The Great American Eclipse Of 2024

Do you remember the Great American Eclipse of 2017 that occurred on August 21, 2017? My wife and I sat on our side porch on the swing as we watched the earlier morning sun change to cloudy and begin to darken around noon lasting through 1:30 pm. Nature around me went quiet throughout the eclipse. Birds went silent and nature around us appeared to go to sleep. The experience was a bit strange to say the least.



We are just three months away from what many believe will be the most dramatic total solar eclipse in U.S. history. It is being called "the Great American Eclipse of 2024", and millions of Americans will take time off in order to travel so that they can personally see it.

Between now and April 8th, the mainstream news will be filled with stories about this eclipse, and so it is going to be difficult for anyone to ignore what is going on.

In this article, Michael Snyder shared 14 things that everyone needs to know about the Great American Eclipse of 2024...

#1 It is a total solar eclipse that will occur on April 8th, 2024.

#2 The path of the eclipse will travel through portions of the states of Texas, Oklahoma, Arkansas, Missouri, Illinois, Kentucky, Tennessee, Michigan, Indiana, Ohio, Pennsylvania, New York, Vermont, New Hampshire and Maine.

#3 The path of the eclipse will also travel through parts of Mexico and Canada.

#4 It is being projected that this eclipse will be the most viewed astronomical event in the entire history of our country.

#5 According to the Washington Post, more than 30 million Americans will simply be able to walk outside of their homes and experience this eclipse...

"This is going to be the most populated eclipse in the U.S. with 31.5 million people able to just walk outside of their homes and experience this event," Kelly Korreck, NASA program manager for the 2024 total solar eclipse, said in a news conference at the American Geophysical Union conference.

#6 We are being told that this eclipse may be "the single-biggest mass travel event" of 2024...

The event may also be the single-biggest mass travel event in the United States, according to the Great American Eclipse website. Several large cities very close to the path of totality are St. Louis, Cincinnati, Detroit, Toronto and Quebec. Boston, New York, Philadelphia, Baltimore and Washington, D.C., are also within 200 miles of the direct path.

#7 Those that are in the direct path of the eclipse will discover that the air temperature suddenly becomes approximately 10 degrees cooler once the moon is fully blocking the sun.

#8 The path of the Great American Eclipse of 2024 will cross the United States on the very first day of the year on the Hebrew calendar. It will be Adar II, Rosh Chodesh Nisan for Hebrew Year 5784.

#9 If you put the path of the Great American Eclipse of 2024, the path of the "Ring of Fire" solar eclipse of October 14th, 2023 and the path of the Great American Eclipse of 2017 all on a map, they combine to form a giant paleo-Hebrew "Aleph" over America...

#10 If you just put the path of the Great American Eclipse of 2024 and the path of the Great American Eclipse of 2017 on a map, they combine to form a giant paleo-Hebrew "Tav" over America...

#11 The heart of the paleo-Hebrew "Tav" forms a giant "X" that falls directly over the New Madrid fault zone.

#12 One of my readers pointed out to me that we have seen a giant "X" like this before. The path of a solar eclipse that occurred on June 16th, 1806 combined with the path of a solar eclipse that occurred on September 17th, 1811 to also form a giant "X" over the New Madrid fault zone.

#13 Three months after the solar eclipse that happened on September 17th, 1811, a series of absolutely enormous earthquakes began to happen on the New Madrid fault...





The New Madrid earthquakes were the biggest earthquakes in American history. They occurred in the central Mississippi Valley, but were felt as far away as New York City, Boston, Montreal, and Washington D.C. President James Madison and his wife Dolly felt them in the White House. Church bells rang in Boston. From December 16, 1811 through March of 1812 there were over 2,000 earthquakes in the central Midwest, and between 6,000-10,000 earthquakes in the Bootheel of Missouri where New Madrid is located near the junction of the Ohio and Mississippi Rivers.

In the known history of the world, no other earthquakes have lasted so long or produced so much evidence of damage as the New Madrid earthquakes. Three of the earthquakes are on the list of America's top earthquakes: the first one on December 16, 1811, a magnitude of 8.1 on the Richter scale; the second on January 23, 1812, at 7.8; and the third on February 7, 1812, at as much as 8.8 magnitude.

