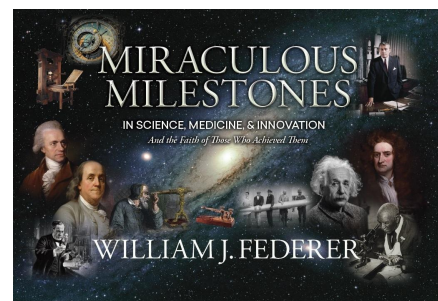
Wernher von Braun stated:

"Don't you know about your own rocket pioneer? **Dr. Goddard** was ahead of us all"

Braun added:

"Goddard's rockets ... may have been rather crude by present-day standards, but they **blazed the trail** and incorporated many **features** used in **our most modern rockets and space vehicles."**

[MIRACULOUS MILESTONES in Science, Medicine & Innovation - And the Faith of Those Who Achieved Them](#)



After **Robert Goddard** successfully launched his first liquid-fueled rocket in 1926, news spread.

Wernher von Braun read the newspaper reports and began corresponding with him.

The next year 1927, **Wernher von Braun** started the **German Rocket Society**. That same year **Charles A. Lindbergh** flew from New York to Paris. World relations

with **Germany** had not yet become hostile.

In 1929, **Lindbergh** began supporting **Goddard's** work.

In the 1930s, **Lindbergh** was sent by the **U.S. military** to **Germany** to assess their **aviation**. While there, he was presented with the Service Cross of the German Eagle on behalf of **Adolf Hitler**.

In 1936, the **Olympics** were held in **Berlin**, where **Hitler** had built a 100,000 seat stadium.

Not suspecting their ill-intent, **Goddard** naively answered telephone inquiries from **German rocket engineers**.

By 1939, **Goddard** ended this when he suspected his research was being co-opted by Germany's **National Socialist Workers Party**.

In 1940, **Goddard** began warning officials in the **U.S. Army and Navy** of the growing **Nazi rocket threat**, although his warnings were largely ignored.

The U.S. Army was not interested, but the **U.S. Navy** was.

From 1942, till his death in 1945, **Goddard** was director of research developing experimental engines at the **U.S. Navy's Bureau of Aeronautics** at Annapolis, Maryland.

When **World War II** started, **Wernher von Braun** was a graduate student.

In **Nazi Germany**, as today on many campuses and military bases, **when the government decided to push a socialist political agenda**, if a scientist refused to comply, his or her career was over.

Von Braun was recruited by the **National Socialist Workers Party** to work as a scientist developing the **V-2**

rocket.

The **V2 rocket** was the **world's first long-range guided ballistic missile**, and it wreaked **devastating destruction** on Allied cities, including **London, Antwerp and Liège**.

As the War neared its end, in May of 1945, the **United States** and the **Union of Soviet Socialist Republics** were racing against each other to **capture the German scientists**.

Von Braun and the other Germany scientists decided to escape to the **American side** rather than the **Soviet Union**.

Suffering a broken arm during his escape, **Wernher von Braun** stated:

"I myself, and everybody you see here, have **decided to go West**. And I think our decision was not one of expediency, but a **moral decision**."

We knew that we had created a **new means of warfare**, and the question as ... **to what victorious nation we were willing to entrust this brainchild of ours** was a **moral decision** more than anything else ...

... We wanted ... to see the world spared another conflict such as Germany had just been through,

and we felt that only by **surrendering such a weapon to people who are guided by the Bible** could such an assurance to the world be best secured."

Wernher von Braun emigrated to the United States where **he became a U.S. citizen** in 1955, calling it "one of the proudest and most significant days of my life."

In 1958, he launched **America's first satellite**.

He became known as the "**Father of Modern Space Flight.**"

Von Braun worked on the U.S. guided missile program and was director of **NASA's Marshall Space Flight Center.**

Wernher von Braun was the chief architect of the **Saturn V booster rocket, the most powerful rocket ever brought to operational status,** being over a football field in length from top to base.

The **Saturn V** was the only launch vehicle powerful enough to **lift beyond low Earth orbit** a spacecraft capable of carrying humans.

The **Ares V** rocket was designed to surpass the Saturn V, but President Obama canceled the **Constellation Program** in 2010.

In 2017, President Trump restarted the mission to the moon by establishing the **Artemis program.**

Several private companies have since been working to develop rockets capable of manned missions to the moon.

