

THE STAR OF BETHLEHEM DECODED

**Volume 1
Background**

3rd Ed.

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PART ONE

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DEDICATION

This book is dedicated to Dan and Dan: to one of my brothers, Dan Joyce, and to our uncle Dan. It is also dedicated to Mary, the mother of our Lord Jesus Christ.

I could go on and on with quite a list of other persons, too, whom I could dedicate this book to, and quite appropriately so: especially my mother (Julia) and my father (Thomas). But it was my brother Dan who instilled in me an interest in science generally, and in astronomy specifically, at a very early age. And it was our Uncle Dan before that who had likewise instilled an interest in such things in my brother Dan. And since those are the two persons who had the most direct influence on the aspects of my life which led up to my writing this book, I believe that those are two persons whom I should mention quite specifically, along with the due acknowledgement of the role which my parents played in establishing the foundation of my spiritual instruction and my education and upbringing, which of course includes astronomy. Furthermore, I have chosen to add here the one person who, more than any other, facilitated the entry of our Lord and Savior Jesus Christ into this world, and who, through her obedience and ministry, helped Him fulfill His own Ministry: His mother, Mary.

DISCLOSURE

The author is a Bible-believing Christian. The purpose in writing this book, first and foremost, is to show people sufficient evidence to convince them that Jesus is Lord, the only-begotten Son of God, and that God raised Him from the dead, and that He can be each person's personal savior, if a person will accept Him as such. Simultaneously, the author also hopes to convince the reader that the Bible is the Word of God, and that it is a book which we can rely on. Failing all of that, the backup purpose in writing this book is to show all those who still remain doubtful about such things that the story of the Star of Bethlehem is not only plausible, but also that it is quite probably true, at least as an historical account on the actual facts themselves, pertaining to something which I believe did in fact take place one night 2,000 years ago.

Other than that, plus any royalties or other income which may accrue directly or indirectly from this book, the author has no vested interest in whether the reader accepts the things which are stated in this book or not.

PREFACE

What Persons With Various Belief Systems Can Learn From This Book

For those who are not familiar with the story of the Star of Bethlehem, this term is applied to a story found in Chapter 2 of the Gospel of Matthew in the New Testament of the Bible (*i.e.*, in the second part of the Bible). We shall consider the story in detail at various points throughout this book itself, of course, but for those of you who are interested in reading the story in Matthew straight through for yourself, the Gospel of Matthew is the first book of the New Testament. Before we go farther, though, I wish to discuss whom my book itself is for.

This book is written for a wide-ranging audience: for those who believe that the story of the Star of Bethlehem pertains to a series of true, historical events, as well as for those who harbor some doubts that the story might be true, but who are willing to consider the possibility that it is true, anyway. But it doesn't end there: This book is also for those who are fully convinced that the story is not true, but who nonetheless are simply curious to learn more about the topic for whatever reason. And it is also for those who are completely unfamiliar with the story at all.

There is also a certain other kind of person for whom this book is written, and perhaps even more so than for all the others: those who are completely convinced ahead of time that the story is false, and who wish to read this book not out of simple curiosity, or for the sake of gaining knowledge itself, but rather, for the sole purpose of finding some flaw which will enable them to attack the very idea that this story may be true, and to discredit those who believe it (myself included), along with Christianity itself. I welcome and look forward to that challenge, and I invite such persons to read this book, though with one caveat: You may be shaken in your beliefs if you do read this book, and you may find yourself compelled to believe that the story of the Star of Bethlehem is a true account---at least in its basic claims, about actual historical events which did in fact take place.

With that in mind, I must caution you even further: for you may wind up not only believing that the story of the Star of Bethlehem is true on the facts, you might also wind up believing that the entire story of the Gospels about Jesus is true, as well as the Bible itself as a whole. Of course, that is not really

a warning in the usual sense; it is instead an invitation for you to accept the challenge of making use of a unique test as to whether there really is a God or not, and then to have a personal relationship with Him through His Son, Jesus Christ.

All in all then, the Christian can expect to get a renewal of faith out this book, and the skeptic may discover, much to one's surprise, that there may be more to the story of the Star of Bethlehem than one had previously considered. Simultaneously, the outright opponent of Christianity may find even more. The opponent of Christianity may find a truly mind-opening, awakening, and challenging experience, one which may completely transform the reader's life, and one's afterlife as well.

In any event, even if I do not persuade each person who reads this book that the story of the Star of Bethlehem is a true account of events which actually did take place, and that the things which the Bible has to say about the divinity of Jesus are true, I do nonetheless believe that I can show each impartial reader that the story of the Star of Bethlehem---at least on the facts themselves---is indeed something which one cannot rule out, something which thinking, rational adults can believe to be an actual historical event.

With all that in mind then, I invite each person to read this book and see for one's self what it holds.

INTRODUCTION

Let the author begin with some good news and some bad news. First, the bad news: The first section of the Introduction (Section I) contains some material which many may find to be boring and tedious. The author freely acknowledges this. But then there is the good news: The reader may simply skip Section I and go on to Section II.

One might wonder, then, as to why it is that such material is included in the first place. The reason is short and simple: to establish that the proper foundation for considering the material in this book does in fact exist, should anyone have any doubts about that. The same holds true in fact for much of the material in the Appendix, and perhaps even more so. And likewise, one may skip any Appendix material which one finds to be uninteresting.

Should the reader choose to skip such things initially, the author would nonetheless encourage the reader to go back and read them at a more convenient time. Also, should any reader who initially skips Section I of the Introduction or various parts of the Appendix find some later portion of the book to be unclear, the reader may find that reading the omitted material can help clarify things.

I. Methodology, Materials, The Reckoning Of Time, Terminology, Etc.

The methodology and materials which I used are covered in greater detail in the Appendix than they are here. For those who do wish to read that discussion, one may simply use the “Find” function of the computer by putting in the word Methodology. (Note: The “Find” function does not always work on Safari, but seems to work fine on Chrome or Firefox.) In fact, all throughout this book, I shall likewise refer the reader to the Appendix or to passages in the main text itself for a detailed discussion of various other topics, and at such times I shall again advise the reader to use the “Find” function of the computer to locate those other topics in the text or in the Appendix.

A. An Equipment Issue

The first issue I wish to discuss concerning methodology pertains to an equipment issue, one which goes to the reliability of the computer program which I used for my research, Starry Night. When I began my research I was using Starry Night Pro 6, version 6.3.9 pcEM. Versions more recent than that, including the most recent version, Starry Night Pro Plus 8 (version 8.1.1.2078 leEM), have an important difference, however, one which affects what positions celestial objects are shown as having and what the timing of the events which are discussed herein may have. (Note: For the sake of consistency, I shall be using the latest Pro Plus 8 version of Starry Night (8.1.1.2078 leEM), except where I might say otherwise.)

Although an issue such as this is of great importance, the issue by itself is so far off-topic from the actual focus of this book that I have decided to place a detailed discussion of it in the Appendix. That being said, what that issue boils down to is this: Our understanding of where celestial objects may have been, and when they may have been there, is sometimes precise, but not always. As it turns out, this is particularly the case for dates ranging from 500

B.C. to 500 A.D., which of course happens to include the timeframe we are most concerned with: the era of Jesus' birth. This imprecision results in turn from the fact that our data is not always complete.

Consequently, when we put the pieces of the puzzle all together with respect to the heavens within that timeframe, we can produce more than one conclusion as to just exactly how the heavens would have looked in every detail. The Starry Night Pro 6 version which I used originally shows the heavens one way. Later versions, including the latest one (which I use), give the user a choice of which approach to use, including the approach which I just referred to, which is in the Pro 6 versions. In so doing, the developers of Starry Night demonstrate their knowledge that the reliability of the new approach, which the latest versions do employ to start out with (but which the user can modify to the previous approach), is not necessarily set in stone. Thus, if cogent reasons are found for using the original approach, one should consider the possibility of doing so. And in this book, as we shall see, one can certainly argue, at a minimum, that such cogent reasons do in fact exist for using the approach found in the Pro 6 version. I shall discuss this more in detail in Part Five of this book, when we shall see the clearest examples of when this would make the greatest difference.

In the meantime, bear in mind that the photos which I use based on images from Starry Night may reflect the adjustments which I made (and which I shall discuss in detail in the Appendix) in order to revert the newer programming to the original format. So if you are following along with a version of Starry Night on your own computer, what you see from your own version of Starry Night may look different from my own photos unless you make the same adjustments which I have made. Specifically, with respect to the positions of celestial objects and the times when they were in those positions, where it may be relevant, I shall drop a footnote to indicate what value for the so-called Delta T¹ I have assigned for that event and to make reference to the NASA source which I used for doing so. As I say, these potential discrepancies and adjustments shall be addressed in detail in the Appendix, and I shall discuss and show with illustrations how one can make those adjustments to Delta T by one's self in Starry Night.

B. The Reckoning Of Time

Next, as to the reckoning of time, all references to dates in ancient times other than dates on the Hebrew calendar shall be given according to our modern reckoning of the Julian calendar, which was developed by the ancient Roman emperor Julius Caesar, and which was in common use from 45 B.C. up until 1582 A.D. (and even after that, in many places).^{2,3} Keeping that in mind, with respect to dates before 45 B.C., unless I say otherwise, all dates during that time other than ones on the Hebrew calendar shall be based on what the date would have been on the Julian calendar if one were to extrapolate that calendar back to those times when it had not yet come into existence, provided one were also to use the same assumptions about the operation of the Julian calendar which the developers of Starry Night used. That being said, let me note that the developers of Starry Night apparently did not use all of the original operating assumptions of the Julian calendar.

¹ A measurement of time that is used in astronomy

² <https://www.britannica.com/science/Julian-calendar>

³ <https://www.britannica.com/topic/Gregorian-calendar>

Following the year 1582 A.D., our modern, Gregorian calendar gradually started to replace the Julian calendar as more and more countries adopted it. For those who wish to convert individual dates on the Julian calendar during the First Century B.C. (and the First Century A.D.) to what the date would have been on the Gregorian calendar if it had existed back then,⁴ one would ordinarily subtract two days from the date given on the Julian calendar to determine the date which would be the equivalent date on the Gregorian calendar,^{5, 6} though this could vary. As to Gregorian dates for dates prior to the introduction of the Gregorian calendar, they are referred to as *proleptic*, as are likewise Julian calendar dates prior to March of 4 A.D., though in fact they may not match the dates which were actually observed in the Roman Empire.⁷

Thus, the conversion between dates on the Julian calendar and the Gregorian calendar during the reigns of Julius Caesar and Caesar Augustus can be complicated, and so I shall here refer the reader to a portion of the Appendix for a further development of this topic; therein find: "B. Possible Reasons As To Why The Discrepancy Exists". One thing which one should bear in mind while considering all of this is that my statements and conclusions about the Star of Bethlehem do not depend upon our ascertaining whether the dates which I mention should best be denominated as either this date, that date, or some other date on either calendar; rather, what is important to keep in mind is simply that the dates on the two calendars can vary when converting from one to the other.

In addition, except where noted otherwise, all references to times are given according to our modern clocks, although Daylight Savings Time (which of course did not exist 2,000 years ago) will not be used; but times according to UTC (Universal Coordinated Time, also known as "Zulu") may be used.

C. Terminology And Style

With respect to terminology, let me say first of all that from time to time I repeat the definition of certain terms for the sake of clarity and convenience because I think that many readers may skip around the text and Appendix in their reading of this book (which is not uncommon) rather than read it from cover to cover. I have purposefully arranged this book with that in mind, along with referring the reader to the Find function of one's computer, because finding a term in context can help one gain a clearer understanding of what the term means.

Let me also note here that with respect to the use of quotation marks, I use the British rule

⁴ More specifically, to do this within the range from March 1, 101 B.C. through February 29, 100 A.D.

⁵ In 1582 A.D. it was necessary, by contrast, to add ten days to a date on the Julian calendar at that time in order to arrive at the corresponding date on the new, Gregorian calendar. And if one were to convert a day on the Julian calendar now, in the 21st century A.D., to the Gregorian calendar, it would be necessary to add thirteen days to the Julian calendar to get the corresponding date on the Gregorian calendar: <https://www.britannica.com/science/Julian-calendar>

⁶ Here again, this is subject to the variation in the use of the Julian calendar which I just mentioned above, and which, as I say, I shall discuss in detail later on in this book.

⁷ https://en.wikipedia.org/wiki/Conversion_between_Julian_and_Gregorian_calendars

rather than the American rule.⁸ The British rule places the final quotation mark after the final punctuation mark only when that punctuation mark itself is part of what is being quoted; the American rule, by contrast, places the final quotation mark after the final punctuation mark in all cases. For myself personally, I use the British rule because when it comes to punctuation, I believe the British rule makes more sense than the American rule.

II. Is It Just A Coincidence?

As we go through these materials, one thing which will occur to many people over and over again is the question of whether the particular event or phenomenon which we are considering at any given moment is really a sign from God about the truth of the story of the Star of Bethlehem and the deity of Jesus, or whether what we are seeing is just a coincidence instead. That's a fair question, of course.

To address that question, let us first consider what a coincidence is. For if God is in complete control of everything at all times, then there are no true coincidences in the absolute, full sense; that is to say, when two or more things have some overlap in time or place, or in terms of other criteria, it could never be the case that the overlap would go unnoticed by God, or that God wouldn't have decided to have things come out the way they did for some reason.

That being said though, I think that when we say that two or more things coming together is a coincidence, what we can all agree on is that if we think of something as being a coincidence, we are simply thinking that no special meaning was actually intended by God or by anyone else in having them come together the way they did. So first of all, throughout this book, let us deem the nature of a coincidence in that manner: *i.e.*, a coincidence is when two or more things come together in such a way that any overlap they may have in substance or in appearance was not intended by God or by anyone one else to have some type of special meaning for us.

Using that as our working definition of a coincidence then, allow me to say that even though I believe that the vast majority of the things which I discuss are not coincidences, it remains the case nonetheless that given the large number of events and phenomena which we shall be looking at, I would indeed be surprised if not even a single one of them is a coincidence, and I am perfectly willing to accept the fact that quite likely, at least some of them are indeed coincidences.

With that in mind, as we conduct our inquiry into this topic then, let us proceed slowly, and with caution, lest we read too much into the data which we shall acquire and thereby end up drawing unwarranted conclusions about things which ultimately may turn out to be mere coincidences. Of course, one other thing which we must consider is the fact that even if a particular pairing of phenomena is in fact truly a coincidence, the Magi themselves might not have thought it to be so, and so they may have acted on the belief that they were seeing a true sign from God instead of a coincidence.

