

The Heavens in Stone
Artifact LDS 60-5600

Chronology and Geography

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The so-called Michigan Relics have had a long and complicated history. Starting in 1812 and for over one hundred years, hundreds of people in Michigan found 10,000s of ancient artifacts from more than a dozen counties. Wayne May has studied original historical accounts to confirm that the earliest discovery of these relics began in 1812 and continued until the 1920s. Today most of the artifacts are under a cloud of suspicion with regard to their genuineness. Indeed, a majority of scholars dismiss the Michigan Relics as a scheming hoax whose purpose was to defraud unsuspecting people of their money.

Notwithstanding the rejection of the Michigan Relics, there are thousands of pieces in private and public collections throughout the country. The world deserves a reexamination of these relics with modern tools and methods. Many of the artifacts have engravings that are forgotten forms of communication. Tens of thousands of inscribed characters and letters have shapes that relate to Old World scripts. Linguists and code breakers have a major job of bringing the lost meanings to the attention of our modern world. I think that with sufficient skill and knowledge they can do the job.

In this article, I want to focus on specific astronomical events in Michigan's skies that took place in a 12hour period of one day in the Fourth Century. I took my original inspiration from David Allen Deal, who wrote about the annular solar eclipse over Michigan on Monday, July 27th, AD 352. My approach is particular. I cannot look at thousands of artifacts, but I can make a minute-by-minute analysis of three astronomical events that relate to one artifact that today is in the Michigan Historical Museum in Lansing. I hope to show that this artifact is genuine and that it has an age of 1,669 years.

My research strictly focuses on images and angles that are cut on the face of one stone. That stone is identified as LDS Artifact 60-5600. My astronomical analysis comes from calculations that are for the exact movements of the sun, the moon, and the falling stars of an ancient meteor shower. With ever-improving computer programs, it is possible to recreate the sun's and moon's movements accurately for each solar eclipse from the ancient world. I tabulated with NASA program details for each solar eclipse worldwide from March 17th, 599 BC to July 7th, AD 1880. There are 2,480 years from when Lehi left Jerusalem until the unearthing of Michigan Relics. Over that time, there were 3,476 solar eclipses in the world. Each one of these thousands of solar eclipses has these exact details:

- (1) The Eclipse Number;
- (2) The Calendar Date;
- (3) The Time of Greatest Eclipse;
- (4) The Eclipse Magnitude;
- (5) The Latitude;
- (6) The Longitude;
- (7) The Sun Altitude; and
- (8) The Duration.

I calculated a table of worldwide solar eclipses and made a PDF file with 103 pages. Go online at www.zarahemla.site to see the results. The table has 27,808 significant astronomical numbers. Each number required thousands of separate calculations. No one in the late Nineteenth Century would have been able to make those calculations by hand. No one in the early Twentieth Century, no, not even a university president, would have been able to do these calculations. Who a hundred years ago could have imagined that such computing power would become a common tool on the tops of millions of kitchen tables?

Nevertheless, it is. Today's technology allows us to do things that our parents would have never thought possible. With this computing power in hand, let's put aside more than 9,000 artifacts and take a closer look at just one stone Artifact LDS 60-5600. As in a financial audit, the truth often becomes more evident when we focus on just one set of details. The question is straightforward. Is Artifact LDS 60-5600 a hoax or real? Can ancient astronomical events over the skies of Michigan give us any connection to the face of the cut stone that is today in the Michigan Historical Museum?

Milton R. Hunter is an important figure in the provenance of LDS Artifact 605600. To get some of that background, I refer to an article in BYU Studies, "Mormonism's Encounter with the Michigan Relics," by Mark AshurstMcGee. The tone of that article was hostile towards the class of artifacts known as the Michigan Relics. Here are quotes from the article.

"One of the strangest and most extensive archaeological hoaxes in American history was perpetrated around the turn of the twentieth century in Michigan. Hundreds of objects known as the Michigan Relics were made to appear as the remains of a lost civilization. The artifacts were produced, buried, 'discovered,' and marketed by James O. Scotford and Daniel E. Soper. For three decades, these artifacts were secretly planted in earthen mounds, publicly removed, and lauded as wonderful discoveries."