#14 The next total solar eclipse visible from the United States will not happen until 2044, and the path of that total solar eclipse will only touch three states.

During the total solar eclipse April 2024: 10 of the biggest cities within the path of totality of the following cities:

It may occur only from within a path 115 miles (185 kilometers) wide and 10,000 miles (16,000 km) long, but the <u>total solar eclipse on April 8, 2024</u>, will be one of the most urban eclipses for decades.

"The total eclipse of the sun next April 8 will envelop many millions of people," Michael Zeiler, eclipse cartographer at <u>GreatAmericanEclipse.com</u>, told Space.com in an email. "31 million people already live inside the path within the U.S., and when you add the millions more Mexicans and Canadians in the path, plus the visitors who come to see totality, between 40 and 50 million people will witness the total <u>solar eclipse</u>."

From Mazatlán and Torreón in Mexico via big cities in Texas, Indianapolis and Montreal in Canada, millions of city-dwellers across North America will witness totality from a city. About 10 million will be in just 10 cities, each with populations above 500,000.

Here are the most significant 10 cities in the path of totality — and what's being planned in each of them:

All times, totality durations and historical cloud statistics for April 8, 2024, come from the <u>Eclipse Calculator — City Lookup</u> on Timeanddate and eclipse expert <u>Xavier</u> <u>Jubier's interactive Google Map</u>.

Plenty of cities will be in the path of totality on April 8, 2024 MONTRÉAL, QUEBEC, CANADA

Montreal is the biggest city in the path of totality for April's total solar eclipse.

MONTRÉAL, QUEBEC, CANADA

Population: 1.79 million

Local time and duration of totality: 2:14 p.m. EDT; 1 minute, 27 seconds

Montreal is right on the northern edge of the path of totality. The North Shore and even Laval must be avoided, with only the southern half of Île de Montréal within the path of totality. Totality will last longest close to the St. Lawrence River and peak at about 2 minutes at the <u>Île aux Hérons Migratory Bird Sanctuary</u>. It's been cloudy in Montreal on April 8, about 69% of the time since 2000.

Related: The best places in Canada to see the 2024 total solar eclipse

SAN ANTONIO, TEXAS, U.S.

SAN ANTONIO, TEXAS, U.S. **Population:** 1.5 million **Local time and duration of totality:** 1:34 p.m. CDT; (up to) 2 minutes, 35 seconds (far northwestern suburbs only)

Like Montréal, this city is split in two by the edge of the path of totality, in this case, the southern limit. However, unlike Montréal, the center of San Antonio lies outside of the path, with only its northern and western suburbs within it. It's been cloudy in San Antonio on April 8 about 55% of the time since 2000.

DALLAS-FORT WORTH METROPLEX, TEXAS, U.S.

Fort Worth Stock Yards will experience totality (Image credit: John Coletti via Getty Images)

DALLAS-FORT WORTH METROPLEX, TEXAS, U.S.

Population: 1.25 million (Dallas)/ 964,000 (Forth Worth)

Local time and duration of totality: 1:42 p.m. CDT; 3 minutes, 52 seconds (Dallas)/ 1:40 p.m. CDT; 2 minutes, 34 seconds (Fort Worth)

Although it comes third on this list, the population of the wider metroplex includes more than 60 cities and over 8 million people. About 1.5 million visitors are expected to a region with the largest selection of hotels anywhere in the path of totality. Organizers are now adding new observing events all the time, with confirmed events including the Frontiers of Flight Museum and the Dallas Arboretum and Botanical Garden. It's been cloudy in Dallas on April 8 about 60% of the time since 2000 and in Fort Worth about 49%.

AUSTIN, TEXAS, U.S.

AUSTIN, TEXAS, U.S. **Population:** 966,000

Local time and duration of totality: 1:36 p.m. CDT; 1 minute, 46 seconds

Although many will stay in Austin and drive into the Texas Hill Country for a longer totality, central Austin will experience a relatively long totality. Just be sure to avoid its southeastern suburbs and Austin-Bergstrom International Airport, which will be outside the path. It's been cloudy in Austin on April 8 about 59% of the time since 2000.

INDIANAPOLIS, INDIANA, U.S

Indianapolis, the 'crossroads of America', will experience a long period of totality. (Image credit: John J. Miller Photography via Getty Images)

INDIANAPOLIS, INDIANA, U.S.