Wernher von Braun received the **National Medal of Science** in 1975, and is considered "without doubt, the greatest rocket scientist in history."

The Founder of the **National Space Institute, Wernher von Braun** stated:

"In this age of space flight, when we use the modern tools of science to advance into new regions of human activity, **the Bible** - this grandiose, stirring history of the gradual revelation and unfolding of **the moral law** - remains in every way **an up-to-date book.**

Our knowledge and use of the laws of nature that enable us to fly to the Moon also enable us to destroy our home planet with the atom bomb.

... **Science** itself does not address the question **whether we should** use the **power** at our disposal **for good or for evil**.

The guidelines of what we ought to do are furnished in **the moral law of God ...**

It is no longer enough that we pray that God may be with us on our side. **We must learn to pray that we may be on God's side."**

Wernher von Braun wrote in *This Week Magazine*, January 1, 1961:

"But I can't help feeling at the same time that this space effort of ours is bigger even than a rivalry between the **United States** and **Russia ...**

... The heavens beyond us are enormous beyond comprehension, and the further we penetrate them, **the greater will be our human understanding of the great universal purpose, the Divine Will itself."**

Wernher von Braun wrote to the *California State Board of Education*, September 14, 1972:

"Dear Mr. Grose:

In response to your inquiry about my personal views concerning the '**Case for DESIGN**' as a viable scientific theory or the origin of the universe, life and man, I am pleased to make the following observations.

For me, the idea of a **creation** is not conceivable without evoking the necessity of **design**.

One cannot be exposed to **the law and order of the**

universe without concluding that there must be **design and purpose behind it all.**

... In the world round us, we can behold the obvious manifestations of **an ordered, structured plan or design.**

We can see the will of the species to live and propagate.

And we are humbled by the **powerful forces at work on a galactic scale**, and the purposeful orderliness of nature that endows a tiny and ungainly seed with the ability to develop into a beautiful flower.

The better we understand the intricacies of the universe and all harbors, the more reason we have found to marvel at the **inherent design** upon which it is based ..."

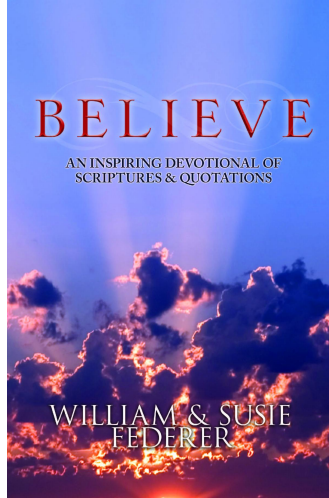
Von Braun continued:

"While the admission of **a design for the universe** ultimately raises the question of **a Designer** (a subject outside of science), the scientific method does not allow us to exclude data which lead to the conclusion that **the universe, life and man are based on design.**

To be forced to believe only one conclusion - that **everything in the universe happened by chance - would violate the very objectivity of science itself.**

Certainly there are those who argue that the universe evolved out of a random process, but **what random process could produce the brain of a man or the system or the human eye?..."**

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Von Braun added:

"Some people say that science has been unable to prove the existence of a **Designer**.

They admit that many of the miracles in the world around us are hard to understand, and they do not deny that the universe, as modern science sees it, is indeed a far more wondrous thing than the creation medieval man could perceive.

... But they still maintain that since science has provided us with so many answers the day will soon arrive when we will be able to understand even the creation of the fundamental laws of nature without a **Divine intent**.

They challenge science to prove **the existence of God**.
But **must we really light a candle to see the sun?**

... Many men who are intelligent and of good faith say they cannot visualize a **Designer**.

Well, can a physicist visualize an electron?

The electron is materially inconceivable and yet it is so perfectly known through its effects that we use it to illuminate our cities, guide our airlines through the night skies and take the most accurate measurements ..."

He stated further:

"What strange rationale makes some physicists accept **the inconceivable electrons** as real while refusing to accept **the reality of a Designer** on the ground that they cannot conceive Him?

I am afraid that, although they really do not understand **the electron** either, they are ready to accept it because they managed to produce a rather clumsy mechanical model of it borrowed from rather limited experience in other fields, but they would not know how to begin building a model of **God**.

... I have discussed the aspect of **a Designer** at some length because it might be that the primary resistance to acknowledging the '**Case for Design**' as a viable scientific alternative to the current 'Case for Chance' lies in the inconceivability, in some scientists' minds, of **a Designer**.