Now, that being said, we must recognize that the issue we face in this book is not the

⁸ <https://www.theguardian.com/media/mind-your-language/2011/may/19/mind-your-language-punctuation-quotations>

question of whether I can prove that *every single one* of the things which we shall investigate is not a coincidence; but rather, the issue we face instead is the exact opposite of that: *i.e.*, the question of whether *none of the things at all* which we shall look at is a coincidence. For if even one thing among the many things which we shall study here is not coincidental, then we would have to ask why that is so, and we would have to consider the question of whether such would be the case because the story of the Star of Bethlehem-

--at least on its facts, if not necessarily in its spiritual dimensions---is a basically true account of events which did in fact take place in history 2,000 years ago.

If we conclude that the story of the Star of Bethlehem is accurate at least in terms of its factual dimensions, then this in turn would lead us to the question of whether one of more of the other things which we shall examine here would point us to the conclusion that the spiritual aspects of the story--- *e.g.*, the divinity of Jesus, and His identity as the Messiah---might likewise be true as well. That being said, let me assure you that I believe that an open- minded reader will, at a minimum, allow for the possibility, at least, that the vast majority of the things which we shall see herein (particularly among the most important facts) do not involve any coincidence concerning the historic facts themselves, and that this may quite possibly apply to the spiritual aspects of the story as well.

Toward the end of this book we shall revisit this issue of coincidences, for we shall then be in a good position to consider such questions in a more fully informed manner when it comes to this story. In the meantime, please try to keep as much of an open mind as you can about what may be coincidental, and what may not be.

III. The Foundation Of My Work

In a series of writings from 1961 to 1964, the late astronomer Gerald Hawkins (not to be confused with the late, more recently-deceased astronomer Stephen Hawking) wrote about the ancient British structure known as Stonehenge.^{9, 10, 11} In 1965, he authored a book in which he pointed out that by using a computer, he had discovered that 165 points within this famous ancient British collection of massive stones were aligned with major events pertaining to the Sun and Moon, and that this ancient structure could actually be used to predict eclipses and to determine the beginning of summer and the other seasons.¹² This was an unusual use of a computer in the mid-1960s, and Hawkins was a pioneer in showing that a computer could be used for this type of research. Whether or not Stonehenge was actually built for the specific purpose of using it as an astronomical computer (as I myself think it was) is an issue which does remain a matter of speculation, but it is indisputable that it does in fact operate in that manner in any event, should one choose to use it that way.

Stonehenge had been a mystery going all the way back to the very beginnings of recorded history in Great Britain. But because Hawkins did reveal for the first time so many of the previously

⁹ <https://www.history.com/topics/british-history/stonehenge>

¹⁰ <http://scihi.org/gerald-hawkins-stonehenge/>

¹¹ <https://www.independent.co.uk/news/obituaries/gerald-hawkins-36937.html>

¹² <http://content.time.com/time/world/article/0,8599,1886661,00.html>

unknown aspects of Stonehenge with his computer-based work, Hawkins entitled his book *Stonehenge Decoded*. I remember when his book came out. Since I was just shy of my 11th birthday at that time, however, I could not follow most of what Hawkins was saying. I do recall, however, that my brother Dan (whom I refer to in the Dedication of this book) was greatly enthused about Hawkins' book, and so as the years went by, I began to study Stonehenge more and more out of curiosity. It is with Hawkins' book in mind that I have decided to entitle this book about the Star of Bethlehem, in which I publish the results of my own computer-based research and findings *The Star of Bethlehem Decoded*.

Now, much of my research stems from the research of a fellow Christian amateur astronomer and lawyer by the name of Rick Larson. Larson's research, in turn, parallels many of those same things which have been shown and discussed over the years in planetariums, as well as in the writings of astronomer Dr. Craig Chester and certain other researchers, although Mr. Larson certainly does expand on what these others have shown or written about. From Larson's own research he produced a documentary simply called *The Star of Bethlehem*, now updated as *The Star of Bethlehem Revealed*.¹³ It is well worth watching, and I recommend that each reader of this book watch it because it will give the reader an introductory look at this topic. I do disagree with Larson a little bit---though only on some of the details, rather than on his basic message---as I shall explain from time to time throughout this book.

In this book I do greatly expand the scope of inquiry into the overall topic of the Star of Bethlehem well beyond what Mr. Larson or any others have presented. In addition, in the Appendix I deal with some of the important points about Larson's discussion of the "blood moon" which took place on the day that Jesus died, and how I differ from him in some details; for more on that find: MY COMMENTS ON RICK LARSON'S DISCUSSION OF THE "BLOOD MOON".

All in all then, my work is not isolated in a vacuum. Instead, it is based heavily on the research of scholars going back many years. In that respect, if I may borrow from Sir Isaac Newton, I would say that if I do appear to some to be able to see farther than others with respect to this topic, it is only because I stand on the shoulders of the giants who have come before me.¹⁴

IV. Do I Prove Anything Scientifically, Or By Appropriate Standards In The Fields Of History Or Archeology?

With respect to the science of this topic, many who read this book will be wondering first of all whether I prove any of what I say here scientifically. In response to that I'll say that I do prove two small parts of what I say here scientifically: namely, that it is at least plausible, as a matter of astronomy and mathematics, that a star went before the Magi as they travelled from Jerusalem to Bethlehem, and second, that the Star could have "stood over", or "stopped over", or "came to rest over" the place where Jesus was when the Magi got to Bethlehem. As to the rest of the material, this

¹³ <https://bethlehemstar.com>

¹⁴ <https://www.scq.ubc.ca/isaac-newton-standing-on-the-shoulder-of-giants-excerpts-from-his-diary/>

inquiry will unfold a detective's story, one which is part science and part speculation.

Now, it is very important to understand just exactly how science and speculation can properly work together to put together the pieces of a puzzle in any detective's story. But for some people, the full explanation of how science fits in with an examination of an alleged historical event may prove tedious. Consequently, in an attempt to achieve a balance, I have included a detailed discussion of the proper role of science in this book, but for the sake of those who are already comfortable with their understanding of how that works, and who wish to proceed directly to a discussion of the main topic of this book itself, I have decided to place that detailed discussion in the Appendix rather than here in the text. For the interested reader, in the Appendix find THE ROLE OF SCIENCE IN THIS INQUIRY.

A. My Background In Science And Astronomy

Since the focus of this book is on astronomy, allow me to share some points about my own background and my ability to comment on astronomy. First of all, I am not a professional astronomer. I am instead a registered pharmacist, and I am also a licensed attorney-at-law. I have made a living by practicing pharmacy, and I have practiced law on the side from time to time. In studying this topic, I utilized the training in logic which I received in both the hard sciences and in the study of law to examine the evidence regarding the so-called Star of Bethlehem.

More specifically, I have almost no formal training in astronomy itself. But for many years I was active as an amateur astronomer (though admittedly, I have been less active recently). I participated in science fair projects on astronomy in eighth grade and during high school. I built my own telescope the summer after eighth grade at the former optical shop of the Adler Planetarium in Chicago (an 8-inch $f4.35$ Newtonian/ $f16$ Cassegrain). As a member of my high school's astronomy club, I was able to join two others from the club when we were allowed to get out of school to go from Chicago to Savannah, Georgia to see a total eclipse of the Sun in March of 1970, during my sophomore year (though it was cloudy on that occasion, unfortunately). Those of us who were members of the astronomy club were also commonly allowed to get out of class to go downtown to see the Apollo astronauts at the appearances they made following the completion of their missions.

I had an observation report regarding a particularly bright display of the aurora borealis (the so-called northern lights) published in *Sky and Telescope* magazine in October of 1970, during my junior year high school. Some of the photographs I took on that occasion were on display for many years at the Adler Planetarium in Chicago. In my senior year (Class of '72), I was president of my high school's astronomy club (vice-president during junior year). Following graduation from high school, I went with some fellow amateur astronomers (including my brother Dan) on a trip to southern Quebec, Canada, to see a total eclipse of the Sun (under clear skies this time, fortunately) in July of 1972. (This particular eclipse, by the way, which went across several Canadian provinces, is the eclipse which is mentioned in the song *You're So Vain* by Carly Simon.)

While I was in the pre-pharmacy program at the University of Arizona I took an elective course in observational astronomy from the late Dr. Raymond E. White, Jr. of the university's

Steward Observatory. He is the person for whom the telescope of the on-campus station of Steward Observatory is now named. Given the interest which Dr. White had in archaeoastronomy¹⁵ (something which I did not know about him at the time), I cannot help but wonder what Dr. White would have thought of this book, the work of one of his students.

The year after I graduated from pharmacy school I led an expedition of the Chicago Astronomical Society to observe the heavens from the White Mountains of east-central Arizona and from Big Bend National Park in Texas, and to tour Kitt Peak National Observatory outside of Tucson, Arizona, as well as McDonald Observatory in Texas and the Very Large Array (VLA) radio telescope in New Mexico. I have also observed the very rare phenomenon known as the gegenschein¹⁶ from a remote desert site in Arizona, as well as the Leonid Meteor Storm of 2001 from a similar location.

More recently, I observed the Great American Eclipse of the sun on August 21, 2017, from a site just east of Nashville, Tennessee.¹⁷ (And then, immediately following that, I also took part in the Great American Traffic Jam on my way back to Illinois.¹⁸¹⁷) I also saw the 2024 eclipse from Bloomington, Indiana. All in all then, although I have virtually no formal training in astronomy, I am nonetheless at least reasonably conversant in the topic.

As a closing note on this point, bear in mind that when I say that certain events were visible in the heavens to ancient peoples, I can say from my own background in astronomy, such as it is, that the Magi themselves would not actually have to have seen all of the events in the heavens of which I shall speak, for even without a telescope or a modern-day understanding of Kepler's Laws of Motion,¹⁹ they nonetheless would have known from their own study of the heavens that these events would be taking place even if it had been cloudy, if the objects to be observed were below the horizon, or if the glare of daylight made observing the events impossible. In fact, when I was in high school, any of us in the astronomy club could have told you to a relatively fair degree of accuracy where the various planets, the Sun, and the Moon would be at least a few years in advance, or where they had been up to a few years previously, just from our own observations of the heavens, without having to make use of our telescopes or the modern theories of physics.

For a detailed discussion of how the Magi could have known that a celestial event would take place even if it would take place when they could not have seen it, in the Appendix find: HOW ANCIENT PEOPLES COULD HAVE KNOWN THAT CELESTIAL EVENTS WHICH THEY COULD NOT

¹⁵ <https://aas.org/obituaries/raymond-edwin-white-jr-1933-2004>

¹⁶ <https://earthsky.org/space/definition-what-is-the-gegenschein>

¹⁷ In the Appendix I have placed a photo of myself on that day with the 8" *f* 4.35 Newtonian telescope (convertible to Cassegrain) that I made the summer after eighth grade, and a photo of myself and my brother Dan on that day with a 10" *f* 4.8 Newtonian telescope which he made. (In the Appendix find "Telescope Photos".) And thanks to Gene and Pierre of Direct Flight Solutions, by the way, for letting us set up next to their facility at the Lebanon Municipal Airport.

¹⁸ which anyone else who was northbound on Interstate 65 in that area at that time can relate to as well, I am sure

¹⁹ <https://www.britannica.com/science/Keplers-laws-of-planetary-motion>

SEE WOULD BE TAKING PLACE.

B. Keeping My Statements On Archeology And Related Fields In Perspective

Allow me to emphasize here what I said before about my investigation of this topic overall: What I say here will entail in part the use of speculation, and on occasion, substantially so. With that in mind, I must emphasize that I have no formal training at all in historical research or archeology, or in the study of the various cultures which we shall examine. And so I strongly encourage the reader to consider what I say here in that light. Accordingly, I invite the reader to consider what I say here in light of what any credentialed professional in these various fields might have already said about these topics, or what they may come to say afterwards. I only ask the reader to bear in mind that if any such professional should happen to comment (whether favorably or unfavorably) on what I say here after that person has read or heard about this book, that an issue will then arise as to whether that professional is giving an impartial assessment of my work, which hopefully (and in fact presumably) will be the case.

Of course, in light of that, one might then wonder why I would even bother to put my own thoughts about history and archeology in writing at all. In answer to that please allow me to say that first of all, for reasons which I think the reader will agree with by the end of this book, the topic of the Star of Bethlehem is worth discussing in depth just for its own sake, if nothing else, and second, it would be impossible to discuss the topic fully without at least some discussion of the history of certain cultures in the ancient world.

Furthermore, nothing which I say herein is intended to take the place of scholarly work by credentialed researchers in the fields of study pertaining to such topics. Rather, what I hope to do here is only intended to supplement the great scholarly collection of thought on ancient cultures which others have written by including some additional thoughts from my own perspective; granted, some of what I say here may contradict some of the things which credentialed researchers may say, but I shall leave it to the reader and to academic commentators to ascertain what things should be deemed credible and what should not be. Simply keep in mind that we all have our prejudices, and this will of course be true for all researchers, including my critics, my supporters, and myself.

That being said, one might wonder, in light of all that, whether my own perspective would even be worth anything in the first place, anyway. In response to that, I would say that it is quite probable that credentialed professionals in these various fields outside of astronomy are scholars of their respective fields (such as ancient Near East studies) first and foremost, and astronomers only second, and then only to the extent to which they needed to become introduced to the topic of astronomy in order to do research within their respective fields.

By contrast, I come to this issue from the exact opposite direction: With respect to the fields of astronomy and the other fields, I come into this topic as an astronomer first, and someone who has found the study of ancient cultures to be quite fascinating second. So it is at least plausible that I may have noticed some otherwise-overlooked perspective of this matter from the astronomical angle which should be brought to light.

Furthermore, I should think that so long as one refrains from recklessly or intentionally misleading people about the material presented, there is no harm in presenting some new ideas just for the enjoyment and enrichment which comes from discussing them, if nothing else, especially where one warns the reader up front that this is all that one is doing. And so, that being said, let us keep this in mind when we study herein the archeological, cultural, and astronomical aspects of the story of the Star of Bethlehem.

V. The Academic Points About Science, Scripture, And History

Now, all that being said, what this book adds to those things which have already been said by others on this topic over the years is based on how I apply astronomy to geography, mathematics, and even (in one case) biology. And I recognize that to do such a thing, one must first utilize logic to lay three foundations. First, since the focus of this book is on the science of the matter (principally astronomy), one must have a solid foundation in science in order to understand the scientific points raised herein. Second, since a study of the Star of Bethlehem must be based upon what the Bible says about the Star, one must add a solid foundation of what Scripture itself says about it. And then third, one must lay a solid foundation in human history.