Population: 871,000

Local time and duration of totality: 3:06 p.m. CDT; 3 minutes, 46 seconds

A few big cities in the Midwest are close to the path of totality — among them Columbus, St. Louis, and Cincinnati — but only Indianapolis will experience totality There are big plans for Indy's 2024 Solar Eclipse Weekend, including events at Indianapolis Zoo, The Children's Museum of Indianapolis, Conner Prairie and Indiana State Museum NASA will broadcast internationally from a huge public event at Indianapolis Motor Speedway. It's been cloudy in Indianapolis on April 8 about 60% of the time since 2000.

VICTORIA DE DURANGO, DURANGO, MEXICO

VICTORIA DE DURANGO, DURANGO, MEXICO

Population: 713,000

Local time and duration of totality: 12:12 p.m. CST; 3 minutes, 47 seconds

With a primarily dry climate year-round, this large city — the capital of Durango — will be where many tour groups are based. It could also be a venue for eclipse-chasers in Mazatlán, who must find clear skies if forecasts are poor. In a mountainous region and

slightly south of the centerline, the city has a historic center with several well-preserved baroque buildings. It's been cloudy in Durango on April 8 about 30% of the time since 2000.

Related: The best places in Mexico to see the total solar eclipse on April 8, 2024

HAMILTON, ONTARIO, CANADA

Hamilton will experience its first totality since 1925 HAMILTON, ONTARIO, CANADA **Population:** 587,000

Local time and duration of totality: 3:18 p.m. EDT; 1 minute, 50 seconds

A prominent port city on the western tip of Lake Ontario, Hamilton is part of Canada's Golden Horseshoe. It's set to be extremely busy on the day of the eclipse, despite only just being inside the northern limit of the path of totality, because of its proximity to Toronto, a city of 3 million that completely misses out on totality. It's been cloudy in Hamilton on April 8 about 61% of the time since 2000.

TORREÓN, COAHUILA, MEXICO

Population: 577,000

Local time and duration of totality: 12:16 p.m. CST; 4 minutes, 11 seconds Given its higher chance of clear skies, this eclipse could go down in history as the Great Mexican Eclipse. If it does, a high proportion of Mexicans who experience the nation's first totality since 1991 will do so from the environs of this industrial town in the country's northwest. It's been cloudy in Torreón on April 8 about 27% of the time since 2000.

MAZATLÁN, SINALOA, MEXICO

Mazatlán will be the first city to experience totality on April 8, 2024. (Image credit: benedek via Getty Images)

MAZATLÁN, SINALOA, MEXICO

Population: 515,000

Local time and duration of totality: 11:07 a.m. MST; 4 minutes, 16 seconds

Although it comes last on this list, the beach-blessed colonial town of Mazatlán in northwest Mexico has been in the plans of many eclipse-chasers for several years because of its low chance of clouds. While tourists will fill its resorts, locals will swarm its 4-mile (7 km) paved <u>malecón</u> boardwalk to be the first people in North America to see an eclipsed sun. It's been cloudy in Mazatlán on April 8, about 28% of the time since 2000.

The spiritual meaning of the April 2022 new moon solar eclipse is about finding comfort amidst the chaos, so it's important to trust the changes that unfold in our lives. New moons mark the rebirth of the monthly lunar cycle, which is why they're astrologically aligned with the energy of new beginnings, fresh starts, and planting seeds.

'Astronomy' magazine mentions 25 facts you should know about the total solar eclipse on April 8, 2024

Brush up on your eclipse basics before the big day. By <u>Michael E. Bakich</u> | Published: April 9, 2021



This stunning view of the total solar eclipse in 2017 was made by combining seven exposures ranging from short too long. The surface of the Moon is visible in this image because it is illuminated by light reflected off Earth, called Earthshine. Credit: Michael S. Adler.

As I write this article, I realize North America's next total solar eclipse is still three years away. But it's going to be so huge that I thought I'd share some of the most important details with our readership, the general public, and the media. After all, it's never too early for knowledge, right?

Anyway, here are 25 fascinating facts about the 2024 total solar eclipse, which will race up through Mexico, trek through the United States from Texas to Maine, and finish out its land journey by dashing through the eastern tip of Canada.