The inconceivability of some ultimate issue (which will always lie outside scientific resolution) should not be allowed to rule out any theory that explains the interrelationship of observed data and is useful for prediction ..."

Von Braun concluded:

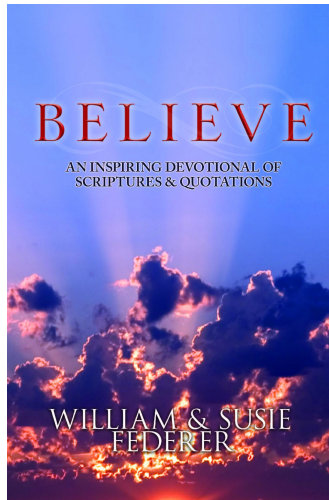
"We in NASA were often asked what the real reason was for the amazing string of successes we had with our Apollo flights to the Moon.

I think the only honest answer we could give was that we tried to never overlook anything.

... It is in that same sense of scientific honesty that I endorse the presentation of alternative **theories for the origin of the universe, life and man** in the science classroom.

It would be an error to overlook the possibility that **the universe was planned** rather than happened by chance.

With kindest regards. Sincerely, **Wernher von Braun.**"



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Wernher von Braun wrote an article titled "**My Faith: A space-age scientist tells why he must believe in God**" (*American Weekly*, February 10, 1963, Foreword to his *Anthology on the Creation and Design exhibited in Nature*):

"The two most powerful forces shaping our civilization today are **science** and **religion**.

Through **science** man strives to learn more of the mysteries of **creation**. Through **religion** he seeks to know the **Creator**. Neither operates independently.

It is as difficult for me to understand a scientist who does not acknowledge the presence of a **superior rationality behind the existence of the universe** as it is to comprehend a theologian who would deny the advances of science.

Far from being independent or opposing forces, **science** and **religion** are **sisters**. Both seek a better world.

While **science** seeks control over the forces of nature around us, religion controls the forces of nature within us

..."

Von Braun continued:

"As we learn more and more about **nature**, we become more deeply impressed and humbled by its **orderliness** and **unerring perfection**.

Our expanding knowledge of the laws of the universe have enabled us to send men out of their natural environment into the strange new environment of space, and return them safely to earth.

Since we first began the **exploration of space through rocketry**, we have regularly received letters expressing concern over what the writers call our 'tampering' with **God's creation**.

Some writers view with dismay the possibility of upsetting the delicate balance of the tremendous forces of nature that permit life on our globe ..."

Von Braun added:

"One letter revealed an honest fear that a rocket would strike an angel in space high above the earth.

And one of the Russian cosmonauts stated flatly after his earth-circling flight in space: 'I was looking around attentively all day during my flight, but I didn't find anybody there - neither angels nor God ...' Such shallow thinking is childish and pathetic.

I have no fear that a physical object will harm any spiritual entities. Manned space flight is an amazing achievement. But it has opened for us thus far only a tiny door for viewing the awesome reaches of space.

Our outlook through this peephole at the vast mysteries of the universe **only confirms our belief in the certainty of its Creator**.

Finite man cannot comprehend an **omnipresent, omniscient, omnipotent, and infinite God.**

Any effort to visualize **God**, to reduce him to our comprehension, to describe him in our language, beggars his greatness.

I find it best through faith to accept **God** as an Intelligent Will, perfect in goodness, revealing himself in the world of experience more fully down through the ages, as man's capacity for understanding grows.

... For **spiritual comfort** I find assurance in the concept of the **fatherhood of God.**

For **ethical guidance** I rely on the corollary concept of the **brotherhood of man ..."**

He stated further:

"Scientists now believe that in nature, matter is never destroyed. Not even the tiniest particle can disappear without a trace.

Nature does not know extinction - only transformation.

Would **God** have less regard for **his masterpiece of creation, the human soul?** Each person receives a gift of life on this earth.

A belief in the **continuity of spiritual existence**, after the comparative mere flick of three score and ten years of physical life here in the endless cycle of eternity, makes the **action of each moment like an investment with far-reaching dividends.**

The knowledge that **man can choose between good and evil** should draw him closer to his **Creator ..."**

Von Braun concluded:

"Next, the realization should dawn that his survival here and hereafter depends on his adherence to the **spiritual rather than the scientific**.

Our decisions undeniably influence the course of future events. Nature around us still harbors more unsolved than solved mysteries.