"Forty years after the digging stopped, the Michigan Relics captured the attention of Milton R. Hunter, the president of the New World Archaeological Foundation. Hunter, who was also a General Authority in The Church of Jesus Christ of Latter-day Saints, researched and wrote about archaeological evidence regarding the Book of Mormon historicity. In 1960, he received a letter from two Latter-day Saint missionaries who discovered the Savage collection while proselytizing at the University of Notre Dame."

"In 1962, he visited Notre Dame to view them. He showed so much interest that Notre Dame gave him the collection. In the course of this transaction, Hunter learned of Ellis Clarke Soper, who still had his father's collection. He contacted Ellis, who lent him a number of items. Hunter responded so favorably that Ellis decided to give him the entire collection. So, by 1963, Hunter had acquired the bulk of Scotford's productions."

Before his death, Brother Hunter donated his collection of Michigan Relics to The Church of Jesus Christ of Latter-day Saints. Thirty years later, the Church transferred these artifacts to Michigan State. On October 27th, 2003, the Associated Press in Grand Rapids, Michigan, filed a report on the transfer of the relics. The tone of that article was also negative. It seems that the Michigan Relics only get bad press. Here are a few sentences to give you the flavor of that report.

" Some of the now debunked Michigan Relics once considered by some influential Mormons as evidence of the Church's connection to a Near Eastern culture in ancient America have a new home. For decades, the Mormon Church kept a large collection of the artifacts in its Salt Lake City museum but never formally claimed them to be genuine. After scholars examined the relics and declared them fakes this past summer, The Church of Jesus Christ of Latter-day Saints donated the 797 objects to the Michigan Historical Museum, which will display them next month. The relics were once hailed as the greatest archaeological discoveries since Pompeii. But there are many clues they are really fakes, Michigan State Archaeologist John Halsey told The Grand Rapids Press."

"Among the relics are engraved slate tablets. One scene depicts the crucifixion of Christ. The problem is, all the engravings tell stories of the Old Testament. 'It is arguably the largest archaeological fraud ever in this country, and the longest running,' Halsey said. James Scotford claimed he found the first relic a large clay casket while digging a post hole on a Michigan farm in October 1890. He announced his discovery, touching off a frenzy of digging. Over the next 30 years, thousands of artifacts were found, including tiny caskets, amulets, tools, smoking pipes and tablets. The items were made of clay, copper and slate, and most bore the mark "IH/," which some interpreted as a tribal signature or a mystic symbol. Some thought it was a variation on IHS, the ancient Hebrew symbol for Jehovah."

For more than a hundred years, most scholars have had nothing good to say about the Michigan Relics. And so it remains today. In our time, PBS recently produced an hour-long documentary under the title "Hoax or History: The Michigan Relics." The weight of that film came down on the side of a hoax.

My approach to the Michigan Relics is different. I cannot make any informed opinion of thousands of artifacts that I have never seen. It seems clear that no one should put all these artifacts into the same basket. One must determine the evidence of truth one artifact at a time.

For over 55 years, I have lived and worked with foreign languages. I was in the US Army as an Intelligence Officer assigned to a linguist company. I worked with more than a hundred officers

and enlisted men who spoke more than two dozen foreign languages. I know how hard it is to break the codes for foreign languages, especially for strange and forgotten languages.

Once I decided that I would move forward with one artifact at a time, I turned my attention to the annular solar eclipse over Michigan at 1:18 p.m., Monday, July 27th, AD 352. By focusing on astronomical events from noon to midnight, I expect to connect to one artifact's chronology and geography. I understand the movements of the sun, the moon, and the stars and how they interact with each other on a minute-by-minute basis over 12 hours. I decided that the astronomical events that I wanted to calculate would have to be within a circumference of 150 miles around Detroit.