I have placed many of the foundational materials pertaining to science and human history in the Appendix. That way, those materials are there in the Appendix for all who wish to read them, either before or after reading the main text of this book, whereas those who do not wish to read them for whatever reason will not be encumbered by them. I do not encourage this latter approach, however. Rather, the precise opposite is the case. For as I point out in the foundational materials themselves, Scripture admonishes Christians to be prepared at all times to give an answer to all those who may ask us as to why it is the case that we believe those things which we do believe. (I Peter 3:15)²⁰

Furthermore, with respect to the scientific, Scriptural, and historical aspects, it is always good to expand one's knowledge and become conversant in those topics just for the sake of gaining new knowledge, anyway. So I encourage all who read this book, including Christians (*especially* Christians), to read those portions of the Appendix which establish the foundations of science and history pertaining to what I say in the main text of this book. As to the foundational materials pertaining to Scripture, they will, for the most part, be part of this text itself.

²⁰ https://biblehub.com/nasb/1_peter/3.htm

VI. The Bible Story Of The Star Of Bethlehem

A. The Various Translations Which Are Available

As the title of this section indicates, in this part I shall cover the basics of the story of the Star of Bethlehem. Nonetheless, I recommend that you also read the story for yourself online at a website known as biblehub.com: <http://biblehub.com>.

Ordinarily, I might place a discussion of the features of the biblehub.com web site, and how to make best use of it, in the Appendix. But understanding the Scriptural background of our discussion of the Star of Bethlehem is so important for all those who read this book that for the sake of clarity, I shall instead place the discussion of how to use that web site here in the text itself as a way of encouraging people to make use of that web site.

Now, that being said, near the top of that web site, along the right side you will find a drop-down menu for quite a large number of different languages. Also on that site you can find tabs up near the top for various different English language translations of the Bible, such as KJV (King James Version, the traditional Protestant version), DRB (Douay-Rheims Bible, the traditional Roman Catholic version), and NAS (New American Standard Bible, a widely-read Protestant translation in easily-read modern English, also referred to as the NASB), as well as several others translations.

For my own personal reading, I usually prefer the King James Version or the New American Standard Bible, although for those who are unfamiliar with the KJV, it does take some getting used to because it was translated in the 1600s (as was the Douay-Rheims Bible), and the English language at the time was noticeably different from what it is today. (Note: Certain words in some translations of the Bible are written in italics. These words are italicized to show that they are not part of the text in the original language; instead, those words were placed into the various English translations by the translators because these words are implied in the original text, and they are therefore added to make the English translations of the text easier to read and understand.)

I also do like the New International Version and the English Standard Version (which are likewise available on the biblehub.com website), and at times I look at these various translations, as well as a few others, because sometimes a word written in one of the languages in which the Bible was originally written may be hard to translate into just one word in another language, such as English.

To some it may seem confusing to switch between various different translations of the Bible. I do so, however, not because there is any substantive difference in the meaning of the specific verses which I quote from the various translations, but rather, because it can sometimes be helpful to see what word or phrase the translators used in various translations in order to focus on some of the subtleties of the language in which the original text was written, even if all of the translations are themselves in English, and contain the same basic message. And sometimes just the stylistic differences themselves seem to make for easier reading in one translation as compared to another. In this book, I will mostly use the aforementioned translations, although we shall briefly consider the wording in a few of the others as well.

B. The Story Itself

All that being said, let us now look at the Gospel of Matthew. Chapter Two of the Gospel of Matthew says that at some point in time not long after Jesus was born, certain scholarly persons from the east known as Magi (“the Wise Men”;

pronunciation:

<https://dictionary.cambridge.org/us/pronunciation/english/magi>) arrived in Jerusalem saying that they had seen a particular Star which signified that the King of the Jews had been born, and that they had come to worship Him.²¹ When they learned in Jerusalem that they could expect to find this newborn king a few miles to the south in Bethlehem (if in fact He had really been born at all), the Star went before them on their way from Jerusalem to Bethlehem.

The Bible says that when they got to Bethlehem, the Star “stood over” the place where the child was (KJV and DRB). It also says that they rejoiced “with exceeding great joy” (KJV and DRB) when they saw the Star in Bethlehem, and that they found Jesus and His mother, Mary, and presented Jesus with gifts of gold, frankincense, and myrrh, and worshipped Him. We shall examine all of this in more detail later on in this book.

VII. Key Questions Which We Shall Examine About The Star Of Bethlehem

In doing my own research on this topic I found myself, much to my pleasant surprise, uncovering what I believe to be answers to some peculiar questions about this topic. These questions are as follows.

A. Why Did The Magi Go At Night?

There are many false beliefs about the Star of Bethlehem which must be brought to light. For instance, many people believe that the Magi saw the Star both by day and by night. As the song *The First Noel* says,

*And to the earth it gave great light
And so it continued both day and night*²²

There is no support in Scripture, however, for the idea that the Star was visible during the day.

Many people also believe that the Magi decided to follow the Star to Bethlehem because they supposedly had already followed the Star to Jerusalem, and so they continued to do so in order to get to Bethlehem. In fact, however, although the Bible says that the Star went before them as they travelled from Jerusalem down to Bethlehem, it doesn’t say anything about them first

²¹ <http://biblehub.com/nasb/matthew/2.htm>

²² <https://genius.com/Christmas-songs-the-first-noel-lyrics>

following the Star to get to Jerusalem itself. Nor would they have had any need to follow the Star to get to Jerusalem, anyway. For everyone knew where Jerusalem was, and we can see from Scripture that when they did get to Jerusalem, they simply went to the palace of King Herod to find the newborn King of the Jews, which is precisely where one would expect to find a newborn King of the Jews.

Also, there is no apparent reason to believe that they had any reason to think, when they first arrived in Jerusalem, that the Star would lead them directly to the house of the child. Fortunately, as things turned out, it did in fact lead them to the house where Jesus was. But again, there really is no reason to think that they were somehow counting on the Star to lead them to the one, specific house where Jesus was when they first arrived in Jerusalem.

It is therefore particularly puzzling that they would go from Jerusalem to Bethlehem at night. For they were carrying gold, frankincense, and myrrh. And in order to follow the Star at night, they would have to leave the safety of the city walls and thereby place even their own lives at risk, not to mention their treasures. The question then becomes, “Why didn’t they just wait until morning? Why didn’t they go by day?” Bethlehem is only about six miles by road from Jerusalem. And it would have been a very small community at that time, probably consisting of just a few dozen families. So even if more than one male child had been born around the time they thought that Jesus had been born, it should have been relatively easy to determine just through family lineage as to which child would most closely fit the prophecies of the coming Son of David, the King of the Jews.

In light of all this, it is therefore both amazing and puzzling, at least on the face of things, as to why they would go at night at all. For not only would there be robbers and cutthroats out in the desert, but also, since they would be going at night in unfamiliar territory, they could easily make a wrong turn and get lost, thereby increasing the risk of facing dire consequences. For even to this very day, there is no straight road from Jerusalem to Bethlehem through the winding hills of Judea.

B. Was The Star In The East, Or Were The Magi In The East?

When the Bible talks about the Star “in the east”, does the Bible mean that the Star was in the east, or does it mean that the Wise Men themselves had been in the east when they saw it? Three times in the telling of the tale of the Star of Bethlehem, the most commonly read English translations of the Bible use the phrase “the east”. The first time this phrase is used, it obviously refers to the Magi themselves as having come from the east. But people have wondered for 2,000 years about the second and third uses of this phrase. I believe I can shed some light on that mystery, and not just from a study of the language in which the Gospel of Matthew was written, but also by astronomical evidence.

C. How Could They Follow A Star From The Old City Portion Of Jerusalem To The South-Southwest To Bethlehem?

Everyone knows that generally speaking, stars rise in the east and set in the west.²³ So then

²³ As seen from various latitudes, some stars, such as Polaris (the North Star) are too close to a celestial pole to ever set or rise, and simply rotate around the pole above the horizon. These stars are

how could the Magi have followed the Star from the Old City portion of Jerusalem to the south-southwest to Bethlehem? That is a mystery which has puzzled people for 2,000 years, and this fact by itself has led many people to believe that the story of the Star of Bethlehem simply cannot be true. The aforementioned Rick Larson believes that he has solved that mystery, but for reasons which I shall make plain later herein, I cannot agree with him. For I have concluded that his statement is contradicted by the facts, and that there is a different answer. Allow me to note as well that of all the differences which I have with him on the Star of Bethlehem, this is the one point on which I disagree with him the most (though again, I believe his basic message is essentially sound).

D. What Does the Bible Mean When It Says the Star “Stood Over” the Place Where the Child Was?

Another question which I believe I have answered---in substantial part, at least---is, “Why does the Bible say the star ‘stood over’ the place where the child was?” Or, as some translations put it, the star “stopped” or “came to rest” over the place where the child was. People have wondered for 2,000 years, “What could that possibly mean? How could a star possibly stop?” And some people have said that since it is not possible for a star to stop, this account from the Bible cannot be true. The answer to that question has two parts to it, and I believe that Rick Larson has pointed to one important aspect of the answer, though not the only aspect thereof, nor even the one aspect which most closely aligns with Scripture, as I shall explain herein.

E. Why Does The Bible Say That The Magi Rejoiced “With Exceeding Great Joy” When They Saw The Star In Bethlehem?

Then there is the question of why the Bible says that when the Magi saw the Star in Bethlehem, they rejoiced “... with exceeding great joy.” This is a puzzle because the Bible says that when they were in Jerusalem, they told King Herod that they had seen the Star, and quite obviously, all night long, going down from Jerusalem to Bethlehem, they also saw His Star. But the Bible doesn’t say anything about them rejoicing upon seeing it except when they finally did arrive in Bethlehem. So then, what was so special about seeing the Star in Bethlehem that apparently was neither present nor true at any of those other times? I will show that there may have been more than one reason for this.

F. Why Is It That The Magi Apparently Made Such A Journey As This Without Checking To Make Sure That The New King Of The Jews Had Even Been Born?

When the Magi arrived in Jerusalem to worship the newborn King of the Jews, no one knew what they were talking about. This indicates that they had not corresponded ahead of time with anyone in Jerusalem just to make sure that this king had indeed been born before starting out on such a costly and dangerous journey. But why would that be? It would have been easy for them to check with the people in Jerusalem by correspondence before starting their journey. Yet apparently, none of them did.

known as circumpolar stars: <https://earthsky.org/space/what-are-circumpolar-stars>.

I believe I have figured this out, and I shall share the answer to this question herein.

G. Where Was The House Where The Magi Found Jesus And Mary?

Here's another thing to consider. People have often wondered where the house was where Jesus and Mary were when the Magi arrived in Bethlehem. I believe I have been able to develop at least a general idea of where that house may have been. Mind you, no one (myself included) can know for certain where it was; in fact, technically speaking, I recognize that it could have been located literally anywhere in ancient Bethlehem. But based upon the application of astronomy to geography, I believe that I can take at least a reasonable guess as to the approximate location of that house.

All that being said, let us next take a look at a summary version of the story of the Star of Bethlehem.

H. Who Were The Magi? (The Basics) The Ancient Persian Class Of Priests, And A Possible Hebrew Connection

Magi is the name of a priestly class of men dating back to ancient Persia; the word "magi" is the plural of "magus", and we get our words "magician" and "magic" from magus.²⁴ The Magi were men of great learning. Consequently, the Magi are also known as the Wise Men; the Magi who visited Jesus are sometimes also known as the Three Kings,²⁵ though the Bible does not say specifically whether they were kings or not. Nor does Bible say how many Magi there were; it mentions three gifts which they brought, and so from this we commonly assume that there were three Magi. But there could have been two Magi for all we know, or perhaps three, or, according to some traditions, there may have been four, eight, or even twelve Magi.²⁶

The Magi, like all men of learning at that time, would have known a great deal about the stars. In fact, the word "magus" may even be based on a root word for "star".²⁷ Some people think that this automatically means that they were astrologers. Actually, they may or may not have been astrologers; in fact, I personally do not believe that they were astrologers, or at least, not necessarily all of them.

Astrology is the belief that your destiny is governed by the stars.²⁸ As such, astrology operates to the exclusion of the Biblical view that first of all, God is sovereign, and therefore, the stars can't be the thing which determines the direction of your life.

Second, this idea in astrology that the stars determine your fate operates to the exclusion of

²⁴ <https://www.britannica.com/topic/Magus>

²⁵ <https://www.learnreligions.com/three-kings-wise-men-from-the-east-701082>

²⁶ <http://www.ancient-origins.net/history-famous-people/mysteries-three-kings-who-were-they-and-where-did-they-come-003966>

²⁷ <http://armenianweekly.com/2012/01/06/a-story-about-the-magi-in-armenia/>

²⁸ https://www.astrotheme.com/files/astrology_professional_destiny.php

the Biblical idea that you yourself make all the decisions in your life about right and wrong. It is this decision-making power which you do have which forms the basis of your accountability before God for your actions. It is the very basis for saying that if you engage in behavior which departs from God's way, you have sin in your heart, and for saying that if you engage in behavior which conforms with God's way, you thereby act out of goodness and righteousness.

Furthermore, as was pointed out by Dr. Craig Chester (the astronomer whose work guided the aforementioned Rick Larson),²⁹ there is some possibility that the Magi were in fact Hebrews themselves. And as Larson adds in his aforementioned documentary, they may have been descended from those Jews who stayed behind in Babylon after the Babylonian Captivity. I agree that that is a possibility, and I would likewise say, in addition to all that, that they also may have been descendants of one or more of the Lost Tribes of Israel^{30,31} from centuries before the Babylonian Captivity.

More importantly though, I have also uncovered certain other evidence which would at least suggest that one or more of them may have been a member of the Tribe of Levi,³² which is one of the three tribes which was not a Lost Tribe (the others being the Tribe of Judah---the tribe of Kings David and Solomon, and of Jesus---and the Tribe of Benjamin).^{33,34} If any of those three things is the case, they might not have been astrologers at all. Yet as men of learning, they still would have studied the heavens.

A further discussion of the Bible, astrology, and whether it is even proper for Bible-believing Christians and Jews to look for signs in the heavens at all may be found in the Appendix. (In the Appendix find IS IT PROPER FOR BIBLE-BELIEVING CHRISTIANS AND JEWS TO STUDY THE HEAVENS?)