... But **science** has mastered enough of these forces to usher in a **golden age for all mankind, if this power is used for good - or to destroy us, if evil triumphs**.

The **ethical guidelines of religion** are the **bonds that can hold our civilization together**. Without them man can never attain that cherished **goal of lasting peace with himself, his God, and his fellowman**."

Erik Bergaust's book, ***Wernher von Braun: The authoritative and definitive biographical profile of the father of modern space flight*** (National Space Institute, Washington, DC, 1976), quoted **Wernher von Braun** as stating:

"The **laws of creation** and the **divine intentions underlying the creation**. Through **science** man attempts to understand the **laws of creation**; through **religious** activities he attempts to understand the intentions of the **Creator**.

Each approach is a search for ultimate truth ..."

Von Braun continued:

"There have been conflicts in the relationship between **science** and **religion** ...

Personally, I find this state of affairs unsatisfactory, for I wish to regard the **Creator** and **His creation** as an entity

... **science** and **religion** are like **two windows in a house** through which we look at the reality of the **Creator** and the **laws** manifested in **His creation**.

As long as we see two different images through these two windows and cannot reconcile them, we must keep trying to obtain a more complete and better integrated total picture of the ultimate reality by properly tying together our **scientific and religious concepts** ..."

He stated further:

"The more we learn about **God's creation**, the more I am impressed with the orderliness and unerring perfection of the natural laws that govern it.

In this perfection, man - the **scientist** - catches of glimpse of the **Creator** and **His design** for nature.

The **man-to-God relationship** is deepened in the **devout scientist** as his knowledge of the **natural laws** grows."

Wernher von Braun died JUNE 16, 1977.

As Vice-President of Engineering and Development at Fairchild Industries, Germantown, Maryland, **Wernher von Braun** wrote the forward to Harold Hill's book ***From Goo to You by Way of the Zoo*** (Plainfield, NJ: Logos International, 1976):

"Six Apollo crews have visited the moon and returned safely to earth. The Skylab astronauts have spent 171 days, 13 hours, and 14 minutes working and living in space, and all have returned hale and hearty to earth.

Why are we flying to the moon? What is our purpose? What is the essential justification for the exploration of space? The answer, I am convinced, lies rooted not in whimsy, but in the **nature of man**.

... Whereas all other living beings seem to find their places in the **natural order** and fulfill their role in life with a kind of calm acceptance, man clearly exhibits confusion.

Why the anxiety? Why the storm and stress?

Man really seems to be the only living thing uncertain of his role in the universe;

and in his uncertainty, he has been calling since time immemorial upon the stars and the heavens for salvation and for answers to his eternal questions: Who am I? Why am I here? ..."

Von Braun continued:

"Astronomy is the **oldest science**, existed for thousands of years as the only science, and is today considered the queen of the sciences.

Although man lacks the eye of the night owl, the scent of the fox, or the hearing of the deer, he has an uncanny ability to learn about abstruse things like the motions of the planets, the cradle-to-the-grave cycle of the stars, and the distance between stars.

The mainspring of science is curiosity. There have always been men and women who felt a burning desire to know what was under the rock, beyond the hills, across the oceans.

... This restless breed now wants to know what makes an atom work, through what process life reproduces itself, or what is the geological history of the moon.

But there would not be a single great accomplishment in the history of mankind without faith. Any man who strives to accomplish something

needs a **degree of faith**.

But many people find the **churches**, those old ramparts of faith, badly battered by the onslaught of three hundred years of scientific skepticism ..."

Von Braun added:

"This has led many to believe that **science** and **religion** are not compatible, that 'knowing' and 'believing' cannot live side by side.

Nothing could be further from the truth. **Science** and **religion** are not antagonists.

On the contrary, they are sisters. While science tries to learn more about the creation, religion tries to better understand the **Creator** ...

... For me the idea of a **creation** is inconceivable without **God**.

One cannot be exposed to the **law and order of the universe** without concluding that **there must be a divine intent behind it all**.

... Some **evolutionists** believe that the creation is the result of a **random arrangement of atoms and molecules over billions of years**.

But when they consider the development of the human brain by **random processes** within a time span of less than a million years, they have to admit that this span is just not long enough.

Or take the evolution of the eye in the animal world.

What random process could possibly explain the simultaneous evolution of the eye's optical system, the conductors of the optical signals from the eye to the

brain, and the optical nerve center in the brain itself where the incoming light impulses are converted to an image the conscious mind can comprehend?