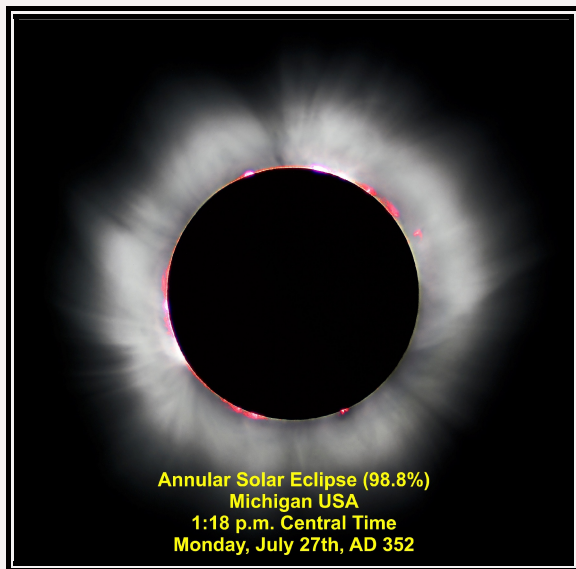


Figure 1

[Figure 1. Annular solar eclipse in skies of Michigan AD 352]

After looking at Artifact LDS 60-5600 for more than a hundred hours, it became clear that the ancient person who created the stone art wanted to give testimony of two events in the sky that are close in time to each other. I supposed that the top half of the stone represented the day sky over Michigan and that the bottom half was a setting for the night sky. There was a noticeable astronomical event during the day, and about 12 hours later, there was a separate astronomical event that was equally noticeable. I assumed that both events would have significantly influenced any person in Michigan looking into the heavens.

No one who saw the two events in the summer sky would have forgotten them. The details of the events came from the sun's exact movements, the moon, and the falling stars in a meteor shower.

Some of you have personally witnessed the moon in its normal course covering the face of the sun. Of course, no one can change the movements of the sun and the moon. Scientists know a lot about the cycles of the sun and the moon. Any solar eclipse always occurs according to Newton's Laws of Motion. The only thing that anyone can do is become a witness to one of the most significant events he will ever see in the sky. Anyone who sees a solar eclipse will never forget it. Such an event is a matter of exact calculation.

[Figure 2. Artifact LDS 60-5600 Photographed when the Michigan Historical Center in Lansing took custody of it in October 2003. Note that when the piece was transferred to Michigan State the artifact was in two pieces. Perhaps, someone maliciously smashed it with a hammer at the middle of the stone tablet. However it happened, the breakage resulted in the loss of about 15% of the total mass from the central area of the artifact. So sad.]

[Figure 3. The paths of all solar eclipses in the world from AD 341 to AD 360. Please note the location of July 27th, AD 352 annular eclipse over Michigan.]

I want to bring again to your attention the following facts:

(a) ANCIENT SOLAR ECLIPSE at 1:18 p.m., Monday, July 27th, AD 352;



Figure 2

(b) Latitude: 40.7442 North and Longitude 84.2115 West;

(c) Magnitude of Solar Eclipse: 98.8%;

(d) Duration of Eclipse: 2 minutes 4.5 seconds; and

(e) ALTITUDE OF THE SUN AT 67 DEGREES AS SEEN FROM THE HORIZON.