I believe it is important for Bible-believing Christians and Jews to consider that matter in depth because there is such an important (though quite subtle) difference between astrology on the one hand and the use of astronomy in the manner in which we will be using it in this book on the other hand. And at times, in fact, it may seem to the uninitiated that I myself am dabbling in astrology, though I assure you that I am not. So if you are having trouble understanding this, it would be highly important for you to study the Appendix materials on point in order to clarify that.

VIII. The Six Main Parts Of This Book

In Part One of this book we shall examine the overall cultural, religious, and astronomical

²⁹ <https://imprimis.hillsdale.edu/the-star-of-bethlehem/>

³⁰ <https://jewinthecity.com/2019/01/what-happened-to-the-lost-tribes-of-israel/> ;
<https://www.bibleodyssey.org/en/places/related-articles/lost-tribes-of-israel>

³¹ Note: The total number of tribes descended from Jacob which are mentioned in the Bible is 13 instead of 12, but this is because Jacob's son Joseph received a double blessing from Jacob: <https://www.bibletools.org/index.cfm/fuseaction/Topical.show/RTD/cgg/ID/21686/Double-Portion-Assigned-Joseph.htm>

³² <http://www.jpost.com/Food-Index/Bene-Israel-The-Jews-of-Mumbai-India>

³³ <https://jewinthecity.com/2019/01/what-happened-to-the-lost-tribes-of-israel/>

³⁴ <https://www.jewishvoice.org/read/blog/who-are-tribes-judah>

events and circumstances which could have led the Magi to believe that the heavens themselves were pointing to the upcoming birth of the King of the Jews. In Part Two we shall examine the events and circumstances from the time that the angel Gabriel announced to Mary that she would be the mother of the Messiah (the “Annunciation”) to the time when Jesus was born. In Part Three we shall look at the actual visit of the Magi, which followed shortly after Jesus was born. In Part Four we shall consider how it is that certain things which are *not* said in the Bible about the Star of Bethlehem and the Magi turn out to be just as important as those things which are in fact said about them. And in Part Five we shall examine the events and circumstances which I believe establish, surprisingly enough, a link between the Star of Bethlehem and the event known among Roman Catholics as the apparition of Our Lady of Guadalupe. In Part Six we shall consider what all of this, taken together, is supposed to mean.

PART ONE

THE BACKGROUND EVENTS AND CIRCUMSTANCES PRIOR TO THE ANGEL'S MESSAGE THAT MARY WOULD BE THE MOTHER OF THE MESSIAH

I. Did The Magi Just Happen To Notice His Star And Decide To Go To Jerusalem?

As I stated in the Disclosure above, one of the purposes in writing this book is to show people that the account of the Magi following the Star one night from Jerusalem down to Bethlehem is true, at least on the facts. And of course, the more I can do to show that the story of them doing so is at least plausible, the more I can enhance the credibility of the story.

There are four main aspects of this story which strain its credibility in the minds of many people, however. Two of them are quite obvious; two of them are subtle. We have already touched briefly on all four of them. One of the obvious ones is that the Magi supposedly followed the Star from the Old City portion of Jerusalem to the town of Bethlehem, which lies to the south-southwest of Jerusalem, a seemingly impossible task. The second obvious point is that the Star supposedly “stood over” the place where the child was: likewise, a seemingly impossible event. The third aspect which strains the credibility of this story (one of the subtle ones) is that the Magi made the long, costly, and dangerous journey from their homelands to Jerusalem to come and worship this newborn King of the Jews without checking ahead of time to make sure He had even been born at all.

The fourth aspect, likewise a subtle one, is that a group of Magi had seen a sign or a series of signs in the heavens which made them so insistent and adamant about the need to get to Bethlehem on one specific night in particular that they would not only undertake the effort to make the arduous, costly, and dangerous journey from their homes to Jerusalem in the first place, but that they would then also take the seemingly-insane step of leaving the safety of the city walls in order to follow the Star through a pitch-black wilderness which they most likely were totally unfamiliar with, one most likely filled with cutthroat bandits, at that.

It is on this fourth point that I wish to focus our attention now. For if we are unable to find cogent reasons as to how the Magi could have mustered up enough courage---indeed, the bold, unshakable determination---to see this journey all the way through to the end, even if it cost them their own lives, then the credibility of the entire story will remain in doubt under any circumstances. And so it is with that in mind that I first wish to discuss the idea that a peculiar event such as the visit of the Magi could have even happened at all, supposedly. After all, there are apparently no accounts of anything similar to this ever having taken place in the ancient world, or at any other time, or in any other culture. And in fact, we know from the Bible that when the Magi arrived in Jerusalem, neither King Herod nor anyone else in Jerusalem seemed to know anything about the Star or a supposedly newborn King of the Jews. (Matt 2:1-2)³⁵ And so we must ask, “How is it that a particular

³⁵ <http://biblehub.com/nasb/matthew/2.htm>

group of Magi would have deemed the Star to be of such special significance and meaning that they would have undertaken a journey to do all of this, and to insist upon completing their journey on one night in particular, despite the odds which were so highly stacked against them?”

To answer that, let us first consider how it is that the Magi might have even become aware of the existence of this Star to begin with. For if there is evidence that the Magi may have thought that the Star would come forth someday, that this Star would herald the birth of the King of the Jews, that they were supposed to look for the Star within a particular timeframe, and that they would then be under a legal and religious duty to act on that knowledge once they had found the Star, this would thereby make the story much more plausible than if we are asked to believe that they simply glanced up one night and, by mere happenstance, noticed something curious thing which led them to believe that they had discovered His Star, and that they then, on a whim, headed off for Jerusalem and faced all the danger, hardship, and expense which lay before them. With all of that in mind, and keeping in mind as well the possibility that one or more of the Magi may have been Hebrews themselves, let us now look to see whether there may have been a prophecy about the Star of Bethlehem in the Old Testament which the Magi may have looked to in order to direct their thinking.

A. Is There A Prophecy Of The Star Of Bethlehem In The Old Testament?

The first five books of the Bible are commonly referred to collectively as the Pentateuch (pronunciation: <https://www.howtopronounce.com/pentateuch>), or the Law of Moses (or sometimes more simply, "The Law").³⁶ One of these books is the Book of Numbers, the fourth book of the Bible. Among other things, it contains certain prophecies by a person named Balaam, including the following passage:

17 I see him, but not now;
I behold him, but not near;
A star shall come forth from Jacob, A scepter
shall rise from Israel,
And shall crush through the forehead of Moab,
And tear down all the sons of Sheth. (Num. 24:17; NASB)³⁷

First of all, here we have a reference to a Star coming forth from Jacob, the father of the Twelve Tribes of Israel,³⁸ which would include, of course, the Tribe of Judah, which is the tribe of Jesus.³⁹ We also see that the Star refers to a ruler (which Messiah would be); for a scepter is a rod which is a symbol of authority.⁴⁰ This verse also points out that the coming of this ruler is something which shall be foreseen in advance of His actual arrival (“I see him, but not now;”). This fits in perfectly with the Magi coming to understand that this Star would herald the coming of this ruler

³⁶ <https://www.merriam-webster.com/dictionary/Pentateuch>

³⁷ <https://biblehub.com/nasb/numbers/24.htm>

³⁸ <https://www.biblestudy101.org/Lists/12tribes.html>

³⁹ <https://www.jewishvoice.org/read/blog/who-are-tribes-judah>

⁴⁰ <https://www.merriam-webster.com/dictionary/scepter>

even before they could lay eyes on Him personally, and quite possibly, even before His birth. It also fits the idea that, in beholding the Star, those who would foresee His coming would thereby be able to behold the ruler Himself (at least indirectly, simply by beholding His Star), even though He Himself might be in a far-off land (“I behold him, but not near;”).

This would imply that those to whom this prophecy was specifically directed would not be in Jerusalem, and perhaps not even in Israel itself. For according to this prophecy, the very ones to whom this prophecy was directed, and who would be given the understanding of what it means, would not be near to Him, and they would then have to undertake a journey if they did wish to see him personally. So the Magi may have concluded that this was a piece of the puzzle which specifically pointed to them personally, a group of persons far away from Jerusalem who could understand what this Star meant ahead of time, before they would actually see the newborn king with their own eyes. And such thoughts, if they did occur, would probably fill them with a sense that they were divinely obligated to go worship the newborn king and proclaim Him to be King of the Jews, despite the danger, hardships, and cost.

1. Who Holds The Scepter?

This prophecy from the Book of Numbers is not the only prophecy in the Bible which makes reference to a scepter for a ruler over Israel. For as Rick Larson has pointed out, in the Book of Genesis, the first book of the Bible, Jacob gave various prophecies over his sons as he lay on his death bed, and he gave this prophecy over his son Judah:

[9](#) You are a lion’s cub, Judah;
you return from the prey, my son. Like a lion he
crouches and lies down,
like a lioness—who dares to rouse him?

[10](#) The scepter will not depart from Judah, nor the
ruler’s staff from between his feet, until he to whom it
belongs shall come
and the obedience of the nations shall be his. (Genesis 49:9- 10; NIV)⁴¹

Again (for emphasis), remember that Jesus, King David, and King Solomon were all members of the Tribe of Judah.

As it turns out, this prophecy over Judah, in which Jacob calls Judah a lion, was then repeated by Balaam concerning all of the Children of Israel (Jacob) during the Exodus,⁴² just prior to Balaam’s prophecy about the coming forth of a star from Jacob, as we can see here:

[9](#) “He couches, he lies down as a lion, And as a
lion, who dares rouse him? Blessed is everyone

⁴¹ <https://biblehub.com/niv/genesis/49.htm>

⁴² https://www.chabad.org/library/article_cdo/aid/1663/jewish/The-Exodus.htm

who blesses you,
And cursed is everyone who curses you.” (Num. 24:9; NASB)⁴³

So all in all, we see that a Star shall come forth from Israel (Jacob) signifying the arrival of a ruler, one who holds a scepter, that this ruler shall be from the tribe which is symbolized by a lion, the Tribe of Judah specifically (as we shall see in detail later herein), and that the obedience of the nations shall be His when He shall come. Any of the Magi who were Jewish would no doubt recognize this as being a prophecy about the coming forth of the Messiah.

The idea of the Messiah holding a scepter (a rod) is also given in yet another prophecy in the Old Testament:

- 1 Why are the nations in an uproar
And the peoples devising a vain thing?
- 2 The kings of the earth take their stand And the
rulers take counsel together
Against the LORD and against His Anointed [Messiah], saying,
- 3 “Let us tear their fetters apart
And cast away their cords from us!”
- 4 He who sits in the heavens laughs, The Lord scoffs
at them.
- 5 Then He will speak to them in His anger And terrify
them in His fury, saying,
- 6 “But as for Me, I have installed My King Upon Zion,
My holy mountain.”
- 7 “I will surely tell of the decree of the LORD: He said to
Me, ‘You are My Son,
Today I have begotten You.
- 8 ‘Ask of Me, and I will surely give the nations as Your inheritance,
And the very ends of the earth as Your possession.
- 9 ‘You shall break them with a rod of iron,
You shall shatter them like earthenware.’” (Psalm 2:1-9; NASB)⁴⁴

Only Moshiach (the Messiah) could be the intended recipient of this promise that the nations of the earth would become His inheritance, and that the very ends of the earth would become His possession.

⁴³ <https://biblehub.com/nasb/numbers/24.htm>

⁴⁴ <https://biblehub.com/nasb/psalms/2.htm>

Getting back to the prophecy of Balaam, what a perfect prophecy of the Star of Bethlehem it is, especially for any of the Magi who may have been Jewish! Consider how perfectly this would fit with the experience which any Jewish Magi from Babylon (or other places to the east) would have had. For first of all, as I mention elsewhere in this book, when I was in the astronomy club in high school, any of us could have predicted the basic movements of the planets at least a few years in advance without even using any telescopes or other modern equipment, and without making reference to Kepler's Laws of Motion.

By that I mean that even though the Magi did not have computer programs to show them exactly where the planets would be, they could know, just by carefully examining the recorded positions of the planets over the years, where to expect them to be at least a few years ahead of time, including the extremely close conjunction (encounter) of Jupiter (representing the king) and Venus (representing the mother) which would take place during the month of Sivan in 3759 (June of 2 B.C.). So even prior to that conjunction, when the two planets would appear to merge into one object and then separate out from each other (a highly significant event which we shall examine in detail in this book), they could have foreseen that event coming anyway (as the prophecy of Balaam implies they would), even though they probably did not know ahead of time just exactly how close a conjunction that would be.

In other words, by their knowledge of astronomy, and with an assist from their knowledge of the Holy Scriptures, they could "see" (*i.e.*, foresee) the coming of the King of the Jews, just as Balaam foretold, even though they could not do so "now" (*i.e.*, not at the time when they first discerned what the signs in the heavens were pointing to); and in that manner they could also thereby "behold" Him---in their minds' eyes, at least---even though He was not near, and was instead still quite distant from them by hundreds of miles, at the time when they would first discern the meaning of these celestial signs, signs which were present around the time of His birth and in the years leading up to it.

So as we shall see, the story of the Star of Bethlehem does not entail a group of Magi going off to find the newborn king just on a whim, but rather that it was the result of a well-thought out decision that was the result of a lengthy study of the evidence over time.

a. Pisces: The Other Sign Of The Jew

With that in mind, let us consider that Balaam's prophecy then says that He (the Star) shall come forth from Jacob, *i.e.*, from all of Israel. This would be quite fitting for any Jewish Magi who were from Babylon, for the first of the two so-called triple-conjunctions of Jupiter which we shall examine in detail later herein took place in the constellation Pisces, which the Babylonians associated with the Jews.⁴⁵

Rick Larson points out in his documentary that there is plenty of reason to associate the

⁴⁵ <https://books.google.com/books?id=2IfdjLstwp0C&pg=PA355&lpg=PA355&dq=pisces+zodiac+sign+jew&source=bl&ots=jKRmzNRhRE&sig=Xf7GQwiQbYPGGROPVocXdNBhdms&hl=en&sa=X&ved=0CD8Q6AEwBjgKahUKewiWocjFs-nIAhXLAT4KHcMoCHI#v=onepage&q=pisces%20zodiac%20sign%20jew&f=false>

constellation Leo with the Tribe of Judah, and apparently, he is not the only one who does so.^{46, 47} (Some Jewish scholars associate Leo with the Tribe of Simeon instead, although this view might have some Assyrian influence in it.⁴⁸) Although I do agree with Larson on point, I should also reiterate that the constellation Pisces had also been considered to be the sign of the Jew by the Babylonians during the Jews' captivity in ancient Babylon.⁴⁹

Pisces is a constellation represented by two fish swimming off in opposite directions from one another, yet tied together by a common cord. This is, of course, an apt representation of a people who were split apart (which the ancient Israelites had become from the time of King Solomon onward), with most of the tribes forming the Kingdom of Israel---mostly in the north---while the tribes of Judah, Benjamin, and Levy, which occupied Jerusalem, remained as a separate kingdom in the south, the Kingdom of Judah.