1. This will be the first total solar eclipse in the continental U.S. in 7 years.

The last one occurred August 21, 2017. It crossed the country from Oregon to South Carolina, and millions of people viewed it successfully. Before that one, you have to go back to February 26, 1979. And it will be 20 years until the next one: August 23, 2044.

2. A solar eclipse occurs when the Sun, the Moon, and Earth are aligned, or in syzygy.

The Moon, directly between the Sun and Earth, casts a shadow on our planet. If you're in the dark part of that shadow (the umbra), you'll see a total eclipse. If you're in the light part (the penumbra), you'll see a partial eclipse.



Credit: Penn State Astronomy & Astrophysics

3. A solar eclipse only happens at New Moon.

The Moon has to be between the Sun and Earth for a solar eclipse to occur. The only lunar phase when that happens is New Moon.

4. Solar eclipses don't occur at every New Moon.

The reason is that the Moon's orbit is tilted 5° compared to Earth's orbit around the Sun. Astronomers call the two intersections of these paths nodes. Eclipses only occur when the Sun lies at one node and the Moon is either at the same node (for solar eclipses) or at the opposite node (for lunar eclipses). During most (lunar) months, the Sun lies either above or below one of the nodes, and no eclipse occurs.



Credit: Penn State Astronomy & Astrophysics

5. Eclipse totalities are different lengths.

The reason the total phases of solar eclipses vary in time is because Earth is not always at the same distance from the Sun, and the Moon is not always the same distance from Earth. The Earth-Sun distance varies by 3 percent and the Moon-Earth distance by 12 percent. The result is that the Moon's apparent diameter can range from 10 percent smaller to 7 percent larger than the Sun's.

6. It's all about magnitude and obscuration.

Astronomers categorize each solar eclipse in terms of its magnitude and obscuration and I don't want you to be confused when you encounter these terms. The magnitude of a solar eclipse is the percent of the Sun's diameter that the Moon covers during maximum eclipse. The obscuration is the percent of the Sun's total surface area covered at maximum. Here's an example: If the Moon covers half the Sun's diameter (in this case the magnitude equals 50 percent), the amount of obscuration (the area of the Sun's disk the Moon blots out) will be only 39.1 percent.

7. Solar eclipses occur between Saros cycles.

Similar solar and lunar eclipses recur every 6,585.3 days (18 years, 11 days, 8 hours). Scientists call this length of time a Saros cycle. Two eclipses separated by one Saros

cycle are similar. They occur at the same node, the Moon's distance from Earth is nearly the same, and they happen at the same time of year.

8. Everyone in the continental U.S. will see at least a partial eclipse.

In fact, if you have clear skies on eclipse day, the Moon will cover at least 16 percent of the Sun's surface, and that's from Neah Bay at the northwestern tip of Washington.



The path of annularity during the June 21, 2020 annular (not total) solar eclipse grazed Saudi Arabia, resulting in a partial eclipse for many. Abouazza Elhamdi of the Astronomy and Physics Department of King Saud University captured this sequence of partial phases in the early morning from Riyadh. Credit: Abouazza Elmhamdi

9. It's all about totality.

Not to cast a shadow on things, but likening a partial eclipse to a total eclipse is like comparing near-death to death. I know that 16 percent sounds like worthy coverage. It isn't. You won't even notice your surroundings getting dark. And it doesn't matter whether the partial eclipse above your location is 16, 56, or 96 percent. Only totality reveals the true celestial spectacle: the diamond ring, the Sun's glorious corona, strange colors in our sky, and seeing stars in the daytime. (And don't forget to listen to your surroundings, too; wildlife tends to react to a total solar eclipse suddenly passing overhead.)

10. You want to be on the center line.

This probably isn't a revelation, but the Moon's shadow is round. If it were square, it wouldn't matter where you viewed totality, as people across its width would experience the same duration of darkness. But because the lunar shadow is round, the longest

duration of an eclipse occurs at its center line, as that's where you'll experience the full width of the Moon's shadow.

11. First contact is in Texas.

If you want to be the first person to experience totality in the continental U.S., be at the Mexican border in Las Quintas Fronterizas, Texas, at 1:27:21 p.m. CDT. There, the total phase lasts 4 minutes 22 seconds.