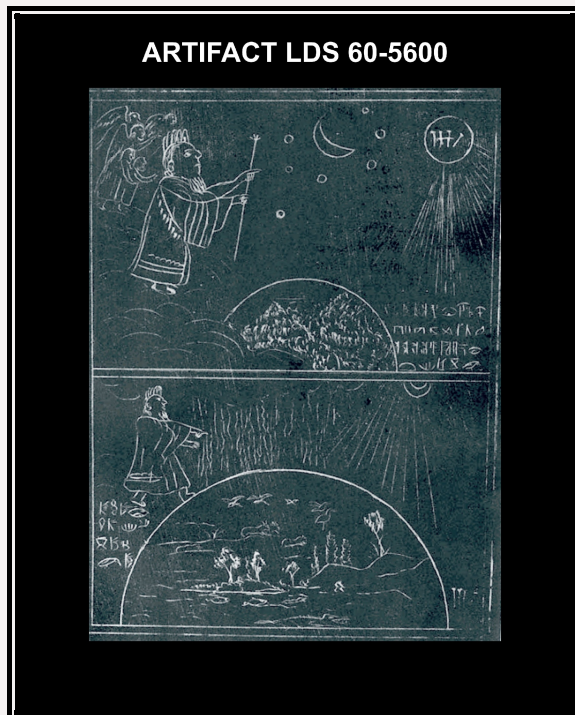


Figure 3

[Figure 4. Here is a photo of the unbroken LDS 60-5600 Artifact. The stone image is divided into two parts. The upper half of the image is the daytime sky of Michigan. The lower half is the image of the night sky.]

These facts come from careful calculations that are available online from NASA computer programs. Go and make the same calculations with the same programs.

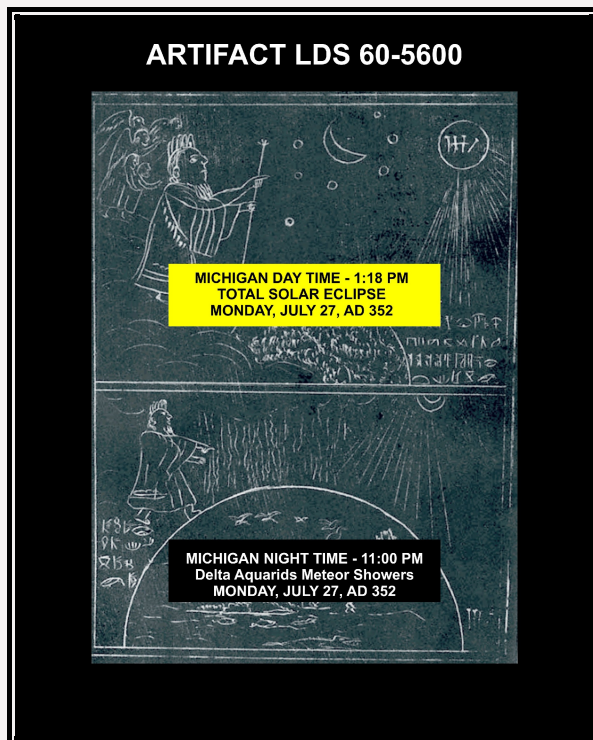


Figure 4

face was dark for 2 minutes and 4.5 seconds when the moon covered 98.8% of the sun at 1:18 p.m., on Monday, July 27th, AD 352, when the sun was at an altitude of 67 degrees. Bingo. There is a perfect fit between the computer calculation and the angle on the stone.

How would an ancient person have been able to measure this critical angle? Simple. No need for any special instruments. A string, a rock, and a stick would have been enough. He would tie the rock to the string. He would ask a friend to hold the string with the rock's weight pulling down to the ground creating the plumb line. With one end of the stick fixed firmly in the ground, he would point the other end of the stick towards the moving sun. He would make a mark on the string where the stick crossed the plumb line when the sun was darkened, and the stars came into view in the day's sky.

What does any of this have to do with one of nearly a thousand artifacts that Milton R. Hunter gave to The Church of Jesus Christ of Latter-day Saints in the 1970s and that the Church later gave to the State of Michigan in the fall of 2003?

[Figure 4. Sun's altitude of 67 degrees fixed the time at 1:18 p.m. on Monday, July 27, AD 352. This angle would have been easy enough to measure by direct observation in AD 352, but it would have been impossible for any Michigan citizen to calculate the time of the solar eclipse than 1,600 years earlier.]