As to the tribes which formed the Kingdom of Israel, it is they, of course, who became scattered abroad by their enemies and became known as the Lost Tribes of Israel. And yet, all the tribes⁵⁰ are still tied together by a common cord nonetheless, for they are all children of Israel. (And today's modern rabbinical council in Jerusalem, in fact, even recognizes that all those who can prove that they are descendants of any one of the Tribes of Israel are entitled, in most cases, to take advantage of the modern Israeli law which says they have the right to come to Israel and make it their home and apply for citizenship.^{51, 52}) So in other words, Babylonian Magi who were Jewish lived in a land in which the sign of the Jew (Pisces) was also a sign of Jacob (*i.e.*, all the tribes); and allow me to state again, for the sake of emphasis, that Pisces is where the triple-conjunction of Jupiter and Saturn---signifying the coming forth of the king (Jupiter) from the father (Saturn)---took place, as we shall see later on in detail herein.

Now, as to whether the ancient Babylonians had this "united, yet divided" character of the Tribes of Israel in mind when they decided to call Pisces the sign of the Jew, I do not know. But the imagery of this constellation does fit the dual united/divided relationship of the Tribes to each other in any case, and that by itself is a sign for us today, if nothing else, even if the ancient Babylonians did not themselves have this in mind.

⁴⁶ <https://milkywayastrology.wordpress.com/2010/06/13/the-zodiac-signs-and-the-twelve-tribes-of-israel-also-the-babylonian-zodiac/>

⁴⁷ <https://www.foxnews.com/tech/last-supper-site-reveals-secrets>

⁴⁸ <http://www.jewishencyclopedia.com/articles/15277-zodiac>

⁴⁹ <https://books.google.com/books?id=2JfdjLstwp0C&pg=PA355&lpg=PA355&dq=pisces+zodiac+sign+jew&source=bl&ots=jKRmzNRhRE&sig=Xf7GQwiQbYPGGROPVocXdNBhdms&hl=en&sa=X&ved=0CD8Q6AEwBigKahUKEwiWocjFs-nIAhXLAT4KHcMoCHI#v=onepage&q=pisces%20zodiac%20sign%20jew&f=false>

⁵⁰ The reason that there are 13 tribes total pertains to how the inheritance of Jacob was divided. Eleven of the tribes are named for 11 of Jacob's 12 sons. As for the 12th son, Joseph, he received a double blessing, for two of his sons (Manasseh and Ephraim) each received a blessing from Jacob: https://biblestudyforlife.com/13_tribes.htm

⁵¹ <https://shavei.org/lost-tribe-of-israel-returning-home/>

⁵² <https://www.myjewishlearning.com/article/ask-the-expert-lost-tribes/>

Then there is the part within this verse which says that a scepter shall arise from Israel. We have likewise already seen that in Jacob's prophecy over Judah, he said that the scepter shall not depart from Judah, whom he calls a lion's cub, until the Messiah comes; and Judah was, of course, one of the sons of Jacob (*i.e.*, Israel). So as the scepter arises in the hand of the Messiah---who is, of course, of the tribe of Judah (one of the sons of Jacob/Israel⁵³)---the scepter thereby also arises from Israel. And as I said, the lion (Leo), which is the symbol of the tribe of Judah,⁵⁴ is where the apparent merger of Jupiter and Venus would take place in June of 2 B.C. (as we shall examine in detail), and where certain other so-called triple events of Jupiter, which we shall examine as well, also took place.

b. Leo And Regulus: The Signs Of Royalty

Before we move on, let us consider the constellation Leo in ancient thought in more depth. As Larson has pointed out, ancient peoples throughout the Middle East commonly thought of Regulus, the brightest star of Leo, as being the so-called king star.⁵⁵ Furthermore, in ancient Persia, the lion was associated with royalty,⁵⁶ and other ancient cultures have associated Leo with kingship.⁵⁷ Interestingly enough, just as Jacob's prophecy refers to Judah as a lion's cub, so also the word Regulus is a Latin word meaning "prince", or "little king".⁵⁸

As we have also seen, Leo (along with Pisces) was associated with the Jewish people.⁵⁹ And as was likewise mentioned previously, this is principally based on the fact that the lion is an ancient symbol of Jerusalem and of the Tribe of Judah,⁶⁰ the tribe into which Jesus was born,^{61, 62} and the tribe of His forefathers Kings David and Solomon.⁶³

Let's say you were a Jewish Magus in Babylon when the triple conjunction of Jupiter and Saturn took place in Pisces. This was then followed by the triple conjunction of Jupiter with the king star: the star Regulus (the brightest star of Leo, the constellation of royalty).⁶⁴ Let's say that this in turn was followed by a type of triple conjunction of Jupiter with Venus, showing the apparent merger of Jupiter and Venus, and then their separation from each other (signifying the birth of the king from the mother), an event which was likewise in Leo. With all that in mind, what would you make of this,

⁵³ <https://www.gotquestions.org/Jacob-Israel.html>

⁵⁴ <https://symbolsage.com/lion-of-judah-significance/>

⁵⁵ <https://www.star-facts.com/regulus/>

⁵⁶ <https://www.ancient-symbols.com/persian-symbols.html>

⁵⁷ <https://www.space.com/5182-leo-lion.html>

⁵⁸ <https://www.star-facts.com/regulus/>

⁵⁹ See <http://www.llewellyn.com/journal/article/472> and <http://www.askelm.com/star/star004.htm>; but see also, <http://www.jewishencyclopedia.com/articles/15277-zodiac> . (The Jewish zodiac itself, by the way, does include Leo: <http://www.askelm.com/star/star004.htm> ; <https://sewjewish.com/2015/06/21/signs-of-the-zodiac-are-jewish-symbols/> .)

⁶⁰ https://en.wikipedia.org/wiki/Lion_of_Judah

⁶¹ <http://www.llewellyn.com/journal/article/472>

⁶² <http://www.askelm.com/star/star004.htm>

⁶³ <https://www.foxnews.com/tech/last-supper-site-reveals-secrets>

⁶⁴ [https://en.wikipedia.org/wiki/Leo_\(astrology\)](https://en.wikipedia.org/wiki/Leo_(astrology))

in light of this prophecy from the Book of Numbers? Would it not perhaps have an impact on your thinking regarding the coming of the Messiah (particularly in light of all the other things we shall look at in this book), and could this perhaps cause you to conclude that in that particular moment in time, Jupiter was the Messiah's Star, as was prophesied by Balaam in the Book of Numbers, and that you should closely observe its movements if you wished to know when the King Himself would be born, and when one should go to pay homage to Him?

Apparently, the Apostle Matthew, whose Gospel contains the story of the Star of Bethlehem, was oblivious to all of this. For surely, if he had recalled this prophecy from the Book of Numbers, he undoubtedly would have mentioned it in his Gospel in order to enhance the credibility of his story. Thus, paradoxically, the very fact that he did not mention this prophecy does help prevent damage to Matthew's credibility; for if he had mentioned this prophecy from the Book of Numbers, many might think that he was simply concocting his story about the Star of Bethlehem in the Gospel of Matthew in order to fit the story in with this Old Testament prophecy.

So the fact that he apparently forgot about this prophecy (assuming he ever did hear of it at all)⁶⁵ has a silver lining. For we can now assess Matthew's account of the Star of Bethlehem on its own merits rather than having Matthew's account of this story be under a cloud of suspicion that Matthew's statements were all just made up to fit the prophecy from the Book of Numbers. Herein lies one of the examples which we shall consider in this book pertaining to something which is not said in Scripture (*i.e.*, no mention in the Gospel of Matthew of the prophecy in the Book of Numbers) as being just as important as those things which are in fact said therein, just as we shall also see in Part Four of this book pertaining to other matters.

B. The Possible Influence Of Plato On The Thinking Of The Magi

The ancient Greek philosopher Plato lived about 400 years before Jesus was born.⁶⁶ He was a student of the famous Greek philosopher Socrates, and he was the teacher of another famous Greek philosopher, Aristotle. His influence on the eventual development of Western culture would prove to be so profound that one scholar once said of Plato,

The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato.⁶⁷

Plato was convinced that the things of earth are a mere shadow or copy of the real world, a concept which he called the Theory of Forms.⁶⁸ So in other words, if something could be found on

⁶⁵ He very well might have never heard of it. For after all, he had been a tax collector before meeting Jesus. And the tax collectors of that day and age were considered to be sell-outs to the Romans, and thus, traitors to Israel. They were among the most ungodly men in Israel at that time, and it is quite possibly the case that none (or few) among them had a religious upbringing, in which they would have been well-schooled in a study of the Scriptures. (See Matthew 9:9-13; <https://biblehub.com/nasb/matthew/9.htm>.)

⁶⁶ <https://iep.utm.edu/plato/>

⁶⁷ https://www.age-of-the-sage.org/philosophy/footnotes_plato.html

⁶⁸ <https://iep.utm.edu/plato/>

Earth, it must be an imitation of something which truly exists on a higher level.

Of course, we have no way of knowing whether the Magi were in fact influenced directly in their thinking by Plato. But as men of learning from that part of the world, they certainly would have heard of Plato, and would have studied his teachings in any event. And the writings of Plato might have had at least some influence on the thinking of the Apostle Paul about half a century after the birth of Jesus. For instance, Plato once wrote,

The greatest wealth is to live content with little.⁶⁹

In similar fashion, the Apostle Paul would say,

8 But if we have food and clothing, with these we will be content. (I Timothy 6:8; NASB)⁷⁰

More to the point, when Moses was on Mt. Sinai during the Exodus he was given instructions by God on how to construct and arrange the Tabernacle which housed the Ark of the Covenant (which held the stone tablets of the Ten Commandments). At that time the Lord gave Moses the following instruction:

30 “Then you shall erect the tabernacle according to its plan which you have been shown in the mountain.” (Exodus 26:30; NASB)⁷¹

In the New Testament, the Apostle Paul, in writing to his fellow Hebrew Christians, made reference to this verse when he was talking about the priests who ministered during his own day and age in the Jewish Temple in Jerusalem:

5 who serve a copy and shadow of the heavenly things, just as Moses was warned *by God* when he was about to erect the tabernacle; for, “SEE,” He says, “THAT YOU MAKE all things ACCORDING TO THE PATTERN WHICH WAS SHOWN YOU ON THE MOUNTAIN.” (Hebrews 8:9; NASB)⁷²

And again, in talking about Jesus as our High Priest in heaven, Paul went on to say,

11 But when Christ appeared as a high priest of the good things to come, *He entered* through the greater and more perfect tabernacle, not made with hands, that is to say, not of this creation; (Hebrews 9:11; NASB)⁷³

Paul also made this comment as well:

⁶⁹ <https://www.quotes.net/quote/6269>

⁷⁰ https://biblehub.com/drb/1_timothy/6.htm

⁷¹ <http://biblehub.com/nasb/exodus/26.htm>

⁷² <http://biblehub.com/nasb/hebrews/8.htm>

⁷³ <http://biblehub.com/nasb/hebrews/9.htm>

[24](#) For Christ did not enter a holy place made with hands, a *mere* copy of the true one, but into heaven itself, now to appear in the presence of God for us; (Hebrews 9:24; NASB)⁷⁴

What we all must keep in mind is that we ourselves need not resolve at this very moment the question of whether Paul's view of things, which closely parallels Plato's, is either accurate (which I believe it to be) or inaccurate, one way or the other. For what we need to focus on instead, when it comes to discerning the thoughts of the Magi, is only the more simple question of whether the Magi themselves looked upon the world and heaven above in similar fashion. And as I said, since the Platonic view of things was widely known to the various peoples of the ancient Roman world, one would expect any man of learning, such as a magus, to at least know about the existence of this view, whether the magus was Jewish or gentile, and whether the magus accepted this point of view or not.

For a further look into the issue of various ancient cultures, apparently worldwide, which believed that the things on Earth are mere copies of that which is in heaven, in the Appendix find ASTRONOMY AND ARCHITECTURE IN ANCIENT EGYPT AND WORLDWIDE.

C. When Should The Magi Have Looked For The Birth Of The Messiah?

With that in mind, let us consider this next point: Any of the Magi who were Hebrew had assurances from all throughout the Old Testament that a Messiah would be coming. In addition, they had assurances from the Book of Numbers specifically that a star would in fact come forth from Jacob, and that this star would herald the coming of a ruler (one who holds a scepter). They also had assurances from the Book of Numbers and the Book of Genesis combined that this ruler would come forth from the Tribe of Judah.

So if they were in fact influenced by the writings of Plato, they may have said to themselves that if the Scriptures themselves say that the Messiah is in fact coming, and that a star will herald His arrival, then the birth of this ruler is something which must become true on Earth at some point in time, at least, and that it will reflect that which is true on a higher plane. And if they perceived, through their study of the heavens, that a message about the upcoming birth of the Messiah was developing in the heavens right before their very eyes at a time when this birth would be expected on Earth, then at such time, they very well may have concluded that this was indeed the time when they should go looking for the earthly example of the heavenly truth.

As we shall see, the signs in the heavens leading up to one night in particular---the night when they did go to visit Jesus---could have been sufficient to assure them that they should do everything they possibly could do in order to seek out the newborn king on that one specific night in particular. All of that being said, let us next consider whether any Magi who were Hebrew had any reason to conclude when it would be that anyone should begin to look for this Star.

⁷⁴ <http://biblehub.com/nasb/hebrews/9.htm>

1. Guidance From The Book Of Daniel As To When To Expect The Messiah

If any of the Magi were indeed Hebrews, would there be a particular time frame within which they would be expecting the birth of the King of the Jews? Could it be just any time? Could it be 2,000 years ago? Or should the members of their priestly class have expected the King before that? Or instead, around our time now? Or perhaps even longer after that? As it turns out, there is in fact a time frame within which one could look for the coming of Messiah according to one of the major Hebrew prophets.