The path of the April 8, 2024 total solar eclipse begins in the United States in Texas and ends in Maine. Credit: Google, INEGI

12. The center line crosses through 15 states.

After a great southwest-to-northeast run through Texas, totality simultaneously begins in Oklahoma and Arkansas at 1:45:39 p.m. CDT. Next up is Missouri. Unfortunately, Saint Louis lies just outside the path's northern limit. Technically, Tennessee can claim to be one of the states touched by totality, however only a tiny part of its northwest corner is covered by the umbra. Likewise, only a small part of far-western Kentucky experiences totality. A large section of southern Illinois lies along the path, but it pales in comparison with the swath the umbra covers in the next two states: Indiana and Ohio. Even before the eclipse passes out of Ohio, a tiny tip of southeastern Michigan technically sees totality. The last stages in the U.S. see the path cover areas of Pennsylvania, New York, Vermont, New Hampshire, and Maine.

13. Totality lasts a maximum of 4 minutes 28 seconds.

That's it. To experience that length, you'll need to be in the small town of Nazas, Mexico, which is about 40 miles (60 km) southwest of Torreón. And trust me, no matter

how long totality really lasts, solar eclipses are so captivating, they always seem to only last a few brief seconds.

14. The end of the eclipse for the U.S. is in Maine

. Totality leaves the United States for good in 2024 at 3:35 p.m. EDT on the eastern edge of Littleton, Maine. An observer there would enjoy 3 minutes 22 seconds of totality with the Sun 35° high in the west-southwest at mid-eclipse.

15. Cool things are afoot before and after totality.

Although the big payoff is the exact lineup of the Sun, the Moon, and your location, also pay attention during the partial phases that lead up to and follow totality. As you view the early stages through a safe solar filter, the universe will set your mind at ease when you see the Moon take its first bite out of the Sun's disk. Around the three-quarters mark, you'll start to notice that the shadows around you are getting sharper. The reason is that the Sun's disk is shrinking, literally approaching a point — and a smaller light source produces better-defined shadows. At about 85 percent coverage, you'll be able to spot Venus 15° west-southwest of the Sun. If any trees are at your site, you may see their leaves act like simple pinhole cameras, with hundreds of crescent Suns appearing in their shadows.



A staple of eclipse photography, this series taken July 2, 2019, shows the Sun's shrinking crescent (top right) morph into a total eclipse (center) before creeping back out again (bottom left). Credit: Michel Tournay

16. This eclipse will be the most-viewed ever.

I base this proclamation on four factors: First, the attention it will get from the media; second, the superb coverage of the highway system in our country; third, the typical weather on that date (April 8, 2024); and fourth, the vast number of people who will have access to it from large cities located near the eclipse path.

17. Several large cities will enjoy a great view.

Unlike the 2017 eclipse, which covered only one large city, Nashville, the 2024 event will plunge several major metropolitan centers into darkness. Many completely lie along the path, while others will have a large percentage of their areas covered. Among them are Mazatlán, Mexico; San Antonio, Austin, Fort Worth, and Dallas, Texas; Indianapolis, Indiana; Cincinnati, Columbus, and Cleveland, Ohio; and Buffalo, New York.

18. Tens of millions of people live in the eclipse path.

In 2017, approximately 12.25 million residents of the U.S. lived along the path of totality. In 2024, more than that number live along the path before the eclipse even exits Texas. In all, approximately 31.5 million people can simply walk outside, look up, and see a totally eclipsed Sun in the daytime sky during the 2024 eclipse — weather permitting, of course.

19. Totality is safe to look at.

During the time the Moon's disk covers that of the Sun — and only then — it's safe to look at the eclipse without a solar filter or eclipse glasses. In fact, to experience the awesomeness of the event, you must look at the Sun without a filter during totality.



Cowboy Nicolas Silva enjoys the total solar eclipse on July 2, 2019, atop a mountain ridge near Cabalgatas Altos de Cochiguaz, a ranch in Chile's Elqui Valley. Credit: Rick Armstrong

20. Yes, the Sun's a lot bigger.

But it's also a lot farther away. The Sun's diameter is approximately 400 times larger than that of the Moon. What a coincidence that it also lies roughly 400 times farther away. This means both the solar and lunar disks appear to be the same size. But that won't last forever. The Moon is slowly inching away from Earth, meaning that hundreds of millions of years from now, the Moon will appear too small to entirely cover the Sun's disk. At that point, solar eclipse will be a thing of the past.