Take a careful look at the picture of the ancient stone from the Michigan Relics. Measure on the face of the stone the sun's altitude from the earth's horizon. Note that the angle is 67 degrees. The angle for the sun's altitude from the NASA program matches the angle on the stone. With confidence, we note that the sun's

Figures 5 through 10

Critical 67-Degree Angle
Unique Connecting Point for Michigan Solar Eclipse
Between Ancient Stone Tablet and Modern NASA Computers



Figure 5



Figure 6



Figure 7

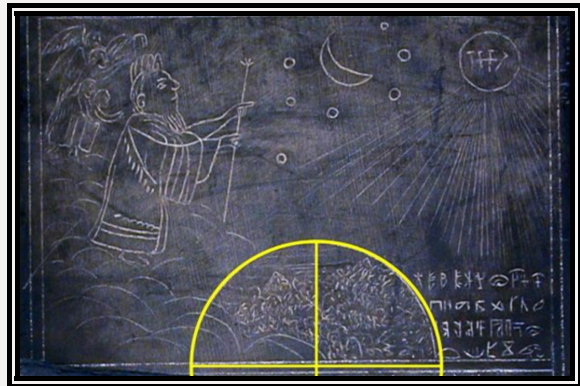


Figure 8

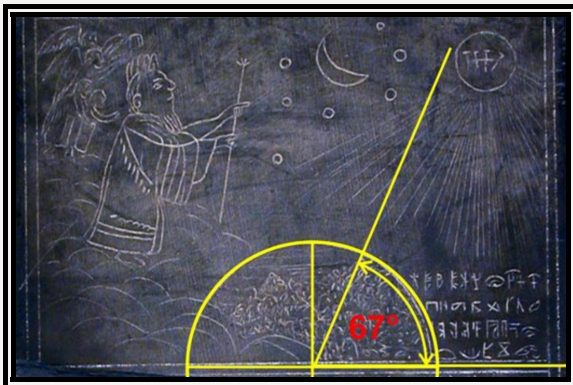


Figure 9

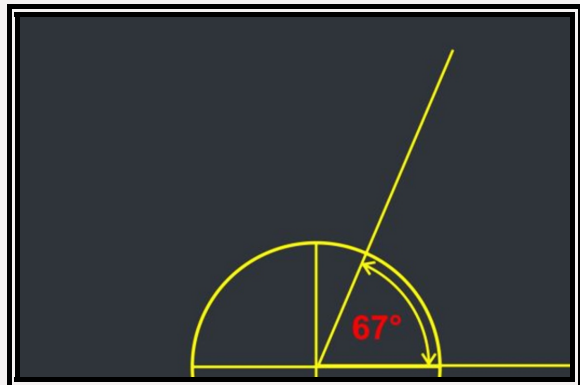


Figure 10

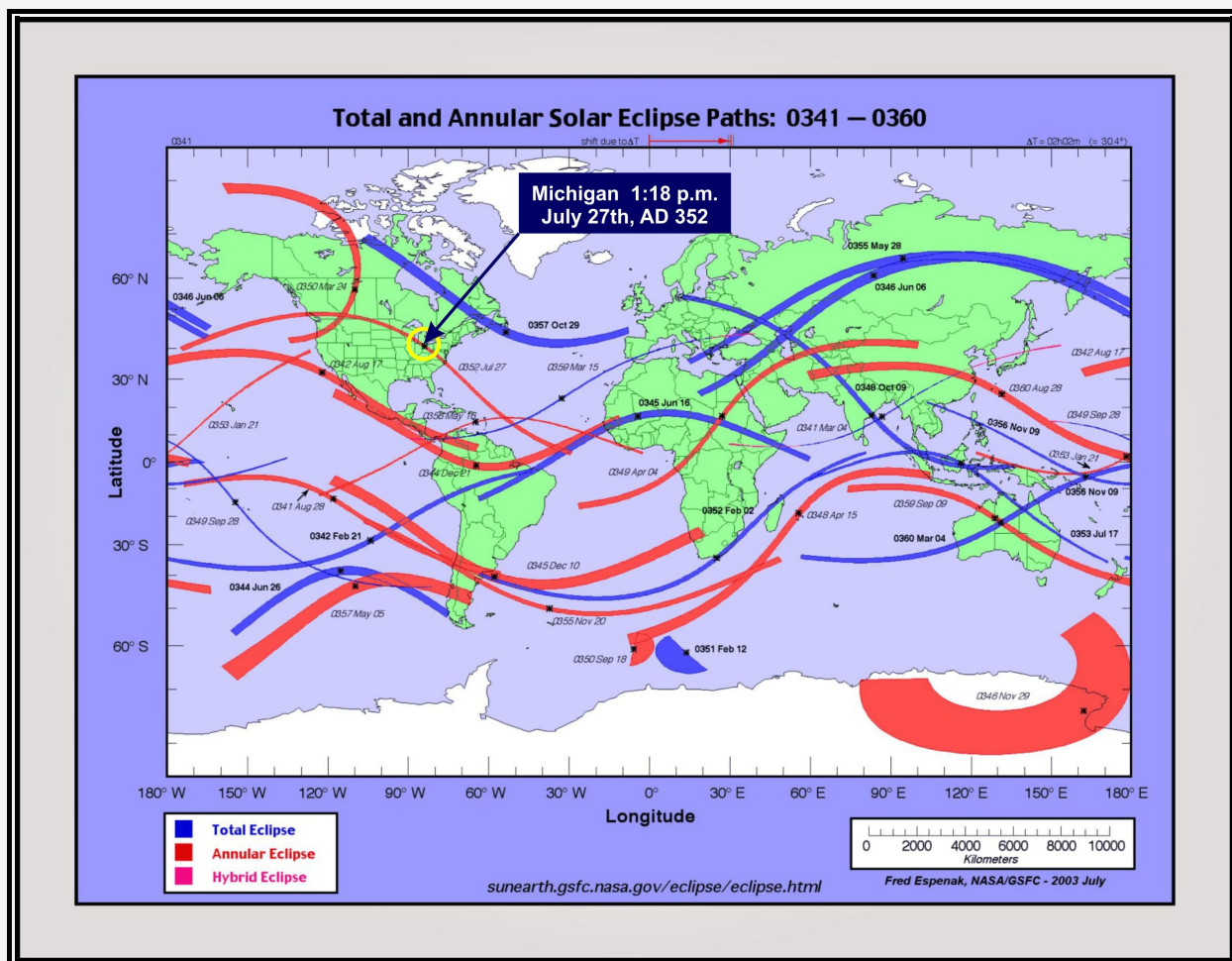


Figure 11

By marking the string, it would then be possible to recreate the sun's altitude at the eclipse time. No protractor was required. No sextant was necessary. All the ancient people needed was a rock, a string, and a stick. The cut of the stone's angle became an exact witness for that eclipse over Michigan so many years ago. The angle is where it is possible to connect the artifact to the exactness of astronomical calculations. Today we independently confirm the 67degree angle of the sun's altitude that the ancient person cut on the stone's face when he witnessed the solar eclipse in the early afternoon of Monday, July 27th, AD 352, in the sky over the Detroit area. Chronology and geography came together on that summer's day as a witness of the ancient eclipse cut in stone.

We know from a careful reading of the Book of Mormon that in AD 350, the Nephite Army Commander made a treaty with the Lamanites and the Gadianton Robbers. The Nephite Army agreed to give up its claim to southern lands if their enemies would cease fighting and leave them in peace on the north side of a new border. Unfortunately, both sides would break the treaty, and 34 years later, large armies would gather at Cumorah, where the Nephites fell as they made a last

stand.

The cut stone of Artifact LDS 60-5600 from Michigan has exact details. These details relate to an ancient eclipse of the sun. The artifact clearly connects to an important event that occurred in the heavens, as seen from Michigan. No European farmer in Michigan in the late Nineteenth Century would have been able to calculate and replicate what is now identified from the stone's engravings.

The ancient person who cut this drawing saw stars in the sky with the sun's darkening. Any child knows that when the sun goes down, you will be able to see stars. Nevertheless, in this artifact, as another confirmation of its authenticity, there were stars in the sky over Michigan in the Fourth Century during the day at the time of the solar eclipse.