In Chapter Nine of the Book of Daniel, the prophet Daniel tells us of his visit by an angel who told him about the End Times. The message of the angel is expressed in terms of “weeks” (*i.e.*, weeks of years). Just as a matter of background information, this term happens to refer to the fact that during the seventh year of each seven-year cycle (a “week of years”), the land was to be given a sabbatical⁷⁵ from agricultural production. (See Leviticus 25:2-4.)⁷⁶

The land was left to lie fallow for one year in order to give it a rest and to allow the nutrients which had been taken from land by the growth and harvesting of crops to be replenished, as well as to provide both the poor among them and the animals with the opportunity to eat of the things which sprang up naturally while the land was not actually being farmed. (Exodus 23:10-11,⁷⁷ Leviticus 25:1-7,⁷⁸ Leviticus 25:20-22.⁷⁹) Also, during such years, the Hebrews were released from any and all debts which they may have had. Consequently, the seventh year was referred to as a *shemitah* year (pronunciation: <https://www.howtopronounce.com/shemitah>); *shemitah* is a Hebrew word meaning “release”.^{80, 81}

So a “week of years” is seven years. With that in mind, consider the following verse from Chapter Nine of the Book of Daniel, which pertains to a message of an angel which was given to Daniel during the captivity in Babylon:

25 Know therefore and understand, *that* from the going forth of the commandment to restore and to build Jerusalem unto the Messiah the Prince *shall* be seven weeks, and threescore and two weeks: the street shall be built again, and the wall, even in troublous times. (Daniel 9:25; KJV)⁸²

Seven weeks, plus threescore weeks (3 X 20 weeks), plus two weeks is 69 weeks total, or in other words, 483 years (69 X 7). But before we do the math to figure out when to expect the arrival

⁷⁵ <https://www.merriam-webster.com/dictionary/sabbatical>

⁷⁶ <https://biblehub.com/nasb/leviticus/25.htm>

⁷⁷ <https://biblehub.com/kjv/exodus/23.htm>

⁷⁸ <https://biblehub.com/kjv/leviticus/25.htm>

⁷⁹ <https://biblehub.com/kjv/leviticus/25.htm>

⁸⁰ https://www.chabad.org/library/article_cdo/aid/562077/jewish/What-Is-Shemittah.htm

⁸¹ <https://endtimestruth.com/the-shemitah-effect/>

⁸² <https://biblehub.com/kjv/daniel/9.htm>

of Messiah the Prince, we should first determine what level of precision we are looking for in the fulfillment of this prophecy.

For instance, if someone says that a particular event will take place three millennia from now, we wouldn't have to think that that event would necessarily occur exactly 3,000 years from now. Similarly, if someone says that a particular event will take place three centuries from now, we wouldn't think that the event would necessarily have to take place precisely 300 years from now.

In the present case, since Daniel was told by the angel to expect Messiah the Prince to arrive 69 weeks of years following the issuance of the decree to rebuild the walls of Jerusalem, it would be fair to say we could expect to find the arrival of the Messiah sometime during the 69th week of years, or in other words, sometime within the interval from the start of the 477th year to the end of the 483rd year following the proclamation to rebuild the walls of Jerusalem.

Let's now do the math on this, and see if the calculations show us something pertaining to the life of Jesus. First of all, one scholarly fellow concluded from his research that the decree to rebuild the walls of Jerusalem (which the angel mentioned to Daniel) was issued in the Hebrew year 3316 (445 B.C.).⁸³ His conclusion as to the exact date itself may be the subject of some debate, and I have drawn no firm conclusions on it myself; but I see no reason to believe that his conclusion was off base on the timing altogether.

That being said, if the issuance of the decree to rebuild the walls of Jerusalem occurred in 3316 (445 B.C.), then 483 years from that year would be 3799 (39 A.D.), and we would look for Messiah the Prince between then and any time seven years prior to that, *i.e.*, beginning in 3792 (32 A.D.). With that in mind, there are two things to consider. First, as Larson has so well pointed out in his documentary *The Star of Bethlehem Revealed*, the weight of the evidence points to the conclusion that Jesus died and rose from the dead in the month of Nisan in 3793 (April of 33 A.D.), which is within the time frame which we are considering.

Second, if it is true that we could expect Messiah the Prince to come at any time from 3792 to 3799 (32 A.D. to 39 A.D.), then we must face the question, "If Jesus of Nazareth is not Messiah the Prince, then who is?" Think about it: Who else possibly could be the Messiah, except Jesus of Nazareth? Within that time span of history, there is absolutely nobody else who would come even remotely close to fitting the bill of being Messiah the Prince, whether as a suffering servant, or as a powerful king. No one.

With that in mind, let us now consider whether there would be a particular time frame within which the Magi might expect the King of the Jews to be born. If the Magi were to assume that Messiah would come into His kingdom anywhere between age 20 and age 60, and if Messiah would have to come into His kingship somewhere within the time frame of 3792 to 3799 (32 A.D. to 39 A.D.), then it would be safe to assume that He could be born any time from 3732 (29 B.C.) to 3779 (19 A.D.).

⁸³ http://www.whatsaiththescripture.com/Text.Only/pdfs/The_Coming_Prince_Text.pdf (pg. 53)

And the year which we shall consider in this book as the year of His birth, 3759 (2 B.C.), does fall within that time frame. Any Magi who were Jewish would have known this, and so within that time frame, they could have been looking for His coming.

2. Was Jesus Born During A *Shemithah* Year?

As we shall see throughout this book, unraveling the mystery of the Star of Bethlehem will depend at least in part on considering the events surrounding the birth of Jesus not simply from a gentile view of the timing of these events, but more importantly, from a Hebrew view of their timing. With that in mind, let us consider the possibility that Jesus may have been born during a *shemithah* year, which, as we have seen previously, would come once every seven years.

Now, the question of when it was that the Second Temple (*i.e.*, Herod's Temple) was destroyed is a matter of some debate, but it is commonly believed that the Second Temple was destroyed by the Roman army on the 9th of Av (Tisha B'Av)⁸⁴ on the Hebrew calendar, in the summer of the year 3830 (70 A.D.)^{85, 86} The thing is, apparently, the Temple was destroyed during the year following a *shemithah* year.⁸⁷

Now, that fact, just by itself, is not significant. Nonetheless, with that in mind, however, if in fact the temple was destroyed in the month of Av during 3830 (70 A.D.), as most people believe, then the year preceding it, the year 3829 (September of 68 A.D. to October of 69 A.D.) was a *shemithah* year. From this we can conclude that 70 years earlier, the year 3759 (September of 3 B.C. to September of 2 B.C.), was also a *shemithah* year, since 70 years is ten cycles of seven.⁸⁸ Also, bear in mind again, as was mentioned previously, that because, on our modern calendar, there was no year "0" (since our modern calendar goes directly from 1 B.C. to 1 A.D., without a year 0), then 70 years before the year 69 A.D. would be the year 2 B.C., not 1 B.C.

From all of this we should keep in mind that if any of the Magi were Hebrews, then any signs in the heavens which may have pointed to the birth of the King of the Jews from September of 3 B.C. to September of 2 B.C. most probably would have been noteworthy. For it would certainly be fitting, at the very least, for the Messiah to be born during a year in which debtors would be released

⁸⁴ <https://aish.com/48969411/>

⁸⁵ <https://www.biblicalarchaeology.org/daily/biblical-sites-places/temple-at-jerusalem/what-did-herods-temple-in-jerusalem-look-like/>

⁸⁶ There are some scholars, however, who date its destruction as being in the year 69 A.D.: https://www.chabad.org/library/article_cdo/aid/562077/jewish/What-Is-Shemittah.htm, or perhaps even 68 A.D.: https://www.chabad.org/library/article_cdo/aid/2641925/jewish/Which-Year-Was-the-Second-Temple-Destroyed-69-CE-or-70-CE.htm.

⁸⁷ https://www.chabad.org/library/article_cdo/aid/2641925/jewish/Which-Year-Was-the-Second-Temple-Destroyed-69-CE-or-70-CE.htm

⁸⁸ Here I do not include a *yovel* year (*i.e.*, a year of Jubilee) in the counting of the years because rabbinical authority apparently holds that a *yovel* year is to be observed only during those times when a majority of Hebrews are in the land of Israel, which was not true 2,000 years ago (<https://www.myjewishlearning.com/article/sabbatical-year-shemithah-and-jubilee-year-yovel/>) because the aforementioned Lost Tribes remained scattered abroad (as is likewise the case, for the most part, even today).

from their debts, for it was prophesied that during His reign, Messiah would release those who are held captive:

1 The Spirit of the Lord GOD is upon me, Because the LORD
has anointed me
To bring good news to the afflicted;
He has sent me to bind up the brokenhearted, To proclaim
liberty to captives
And freedom to prisoners; (Isaiah 61:1; NASB)⁸⁹

All in all then, at the beginning of this section we looked at the question of whether there would be a particular timeframe within which the Magi might expect to see signs in the heavens of the birth of the King of the Jews. And the answer to that question is, “Yes.” And as it turns out, by any account, Jesus was born during that time frame: 3732 (29 B.C.) to 3779 (19 A.D.). And apparently (as we shall see) He was probably born specifically during a *shemita* year as well, something which would tend to increase the Magi’s belief that this would be a proper time for them to look for the birth of the King of the Jews.

D. Why Would The Magi Have Deemed It To Be So Important For Them To Seek Out The Newborn King Of The Jews?

There is one clue in particular from the culture of the Magi which gives us at least some reason to believe why they would have considered initiating their dangerous and costly journey from their homeland in the first place, and in fact it might pertain to the most important reason of all. For they may have believed that they themselves were obligated to seek Him out, and that this was not optional for them.

You see, most monarchies throughout history have been strictly hereditary.⁹⁰ Not so in the earliest times of the Magi, however. Instead, when the king would die, the Magi would come together with certain other rulers in the realm, and together they themselves would decide who the new king would be.⁹¹ It might be the deceased king’s son, or it might be someone else entirely. The Magi would then proclaim the one whom they had chosen to be the ruler as being the new king.

Accordingly, the Magi may have felt that it was their legal and religious duty to go and declare Him---this newborn son of David, and the rightful Crown Prince of Israel---to be the King of the Jews. And to do that they would have to go visit Him in order to pay Him homage and to make their declaration of His kingship. For although Scripture indicates that they recognized Him as being King of the Jews by birth under Jewish customs (Matt. 2:2),⁹² they may have felt that it was also both their civic and religious obligation nonetheless to recognize His royal status according to the

⁸⁹ <https://biblehub.com/nasb/isaiah/61.htm>

⁹⁰ <https://www.theclassroom.com/types-government-6th-grade-8049871.html>

⁹¹ <http://www.iranicaonline.org/articles/coronation-pers>

⁹² <https://biblehub.com/nasb/matthew/2.htm>

customs of their own culture as well.

As a side note, the fact that the Magi would participate in proclaiming who their new king would be is a point which may have contributed to King Herod's desire to kill Jesus. For if the Magi did find Him and proclaim Him to be King of the Jews, then this newborn would have a claim which would probably be widely recognized as being a legitimate claim---among some people, at least--to the kingship of Judah. So not only would this threaten the legitimacy of any claims which Herod's sons might have had to the throne, but also, it would even place the continuation of his own claim to the throne in doubt.

This would also imply that the Magi would be in a position to determine who would rule in the newborn king's place until He came of age; this, of course, could be one of the Magi themselves, or perhaps someone else, though not necessarily Herod.

Further complicating matters was the fact that Herod was not an ethnic Jew. Herod's ancestors had been forced to convert to Judaism, and his father specifically had been an Edomite. Aside from the fact that this could cast suspicion on his loyalty to Jews and to Judaism, some may have questioned whether he could really even qualify as being a king of the Jews in light of this fact; after all, it was the Romans who had made him King of Judea, not Jewish law, nor the Jewish elders.⁹³ Herod may have been particularly troubled by the fact that the Magi said that the child was King of the Jews by virtue of His birth,⁹⁴ and His kingship by birth could possibly trump Herod's own claim to the throne among the Jews themselves.

Likewise, his decadent lifestyle would not have helped him secure his image as someone who was truly Jewish, and the sheer brutality of his rule could hardly have enamored him to the Jewish people.⁹⁵

1. A Possible Reason As To Why The Magi Did Not Check To See If The New King Had Been Born Before Starting Their Journey

Not only that, but this also goes to the question of why they would undertake a journey such as this without checking ahead of time as to whether a new King of the Jews had even been born at all. As I said, just by itself, this one factor (*i.e.*, not checking ahead of time to see if this new king had even been born) would be yet another thing which would tend to stretch the credibility of the story of the Star of Bethlehem which we find in the Bible. For surely, most people would want to check on this before they would begin their journey.

The answer may lie in the fact that if it became public knowledge that a group of Magi had concluded that a new King of the Jews had been born, and who presumably would want to proclaim the child to be their king, this would no doubt have grabbed the attention of Rome. And no one could expect Caesar to be enthused about the birth of this child because unlike King Herod, this child would not be someone whom Caesar could control and manipulate, nor could he control and

⁹³ https://en.wikipedia.org/wiki/Herod_the_Great

⁹⁴ https://biblehub.com/nasb/_matthew/2.htm

⁹⁵ https://en.wikipedia.org/wiki/Herod_the_Great

manipulate the Magi as his stewards. And on top of that, this king would be someone whose birth the heavens themselves had proclaimed, something which even Caesar could not claim for himself. Consequently, the Magi might have rightly feared that Caesar would have wanted to have this child killed, along with any Magi who might have been on their way to Jerusalem to proclaim Him to be king.

So although the Magi apparently did trust King Herod with news of the child's birth after they had safely arrived in Jerusalem, they may have feared for the safety of both the child and themselves if Rome were to find out ahead of time that they were coming to worship the child and proclaim Him king. And so they very well may have wanted to keep their interest in the newborn king and their desire to visit Jerusalem at this time completely under wraps, at least until they were first done with their ceremony of officially proclaiming Him to be the King.

Furthermore, as we shall see later on, I believe that the Magi arrived at the palace of King Herod at night. There was probably more than one reason for them doing so, but this part right here certainly does fit in with them arriving at night. For the Magi may have concluded that in the interests of safety, it would be best not to let their secret out that they had come to proclaim the child to be king until after the Roman governor of the province was already in bed and asleep.

E. How Intensely Would The Magi Have Studied The Heavens?

As we begin our look at the various astronomical events which the Magi may have considered in drawing their conclusion that the King of the Jews had been born, let us keep in mind, as I said above, that with their knowledge of astronomy, they would not have had to witness these astronomical events personally in order to know that they were taking place.

Now ordinarily, one would think it unlikely that an unseen astronomical event could have caught the attention of anyone, even Magi. And if an event has not caught one's attention, one could hardly believe that the event would enter into one's decision-making processes.