21. You won't need a telescope.

One of the great things about the total phase of a solar eclipse is that it looks amazing to naked eyes. The sight of the corona surrounding the Moon's black disk in a darkened sky is unforgettable. That said, binoculars at relatively low power still give you a close-up view — one that you should take advantage of several times during the event.

22. Nature will take heed.

Depending on your surroundings, as totality nears you may experience strange things. Look: You'll notice a resemblance to the onset of night, though not exactly. Areas much lighter than the sky near the Sun lie all around the horizon. Shadows appear different. Listen: Usually, any breeze will dissipate and birds (many of whom will return to roost) will stop chirping. It is quiet. Feel: A 10°F to 15°F drop in temperature is not unusual. After all, the Sun provides a lot of energy to the surface of our planet.

23. Maximum totality is not the longest possible in 2024.

The longest possible duration of the total phase of a solar eclipse is 7 minutes 32 seconds. Unfortunately, the next solar eclipse with a totality approaching 7 minutes won't occur until June 13, 2132. That eclipse, with a maximum duration of 6 minutes 55 seconds, will be the longest since the 7 minutes 4 seconds of totality experienced June 30, 1973.

24. The future is bright, but long.

The next total solar eclipse over the continental U.S. requires a 20-year wait until August 23, 2044. That one is visible only in Montana and North Dakota. Great total solar eclipses follow in 2045 and 2078. Those events have maximum totalities of 6 minutes 6 seconds and 5 minutes 40 seconds, respectively.

25. This eclipse will happen on April 8, 2024!

Astronomers, whether professional or amateur, are familiar with the uncertainty and limited visibility of some celestial events. Comets may appear bright if their compositions are just so. Meteor showers might reach storm levels if we pass through a thick part of the stream. A supernova as bright as a whole galaxy is visible now, but you need a telescope that can spot it. In contrast, the 2024 total solar eclipse will occur

when we say, where we say, for how long we say — and in the daytime, no less. Guaranteed!

Does the Eclipse Have Religious Meaning?

Rev. Mr. Matthew Newsome Test Everything

The short answer is "yes," but there is a right and wrong way to approach the question.

In most news stories I've come across that touch on this issue, a contrast is drawn between the primitive, superstitious understanding of solar eclipses, and our more enlightened scientific understanding. I'm sure we've all heard some of the legends ancient cultures created around the phenomenon of the solar eclipse — some mythical creature devouring the sun, that needs to be appeased by banging drums or offering a sacrifice.

This sort of "religious" explanation for the eclipse may be interesting from an historical or anthropological standpoint, but is seen as entirely irrelevant in terms of explaining what is actually going on. Through scientific study, we know that what is going to happen in just a few hours' time across large swaths of America today is a natural phenomenon. A shadow will be cast by the moon when its orbit brings it into position between the sun and the earth.

But this does not mean the eclipse has no religious meaning for Christians.

Astronomy v. Astrology

There is an important middle-ground between primitive superstition and materialistic science (a view of science that does not allow for supernatural or divine realities). This is the Christian point of view.

While most modern atheists might consider Christianity itself a superstition, it is important to understand that the Catholic Church actually condemns superstitious beliefs. In the section of the Catechism dealing with the First Commandment ("You shall have no other gods before me"), superstition is condemned (CCC 2111), as well as astrology (CCC 2116).

Why? Because these false beliefs place created things, such as stars and other celestial objects, above God. Astrology presumes that the stars are in control of our lives. Christianity recognizes that God is in control, not only of our lives, but of the stars themselves. God created the heavens and the earth and is in total control of everything in them. This is an important point.

Contrary to the popular narrative, this makes the Catholic Church very much proscience. But what about Galileo? OK, so the relationship between the Church and science may have got off to a rocky start. But that was 400 years ago! While admittedly, Galileo was treated unfairly, his run in with papal authority was not nearly so dire as the modern legend paints it to be. And besides — the reason why his name is always brought up whenever the Church's relationship with science is discussed is because it's just about the only real negative example over the past few centuries.