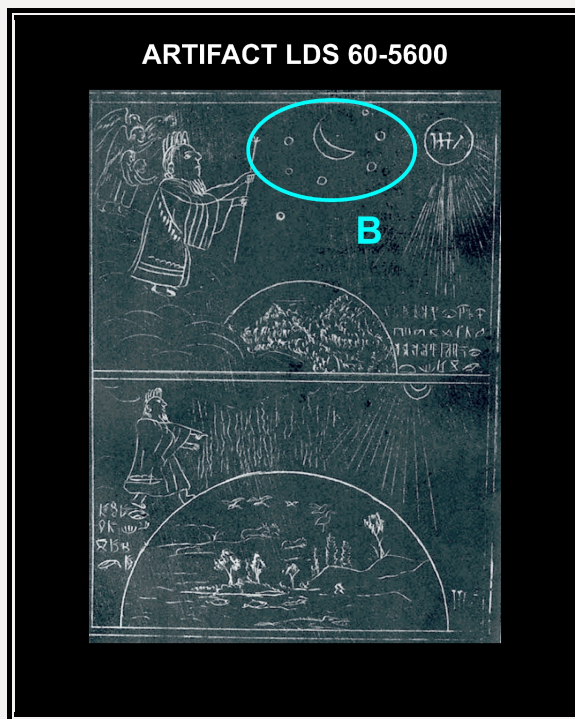


Figure 12

the ancient solar eclipse in the heavens. In short, the person who cut the stone saw stars when the sun was dark, and, as a witness, he drew those stars next to the sun.

A solar eclipse always comes as predicted. When it comes, the only thing to do is stand as a witness to one of the significant events that any person will have a chance to see in the sky. Those who see a solar eclipse never forget it. Such an event is a matter of exact calculation.

We want to understand the frequency of solar eclipses and their uniqueness for particular times and places. Each eclipse has its own path. The cycles of the moon and the sun are independent of

[Figure 12. At the time of the solar eclipse, the stars came out for about two minutes. The visible stars in Section B had at least a magnitude of one in the constellation of Aquarius. The other image is the moon's movement across the face of the sun.]

In short, the ancient person who cut this stone saw stars when the sun was dark and, as a witness, he made sure to include in his drawing the stars that he saw for only two minutes when the light of the summer's sun was no longer in the sky. The stars on the stone are surrounding an image that shows how the darkness of the moon's covering of the sun's face is moving before and after the solar eclipse.

The ancient person who cut this stone made sure that there was space in his drawing for stars at the time of the solar eclipse. This is another confirmation that stone has an accurate image of

each other. There are no patterns in time and place that are synchronous or harmonic for the paths of solar eclipses. To illustrate this fact, we offer a photo of the world views of many solar eclipses from AD 341 to AD 360.

Each path of a solar eclipse has a point where the darkness of the moon's blockage of the sun's light reaches its climax. These movements make the location and time for the paths of solar eclipses into very complex calculations.

When one considers the depiction of the stone's solar eclipse for 352 AD, the Michigan Relic becomes even more remarkable in its details. We understand that the ancient person who made the drawing in stone was near Detroit when he saw at 1:18 p.m. Central Time, Monday, July 27th, AD 352, an annular solar eclipse as the sun was at an altitude of 67 degrees above the horizon. He drew an image of this event in stone. The ancient person's identification of the annular solar eclipse in the Fourth Century with its specific characteristics is proof that this particular Michigan Relic is an authentic artifact.

[Figure 13. The long and rambling Delta Aquariids Shower is officially active from about July 12 to August 23 each year. Here is an illustration that shows the nominal peak on the night of July 27th 28th, AD 352.]

The annual Delta Aquariids result from the earth passing through a cosmic trail of debris left behind by the sungrazing comets Marsden and Kraht. Every year between mid-July and August, bits and pieces of the disintegrated comets slam into the earth's atmosphere. When this happens, falling stars rain down on the earth like fire, producing spectacular streaks of light across the night sky. Because the new moon gave no light that night, the sky was dark, making ideal conditions to see the full glory of shooting stars from the Delta Aquariids. At their peak on the night after the solar eclipse, the meteor showers produced scores of shooting stars per hour. Because of the night sky's darkness, the falling stars were spectacular. The solar eclipse, the new moon, and the meteor showers made for the most active astronomical events for any 12-hour period of anyone living in that generation.