However, since it is also the case, as we have seen above, that the Magi may have been sensitized to all that was taking place in the heavens during their lifetimes, whether seen or unseen, then it would be at least plausible that they would have been paying very close attention to the heavens at that time, such that they would have studied in meticulous detail those events which they knew would be taking place even when they could not personally witness them.

In fact, paradoxically, if an event which they knew would take place would be an unseen event, then that might have actually increased their interest in the event. For the hidden nature of the unseen events could have indicated to the Magi that they were privy to secret information, the likes of which no one else knew. This may have imbued them with a sense of a noble calling and duty to pursue this matter as diligently as possible, for since they were the only ones who had this knowledge, then they were the only ones who could be expected to act on that knowledge and then follow these events to their conclusion.

This concept does have support in Jewish culture today, and it would come as no surprise if a similar sentiment imbued Jewish thought 2,000 years ago. On that point (academically, at least), I refer the reader to a video presentation by NASA astrophysicist Dr. Jeremy Schnittman: http://www.chabad.org/multimedia/media_cdo/aid/1643088/jewish/Astronomy-and-Torah.htm (from five minutes and forty seconds to eight minutes and forty seconds).

It may have also given the Magi a sense that they were part of a very elite class of persons who had a golden opportunity not only to discern when the heavens would finally declare that the Messiah was coming, but also, as a bonus, to give them a head start on everyone else when it came to going to find Him and worship Him---presumably in a highly exclusive, face-to-face audience with Him---long before the vast crowds would come to recognize Him as the Messiah (which the Magi already knew He was).

In summary, from all of this we can find the following:

- There is a prophecy in the Book of Numbers which would tell any Hebrew Magi that a star would come forth from Jacob, and that this would signify the arrival of one who holds a scepter: presumably, the Messiah. And from the prophecies in the Book of Genesis and the Book of Numbers, they would know that this would be a member of the Tribe of Judah.
- There is a prophecy in the Book of Daniel which would tell any Hebrew Magi when to look for the coming forth of the Messiah, and this timeframe did in fact fit in with the timeframe in which they themselves were living. This aspect of the timing of His birth may have been augmented by signs that His birth may have taken place during a *shemittah* year.
- By the influence of Plato in the ancient Mediterranean world, any Hebrew Magi may have concluded that since the Messiah was indeed coming someday, then this would confirm what the Book of Numbers says about a star signifying the birth of the newborn King of the Jews, and that one could perhaps find such a newborn king here on earth when the heavens above would proclaim His birth.
- Any Hebrew Magus may have felt that he had both a civic and a religious duty to go seek out this king when He would be born, both on the grounds that this duty to seek Him out and proclaim Him to be king would naturally fall to the Magi group of priests, and also on the grounds as well that they had special knowledge of the heavens which no one else had, and that they therefore possessed a special duty to be the ones who would proclaim Him to be the King of the Jews.

Thus, we can see that there is sufficient reason to believe that the story of the Star of Bethlehem is not a tale of some Magi who simply happened to glance up into the sky one evening and saw something which, by mere happenstance, caught their attention, something which somehow moved them so deeply as to cause them to believe all the things which they said about that Star, something which compelled them to make the long, costly, and dangerous journey to worship the newborn King of the Jews, and even to take the very great risk of making the journey down to Bethlehem at night (a particular point which we shall consider in more depth further on).

The focus of my thoughts here is that it would be a true stretch of the imagination to think that anything less than the most compelling set of circumstances imaginable could have been enough to embolden any person to do such a thing, and to make such sacrifices and face such danger. However, we can see from the things which we just covered that the plausibility of this story does start to increase when one considers the full context of the facts which the Magi, particularly Hebrew Magi, may have been faced with as seen in the Scriptures and in astronomy 2,000 years ago, as we shall see in even more detail shortly.

II. When Should We Ourselves Be Looking For The Star?

Just as the Magi of old would have to have considered what the time frame should be within which they should be looking for the Star, so also we ourselves must consider this question. For if we are off on the timeframe, everything else must be wrong. And as Larson said, we could even miss certain evidence altogether.

In this aspect of our inquiry, we should first of all take into account the things from the Book of Daniel which the Magi had to work with. And we should then add to that anything additional which we can glean from the New Testament as well. Therefore, we should take a highly detailed look at the issues pertaining to the timing of certain events recorded in the Gospels⁹⁶ and the timing of certain events in the heavens if we are to get a more specific idea as to when Jesus may have been born.

This aspect of our study of the Star of Bethlehem might seem to some people to go into so much detail about the timing of the celestial events as to get off-topic, but I assure you that it is not. For as we shall see, it shall become plainly obvious later on that this topic of the timing of events on Earth and in the heavens is of immense importance, and it shall be well worth our while to take the time to lay the proper foundation for our consideration of the many events which we shall see in the heavens and on Earth.

For example, we have already seen how the prophecies of the Book of Daniel and the possibility that Jesus was born in a *shemithah* year set the stage for considering whether certain signs

⁹⁶ The Gospels are the accounts of the life of Jesus here on earth. There are four Gospels; each was written by one of the apostles of the early church, and each is named for the specific apostle who authored it: Matthew, Mark, Luke, and John.

An apostle is someone who is sent away on a mission: <https://www.merriam-webster.com/dictionary/apostle>. The term is not used much today, although loosely speaking, it could refer to someone who has a ministry to a particular group of people or a particular geographical location. For instance, someone who has a ministry of evangelism (*i.e.*, spreading the Gospel) to college students could be thought of as being an apostle to college students, though as I say, the term apostle is not actually used much today.

Note: the Gospel of John is not to be confused with certain letters of correspondence (epistles) which the Apostle John also wrote, specifically, I John (First John), II John (Second John), and III John (Third John), which are also in the Bible.

in the heavens might have then confirmed to Jewish Magi that the King of the Jews was about to be born. Nonetheless, at the same time, I shall endeavor to place as many things in the Appendix as I think I can so that we can limit the discussion here in the text itself to those things which we truly have to have here.

A. The Events And Circumstances Leading Up To The Annunciation

1. What Does The Bible Say About The Timeframe Of Jesus' Overall Life?

In the Gospel of Luke, the author of that book (the Apostle Luke) writes that when Jesus began His earthly ministry, He was about thirty years old (Luke 3:23).⁹⁷ For many years now, certain authors have made what many (including Larson and myself) find to be a convincing argument that Jesus died in April of 33 A.D.^{98,99} Other authors have also taken the position that Jesus must have died at least sometime around then.

Moving on, we also find that although the Gospels do not expressly state how long Jesus' earthly ministry lasted, we can infer that it must have lasted at least two years, and more likely about three and a half years.¹⁰⁰ So from this we can deduce that Jesus' earthly ministry probably began at some point between late 29 A.D. and early 31 A.D.

2. What Would Be The General Timeframe For The Birth Of Jesus?

If we go back thirty years from the years 29 to 31 A.D., and if we also account for the fact that Jesus might not have been exactly 30 years old when His ministry started (*i.e.*, He could easily have been 28 or 32 years old, for example), we would be looking for His birth probably sometime around 4 B.C. to 3 A.D., and likewise for His conception within that same timeframe, or perhaps as early as the latter part of the year 5 B.C. In any event, His conception and birth probably would not be more than a year or so outside of that range.

Would the final years of the First Century B.C. and the first years of the First Century A.D. be the only years in which to look for the Star, though? Larson has made a case for the proposition that the Magi were inspired to go find the newborn King of the Jews not on the basis of just one event or sign or object in the heavens, but rather, on the basis of the meaning which they attached to a certain series of events in the heavens in 3 and 2 B.C. We shall look carefully at what Larson said about that, but we shall also look at certain other celestial events from before then as well in order to see which of them, if any, might likewise have led to the Magi concluding that the King of the Jews had been born, and that they should go visit Him.

⁹⁷ <https://biblehub.com/nasb/luke/3.htm>

⁹⁸ <https://www.christianpost.com/news/new-study-reveals-exact-date-jesus-was-crucified-scientists-claim.html>

⁹⁹ <https://www.ncregister.com/blog/7-clues-tell-us-precisely-when-jesus-died-the-year-month-day-and-hour-revealed>

¹⁰⁰ <https://www.gotquestions.org/length-Jesus-ministry.html>

Before we go any further, though, one thing which we must focus our attention on is the fact that the Bible says that when Jesus was born, Cyrenius (Quirinius) was governor in Syria,¹⁰¹ and King Herod the Great was alive.¹⁰²

a. The Governorship Of Cyrenius (Quirinius) And The Death Of King Herod The Great

We find the account of the birth of Jesus in Chapter Two of the Gospel of Luke, the third book of the New Testament of the Bible. (As we have seen, the story of the visit of the Magi, which came sometime afterwards, is in the Gospel of Matthew.) The Gospel of Luke says,

1 In those days a decree went out from Caesar Augustus that all the world should be registered. 2 This was the first registration when^a Quirinius was governor of Syria. 3 And all went to be registered, each to his own town. 4 And Joseph also went up from Galilee, from the town of Nazareth, to Judea, to the city of David, which is called Bethlehem, because he was of the house and lineage of David, 5 to be registered with Mary, his betrothed, who was with child. 6 And while they were there, the time came for her to give birth. 7 And she gave birth to her firstborn son and wrapped him in swaddling cloths and laid him in a manger, because there was no place for them in the inn. ^c (Luke 2:1-7; ESV)¹⁰³

(Note: footnote a in verse 2 above says “Or *This was the registration before*”)

So from this we can know that Cyrenius (Quirinius) was alive when Jesus was born. (That being said, allow me also to note here, incidentally, that “Mary” is the English version of the Hebrew name “Miriam”.¹⁰⁴)

The Gospel of Matthew, the first book of the New Testament, has this to say about the arrival of the Magi sometime after that:

1 Now after Jesus was born in Bethlehem of Judea in the days of Herod the king, magi from the east arrived in Jerusalem, saying, 2 “Where is He who has been born King of the Jews? For we saw His star in the east and have come to worship Him.” 3 When Herod the king heard *this*, he was troubled, and all Jerusalem with him. (Matt 2:1-2; NASB)¹⁰⁵

So from this we can likewise know that King Herod was alive when the Magi came to visit Jesus.

¹⁰¹ Luke 2:2; <http://biblehub.com/nasb/luke/2.htm>

¹⁰² Matthew 2:1; <http://biblehub.com/nasb/matthew/2.htm>

¹⁰³ <https://biblehub.com/esv/luke/2.htm>

¹⁰⁴ <https://aleteia.org/2020/09/12/what-was-the-virgin-marys-real-name/>

¹⁰⁵ <https://biblehub.com/nasb/matthew/2.htm>

i. Cyrenius (Quirinius) As Governor Of Syria

With those verses in mind, let us now consider the point which we looked at a few moments ago, as recorded in the Gospel of Luke, about Cyrenius (Quirinius) being governor of Syria at the time that Joseph and Mary went to register for the census. There is, apparently, a long-standing, widely-held opinion that Cyrenius (the Greek version of the Latin name Quirinius) was appointed a legate¹⁰⁶ of Syria in the year 6 A.D.¹⁰⁷ This would have been seven years after the time when many students of the birth of Jesus, myself included, believe that Jesus was actually born. So does this idea that Cyrenius was appointed governor in 6 A.D. disprove the idea that Jesus was born in 2 B.C.?

Actually, no, it does not. For first of all, during the time when I believe that Jesus was born, Cyrenius was already the military governor of all of Syria.¹⁰⁸ So in light of the fact that he was governor of all of Syria in at least one significant respect (militarily), he could fairly be said, for that reason, to be governor of Syria. (As it turns out, he was also at that time the civil governor of Cilicia.^{109, 110, 111, 112} Cilicia occupied an area of land which on modern maps would be found in central and southeast Turkey, and Cilicia was considered at that time to be part of Syria.^{113, 114, 115})

Second, consider, by way of example, the administrations in relatively modern times of U.S. President Grover Cleveland. He was elected President of the United States late in 1892 and took office early in 1893. But Grover Cleveland had also been elected President of the United States late in 1884, and took office early in 1885. There was a four-year interval, from 1889 to 1893, when he was not President. That being the case, he was the first person to have held the office of President of the United States in two non-successive terms, and he is therefore referred to as being both the 22nd and the 24th President of the United States.¹¹⁶ As it turns out, the historical record itself apparently does support the idea that similarly, Cyrenius may have held non-successive terms as governor of Syria.¹¹⁷

¹⁰⁶ <https://www.definitions.net/definition/legatus>

¹⁰⁷ <https://biblearchaeologyreport.com/2019/12/19/quirinius-an-archaeological-biography/>

¹⁰⁸ http://www.biblestudymanuals.net/Jesus_birthdate.htm; see also: https://www.whatsaiththescripture.com/Text.Only/pdfs/The_Coming_Prince_Text.pdf (pp. 38-40).

¹⁰⁹ <http://www.christiananswers.net/dictionary/cyrenius.html>

¹¹⁰ http://www.biblestudymanuals.net/Jesus_birthdate.htm

¹¹¹ <https://books.google.com/books?id=NC9VAAAAMAAJ&pg=PA279&lpg=PA279&dq=cilicia+cyrenius+OR+quirinius&source=bl&ots=0wuAgxhly2&sig=KXW1h7y06pWFNOIE8LV4pvrNmbE&hl=en&sa=X&ved=0ahUKEwif6MzOoIPNAhVPSVIKHVh7BEoQ6AEIOjAE#v=onepage&q=cilicia%20cyrenius%20OR%20quirinius&f=false>

¹¹² <http://www.biblehistory.net/newsletter/cyrenius.htm>

¹¹³ <http://www.christiananswers.net/dictionary/cyrenius.html>

¹¹⁴ http://www.biblestudymanuals.net/Jesus_birthdate.htm

¹¹⁵ Just as a side note, the Apostle Paul wrote of this region as follows: "Then I went into the regions of Syria and Cilicia." (Galatians 1:21; NASB: <http://biblehub.com/nasb/galatians/1.htm>)

¹¹⁶ <https://www.whitehouse.gov/about-the-white-house/presidents/grover-cleveland/>

¹¹⁷ http://www.biblestudymanuals.net/Jesus_birthdate.htm ; see also: https://www.whatsaiththescripture.com/Text.Only/pdfs/The_Coming_Prince_Text.pdf (pp. 38-40).

In any event, for additional reasons which we shall examine herein, I do believe that Jesus was born in 2 B.C. And so for the moment, at least, I ask the reader to simply keep an open mind, then, about whether Cyrenius was governor of Syria in a substantive way at the time that Joseph and Mary went to register for the census.

ii. When Did King Herod The Great Die?