We should focus instead on the tradition of Catholic astronomers and cosmologists like Fr. George Lemaitre, who first postulated the Big Bang theory. Nicholas Copernicus was a Catholic (as was Galileo, for that matter). The Vatican owns and operates its own astronomical observatory, after all! Why? Because Christians believe that "The heavens proclaim the glory of God" (Ps 19:2), and by studying the heavens (and all natural sciences) we are studying God's creation. And that's a good thing.

Different Answers for Different Questions

The scientific method is a wonderful tool for answering the question How? Science allows us to describe in great detail what will be happening in the skies later today. We know that the moon, in its "New Moon" phase, will be travelling at 2288 mph, coming between the sun and the earth, casting a shadow approximately 70 miles wide which will pass over North American at about 1000 mph. It will be an amazing sight to see. But while these facts are interesting, they don't really have any meaning beyond describing the technical details of what's going on.

That's because the scientific method is not equipped to answer the question Why? That's not a criticism of science. It's just not the right tool for the job. A hammer is a great tool for hammering nails, but it's useless if you need to tighten a bolt. To answer the why questions, you need tools such as philosophy and religion. If we don't have these tools in our toolbox, that's when we resort to inferior make-shift tools like superstition.

So is there a genuine religious meaning behind the solar eclipse?

Beware False Prophets

Doubtless there are quacks out there claiming the eclipse means the end of the world, or the dawning of a new spiritual era, or some such. More likely than not, they are relying on astrology, not true religion. Christians should always be mindful of the fact that when Jesus Himself was asked about when the end of the world would come, He said no one knew that day or hour, not the angels or even Himself, but only the Father (Mk 13:32). If that's true, then some conspiracy theorist with astronomy software and a blog is not likely to know, either. Ignore them.

But Christians can certainly find meaning in the eclipse. Three passages from scripture come to mind; two from the Old Testament and one from the New.

Give Glory to God

I've already mentioned Psalm 19. "The heavens declare the glory of God." Another important passage from the Old Testament is Genesis 1. This chapter describes the six days of creation (not meant to be understood as literal 24-hour days). After each stage of creation, God looks at what He made and sees that it is good.

God creates good things. This means everything made by God (which is everything that is) delights Him. So it is no wonder the heavens declare His glory. The moon and the sun, the planets and stars, are all made by God and are good. When they do amazing things, God delights in that. We should, too. The beauty we see and the awe we experience during a full solar eclipse should inspire us to praise the God who made such an amazing universe.

A Darkened Sky

The New Testament passage I have in mind is Luke 23:44–45, describing Jesus' death on the cross on Good Friday.

It was now about noon and darkness came over the whole land until three in the afternoon because of an eclipse of the sun. Then the veil of the temple was torn down the middle.

Scholars are uncertain whether what is being described is an actual solar eclipse or another miraculous phenomenon darkening the sky. But whatever the cause, the sky did go dark over Jerusalem at the hour of Jesus' death. Even if it was not a solar eclipse, the darkening of the sky caused by an eclipse certainly calls to mind the miraculous darkening during the middle of the day described in the gospels.

This is fitting. God, the Author of creation, took mortal form and entered into creation, so that He might die to redeem creation. Upon His death, creation itself mourns. Jesus, the light of God come into the world, has died. And so the sun, the source of light on earth, grows dim.

Perhaps this was a sheer miracle; an example of God operating outside of the natural laws of His creation as a sign for us of His majesty. But if we could explain what happened in scientific terms it would not make it any less significant.

Remember that God is the author of creation, and so doesn't need to operate outside of the natural laws of creation in order to achieve His will. If this was a solar eclipse, it would mean that God, from the moment of the Big Bang, ordained the orbits of celestial bodies so that at on a certain Friday afternoon when His Son would hang from a cross for the salvation of the world, the moon would pass before the sun to block its light over Jerusalem, turning the day into night.

And maybe, just maybe, that's the reason for all solar eclipses throughout time. Maybe they all have to happen so that that one could happen at the preordained hour to mark the death of our Savior. Maybe every eclipse before that was pointing forward to that day. And maybe every eclipse since, including the one passing over America on August 21, 2017, is meant to serve as a reminder of just how much God loves us.

The web site 'BeliefNet.com' has this to say:

A solar eclipse may seem like an odd occurrence, but it is no secret to God or the authors of the Bible. We know from Scripture that God uses signs and wonders in heaven to communicate with His people. That includes rare solar eclipses.