We now have exact coordinates for connecting the LDS 60-5900 Artifact to ancient America's chronology and geography.



Figure 13

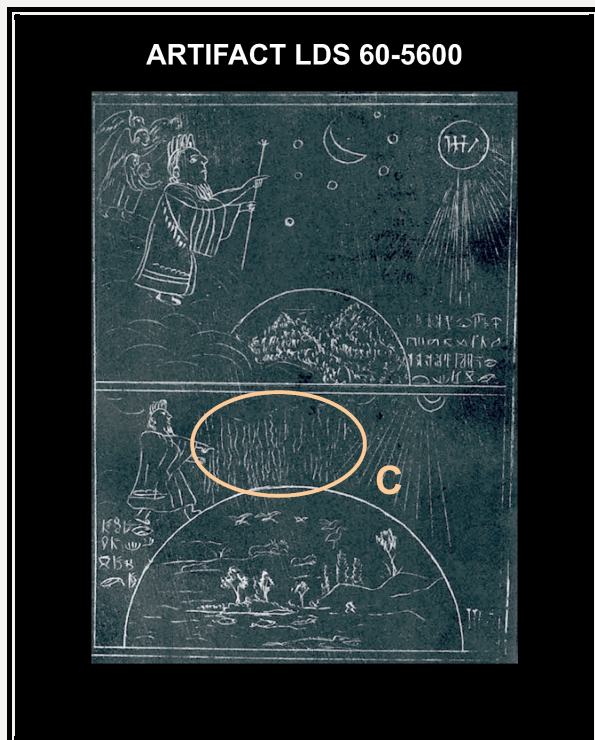


Figure 14

[Figure 14. The Delta Aquariids Meteor Showers cut in stone for the night of July 27th, AD 352]

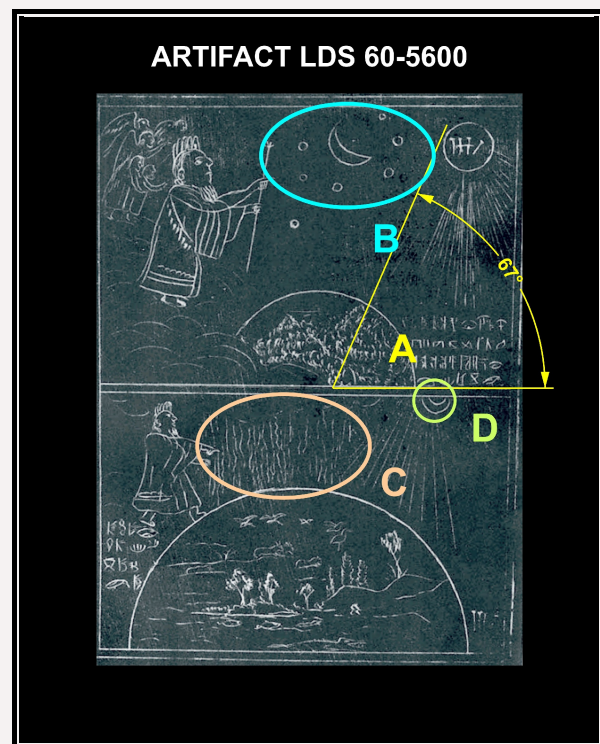


Figure 15

[Figure 15. Astronomical events cut into the stone on Artifact LDS 60-5900.]

A: Annular solar Eclipse, Altitude 67 degrees, Central Time 1:18 p.m., Monday, July 27th, AD 352.

B: Stars visible for 2 minutes during the total darkness of the solar eclipse. Image of the moon's covering as it moves off the face of the sun after the solar eclipse.

C: Delta Aquariids Meteor Shower. Falling stars raining down at 10 to 15 per hour on the earth like fire, producing spectacular streaks of light across the night sky.

D: Astronomical New Moon. Total darkness required for the full impact of the meteor shower.]

Note: Many thanks to Bruce Lloyd for his comments and suggestions in the final preparation of this document.