Our space ventures have been only the smallest of steps in the vast reaches of the universe and have introduced more mysteries than they have solved ..."

He stated further:

"Speaking for myself, I can only say that the **grandeur of the cosmos** serves to confirm **my belief in the certainty of a Creator.**"

Of course, the discoveries in astronomy, biology, physics, and even in psychology have shown that we have to enlarge the medieval image of **God.**

If there is a mind behind the immense complexities of the multitude of phenomena which man, through the tools of science, can now observe, then it is that of **a Being tremendous in His power and wisdom.**

... But we should not be dismayed by the relative insignificance of our own planet in the vast universe as modern science now sees it.

In fact **God deliberately reduced Himself to the stature of humanity** in order to **visit the earth in person**, because the cumulative effect over the centuries of millions of individuals choosing to please themselves rather than **God** had infected the whole planet.

When **God became a man Himself**, the experience proved to be nothing short of pure agony.

In man's time-honored fashion, they would unleash the whole arsenal of weapons against **Him**: misrepresentation, slander, and accusation of treason..."

Von Braun concluded:

"The stage was set for a situation without parallel in the history of the earth. **God would visit creatures and they would nail Him to the cross!**

Although I know of no reference to **Christ** ever commenting on scientific work, I do know that He said, 'Ye shall know the truth, and the truth shall make you free.'

Thus I am certain that, were He among us today, **Christ** would encourage scientific research as modern man's most noble **striving to comprehend and admire His Father's handiwork.**

The **universe** as revealed through scientific inquiry is the **living witness that God has indeed been at work.**

... When astronaut **Frank Borman** returned from his unforgettable Christmas, 1968, flight around the moon with Apollo 8, he was told that a Soviet Cosmonaut recently returned from a space flight had commented that he had seen neither God nor angels on his flight.

Had Borman seen God? the reporter inquired. **Frank Borman** replied, 'No, **I did not see Him either, but I saw His evidence.**'"

John F. Kennedy stated at Rice University, September 12, 1962:

"William Bradford, speaking in 1630 of the founding of the Plymouth Bay Colony, said that all great and honorable actions are accompanied with great difficulties, and both must be ... overcome with answerable courage.

... But if I were to say, my fellow citizens, that we shall send to the moon, 240,000 miles away from the control station in Houston,

a giant rocket more than 300 feet tall, the length of this football field, made of new metal alloys, some of which have not yet been invented,

capable of standing heat and stresses several times more than have ever been experienced, fitted together with a precision better than the finest watch, carrying all the equipment needed for propulsion, guidance, control, communications, food and survival,

on an untried mission, to an unknown celestial body, and then return it safely to earth, re-entering the atmosphere at speeds of over 25,000 miles per hour, causing heat about half that of the temperature of the sun ...

and do all this, and do it right, and do it first before this decade is out -- then we must be bold.

... **Space is there, and we're going to climb it**, and the moon and the planets are there, and new hopes for knowledge and peace are there.

... And, therefore, **as we set sail we ask God's blessing** on the most hazardous and dangerous and greatest adventure on which man has ever embarked."

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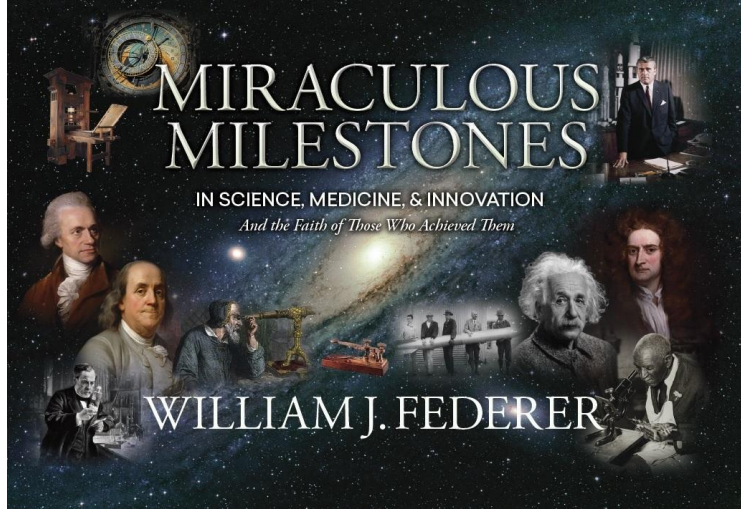


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