"From a biblical point of view, a solar eclipse is meant to be a sign from God," says Pastor Mark Biltz who claims to have first noticed the four blood-moon pattern.

"In Genesis 1:14, God declared this to be so. It is a sign that is beyond man's control, something he can't manipulate," Biltz told WND. "Solar eclipses become biblically and prophetically significant and relevant when man understands their timing according to the biblical calendar and where they happen. Then, we look for the patterns."

Several end-times voices believe the coming total solar eclipse is a sign from God. A total solar eclipse took place on August 21, 2017 and was visible on both the East Coast and West Coast. This was a pretty big deal as one hadn't been visible from the continental United States in 37 years and one hadn't passed over the country since 1918, almost 100 years.

For a solar eclipse to take place at a particular time may not seem to be a big deal. There is a total solar eclipse visible somewhere around the globe about every 18 months. However, from any one location on Earth, total eclipses take place on average only once in several hundred years.

A solar eclipse occurs when the moon passes between the Sun and the Earth, blocking out a large chunk of the Sun's rays. Day will turn into night across the United States on August 21. The moon will pass directly between the Earth and the Sun, casting a shadow on the United States that will track from Oregon to South Carolina.

In order to better to better understand if God is giving us sign or warning, we can turn to Scripture. There are passages through the Bible that talk about the sun being blacked out by darkness descending on the land. During the plagues of Egypt, God covered the land in darkness.

Exodus 10:21-23 says, "Then the LORD said to Moses, 'Stretch out your hand toward the sky so that darkness spreads over Egypt – darkness that can be felt.' So Moses stretched out his hand towards the sky, and total darkness covered all Egypt for three days. No one could see anyone else or move about for three days. Yet all the Israelites had light in the places where they lived."

Kind of sounds like a solar eclipse, right?

Then, during Jesus' crucifixion, referenced in the New Testament, something very similar happened. Mark 15: 32-33 says, "'Let the Christ, the King of Israel, descend now from the cross, that we may see and believe. ' Even those who were crucified with Him reviled Him. Now when the sixth hour had come, there was darkness over the whole land until the ninth hour."

We even see biblical prophecies about the Sun going dark. Revelation 6:12 says, "I looked when He opened the sixth seal, and behold, there was a great earthquake; and the sun became black as sackcloth of hair, and the moon became like blood."

This isn't the only passage that predicts this. We also see this in the book of Matthew and Mark, here foretelling of some sort of eclipse.

"Immediately after the tribulation of those days shall the sun be darkened." (Matthew 24:29). Similar words are said in Mark 13:24.

Blitz believes that the total solar eclipse is a huge sign from God.

"As the sun is larger than the moon, the sun represents the nations of the world and the moon represents the nations of the world and the moon represents the nation of Israel, as their calendar months are based on the cycle of the moon while the nations of the world follow the sun for their calendar," Biltz said. "When there is a total solar eclipse, it is a warning to a specific nation or nations depending on its path."

Blitz ultimately suggests that such cataclysms may be in store for the United States, especially given the timing of the event.

"Now this August 21, 2017, we have a total solar eclipse going over the United States. This is again at the beginning of the month of repentance on the first of Elul! Could God be giving us warning that we need to repent or judgment will be coming on the United States? The timing couldn't be clearer," Blitz said.

Another solar eclipse will be visible in large portions of the nation just seven years later in 2024. When you chart the course of both solar eclipses on a map, you see that they form a giant "X" right over the center of the country. Could this too be significant?

According to the Washington Post, some believe that the two eclipses, one that traveled across the United States in 2017 and one that will take place in 2024 and will mark an X across the nation, could be the starting and ending signs bookmarking a seven-year period of awful tribulations that are in store for nonbelievers who are left behind on Earth when the rapture occurs. While we know from Scripture that there are many other things that are supposed to take place before the rapture occurs, could there be some other sort of significance?

In the Bible, Jesus said that there will be signs in the sun, and in the moon and in the stars just prior to His return, and many are speculating just what the solar eclipse on August 21, 2017 and in 2024 might mean, especially given this type of solar eclipse doesn't happen very often and it will be so visible in large portions of the nation.

Do you think a solar eclipse is a warning from God?

Blessings,

Pastor Bob, EvanTeachr@aol.c om <u>www.pastorbobreid.com</u>