Let us next consider when it was that King Herod the Great died. For given the fact that King Herod plays an important role in the story of the Star of Bethlehem, these events, if they did take place at all, certainly could not have taken place after King Herod the Great had died.

Scholarly thought about when King Herod the Great died has gone back and forth over the years. Some have thought that King Herod died in 1 B.C., and some have thought that he died in 4 B.C.¹¹⁸ Since the confluence of events in the heavens which we shall study in this book comes to a head in the years 3 B.C. and 2 B.C., we will have to ascertain whether it is at least possible that King Herod was still alive during that time (in other words, the possibility that he did not die in 4 B.C., and that he may have lived until 1 B.C.).

Dr. Craig Chester (who, as mentioned previously, is the main researcher whom Larson was guided by) makes the case that King Herod the Great died in 1 B.C., and in that respect, Dr. Chester himself, in turn, makes reference to certain works by Drs. Ernest Martin and John Moseley.¹¹⁹ Larson points out in his aforementioned video that at least some of the confusion as to when Herod died apparently pertains to an error in the copying of ancient texts pertaining to Jewish history. Larson points out that modern translations of the writings of the Jewish historian Josephus point to the conclusion that Herod died in 4 B.C. But as Larson also points out, translations of the writings of Josephus from prior to the year 1544 A.D. all point to Herod having died in 1 B.C.

In addition, an author of two articles about this (one published on his website and one on the National Catholic Register) raised two very important points. First, in order to understand ancient dating, one must consider whether one is supposed to count partial years or not. For instance, without modern calendars, ancient people would speak of the time as to when various events took place according to the year of the reign of whichever king was in power at the time that the event took place.¹²⁰

This could lead to problems, however. For unless a king came to power on the first day of the calendar year, there would be an issue as to whether the partial year during which he ascended to the throne would be considered the first year of his reign, or whether that year would instead be considered the final year of the previous king, or whether both would be true. Thus, it would be possible for the following year to be deemed the first year of the new king's reign, when he presumably would reign the entire calendar year instead of sharing a calendar year with the preceding king.

¹¹⁸ https://www.ancient.eu/Herod_the_Great/

¹¹⁹ <https://imprimis.hillsdale.edu/the-star-of-bethlehem/>

¹²⁰ <https://jimmyakin.com/2013/04/jesus-birth-and-when-herod-the-great-really-died.html>

Conversely, of course, the same thing would hold true with respect to when the king died; unless the king died on the final day of the calendar year, there would be an issue as to whether the final year of his reign, which would be a partial year, would be counted as the last year of his reign, or the first year of the reign of the king who would succeed him, or both. And as the author of the article points out, if one used a particular method of reckoning the years of King Herod's reign, one would conclude that Herod died in 4 B.C. However, the author makes the argument that the more accurate understanding of the system of numbering the years of a king's reign would point to Herod having died in 1 B.C.

That same author points out in another article that the timing of King Herod's death is also calculated by some according to when one of his sons began to reign.¹²¹ When King Herod (Herod the Great) died, his kingdom was divided among his sons, at least one of whom (Archelaus) apparently began to reign in 4 B.C. The author also notes, however, that some kings would start to hand over at least some of the reins of power to their heir or heirs before dying.

In addition, some authors believe that Herod's sons may have backdated the start of their reigns to when Herod the Great was alive in order to increase their perceived legitimacy. (See: https://en.wikipedia.org/wiki/Herod_the_Great) Consequently, the fact that one or more of the sons of King Herod the Great began to rule in 4 B.C. does not by itself necessarily mean that Herod the Great had died by that point. These two articles also contain other points about ascertaining the date of King Herod's death which the reader might wish to consider as well. Here again, as was the case with the possibility of Cyrenius being governor of Syria during 2 B.C., I likewise ask the reader to keep an open mind about whether King Herod the Great was still alive in 2 B.C. as we consider the timeframe in which Jesus may have been born and when the Magi may have come to visit Him.

Two of King Herod the Great's sons, by the way, were also named King Herod: Herod Archelaus (whom I just mentioned) and Herod Antipas. It is this latter king, King Herod Antipas, whom the Bible talks about in a separate context years later, during the time of Jesus' ministry, crucifixion, and resurrection.¹²²

III. What Would Be The Nature Of The Star We Are Looking For?

In order to answer the question of whether there is evidence which supports the story of the Star of Bethlehem, we would not only have to know when to look, but we would also have to know what to look for as we search the heavens of 2,000 years ago in our effort to find something which a group of Magi might have thought of as signifying the birth of the King of the Jews. But what type of thing or things could even qualify as being something we should be looking for?

To begin with, we must keep in mind that the New Testament was written in a version of the

¹²¹ <https://www.ncregister.com/blog/the-100-year-old-mistake-about-the-birth-of-jesus>

¹²² <https://www.biblicalarchaeology.org/daily/people-cultures-in-the-bible/people-in-the-bible/herod-antipas-in-the-bible-and-beyond/>

Greek language known as Koine Greek (pronunciation: <https://www.merriam-webster.com/dictionary/koine>). The New Testament was written in that language because that is the language which was commonly used for correspondence throughout the whole Mediterranean world 2,000 years ago,¹²³ and the authors of the New Testament wanted to reach as many people with their writings as they possibly could.

As to the Greek (Koine Greek) word which is translated "star" in the telling of the story of the Star of Bethlehem, it is the word *aster*.¹²⁴ We get the word "astronomy" and related words from the word *aster*.¹²⁵

Now, as it turns out, an *aster* could be any fixed point of light in the heavens.¹²⁶ So we wouldn't just be looking for stars themselves, in the ordinary sense. We would also have to consider the planets, for instance. And even a constellation can be an example of an *aster*.¹²⁷

Larson does an excellent job of winnowing out certain types of things in the sky which would not qualify as being the Star of Bethlehem. He does this by comparing the properties of the various types of objects in the sky with what the Bible says about the Star. For instance, he points out that the Scripture makes it clear that the Star endured over a considerable period of time. So it could not have been a meteor.

He also points out that it could not have been a spectacular sight, such as a comet or a nova, for apparently neither King Herod nor the people of Jerusalem had noticed anything in the heavens which would be noteworthy; in other words, the Star would have been in plain view, but if one did not have an explanation as to what it might signify, one would not think anything of it. He also notes that on the basis of what the Magi told King Herod, the star would have to signify birth, kingship, and the Jewish nation:

1 Now after Jesus was born in Bethlehem of Judea in the days of Herod the king, magi from the east arrived in Jerusalem, saying,

2 "Where is He who has been born King of the Jews? For we saw His star in the east and have come to worship Him." (Matt. 2:1-2; NASB)¹²⁸

And in light of verse 2, Larson also notes that the Star would have to be something which rises in the east. With respect to that aspect, we shall deal later on in depth about the issue of whether the Star itself was in the east or whether the Magi simply meant that they had seen the Star while they themselves were in the east.

He also points out that a planet could qualify as the Star of Bethlehem, and that the planet Jupiter in particular may qualify as such, for it meets all of the criteria for the Star which are given in

¹²³ <https://www.gotquestions.org/Koine-Greek.html>

¹²⁴ <http://biblehub.com/greek/792.htm>

¹²⁵ <http://www.english-for-students.com/astro.html>

¹²⁶ <https://answersingenesis.org/holidays/christmas/what-was-the-christmas-star/>

¹²⁷ <https://biblehub.com/greek/798.htm>

¹²⁸ <https://biblehub.com/nasb/matthew/2.htm>

the Bible (and is in fact the only object of any kind which does so), including the part about the Star leading the Magi on to the house where Jesus was and then standing over that place (in two different ways, actually, as we shall see later on). And as we shall likewise see herein, certain other planets, along with the Moon and the Sun, probably also played a significant role in the overall development of this story as well.

IV. The Echo Of Heaven

As we study the heavens for clues as to what the Magi might have found to be significant, whether the Magi were Jewish or pagan, we shall find that, in Platonic fashion, certain events on Earth echo back to heaven the things we find among the stars. I call this the Echo of Heaven. Larson calls it the Starry Dance and the Celestial Poem. I believe that those terms aptly describe it, too. And like Larson, I believe that these things show us that the story of the Star of Bethlehem pertains to a real astronomical event, and that these events point to the time of the birth of Jesus and the visit of the Magi.

A. Certain Conjunctions And Other Astronomical Events Prior To The Birth Of Jesus

In this section we shall look at a number of different events which I believe point to the conclusion that the King of the Jews was born in 2 B.C., most of which (or at least, many of which) the Magi themselves probably noticed. To some it may seem that each of these events individually is insignificant, but in anticipation of such sentiments, allow me to say that there are two reasons for covering them here.

First, even if some of the events do not seem to be as significant as certain other events, the combined impact of all of them over several years may have had an effect on the Magi which was synergistic¹²⁹ (pronunciation: https://www.youtube.com/watch?v=bmgctaL_6JU). Second, one of these series of events does point, I believe, not just to the birth of Jesus, but also to the Annunciation and to His conception. The Annunciation is a Christian term referring to the announcement by the angel Gabriel to Mary that she would be the mother of the Messiah.¹³⁰

The Echo of Heaven entails several different types of celestial phenomena, including so-called conjunctions (pronunciation: <https://dictionary.cambridge.org/us/pronunciation/english/conjunction>).

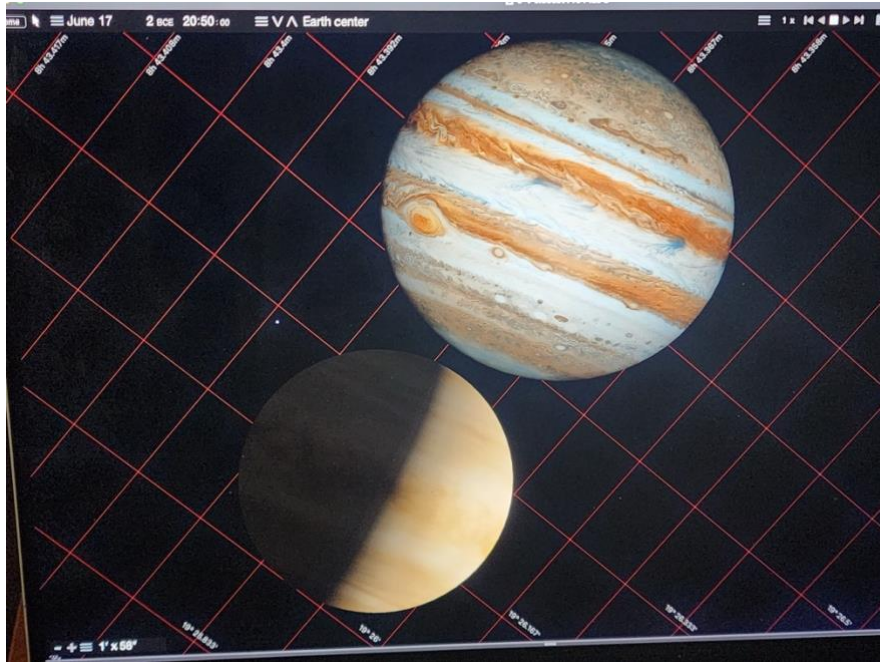
“Conjunction” is an astronomical term pertaining to a situation in which two or more objects in the heavens appear to line up or get close to each other.¹³¹ The alignment and apparent closeness of celestial objects in a conjunction draws the attention of all who behold it.

In fact, they are not actually close to each other, but only appear to be. Compare the following photograph with the illustration which is shown immediately thereafter:

¹²⁹ <https://www.dictionary.com/browse/synergistic>

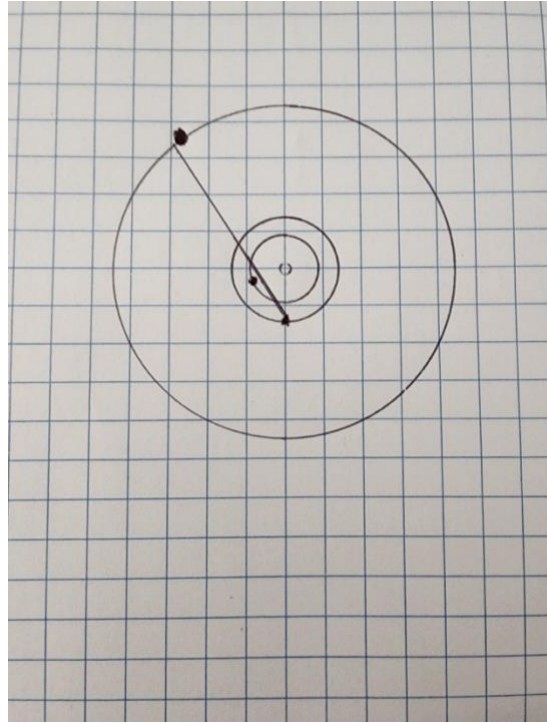
¹³⁰ <https://www.merriam-webster.com/dictionary/annunciation>

¹³¹ <https://earthsky.org/astronomy-essentials/what-is-a-conjunction>



Jupiter (top) and Venus (below) under high magnification at their apparent closest approach during their conjunction on June 17, 2 B.C. Note: Venus is shown off-center here (a few minutes after the planets' apparent closest approach) so that its center of brightness---in the sunlit portion of the planet---is aligned with that of Jupiter's.

Images provided courtesy of Starry Night Education. Photograph by the author.



A partial view of the solar system as seen from above the North Pole of Earth, the Sun, Venus, and Jupiter at the time when Venus and Jupiter appeared to separate during their conjunction on June 17, 2 B.C., about one hour following the above photograph. This illustrates the point that Jupiter and Venus at this time were not in fact close to each other, though from Earth they did appear to be so. (Note: This conjunction shall be discussed in greater detail later herein.)

The Sun is shown by the small circle in the center. Venus and its orbit are shown in the first circle outward from there. Earth and its orbit are illustrated in the next circle outward. Jupiter and its orbit are shown in the outermost circle.

The motion of the planets in their orbits would be counter-clockwise. The line of sight from Earth through the gap between Venus and Jupiter at the time when those two planets appeared to separate is also shown.

Image not to scale; also, Mercury and Mars are not shown, nor are any of the planets beyond Jupiter, since they play no role here.

Image and photograph by the author.

The frequency of planetary conjunctions varies considerably, depending principally on which planets are involved. Of course, a truly rare conjunction certainly would have caught the attention of the Magi. But in that respect, rarity would not be the only criterion that would have mattered. The timing and positioning would have mattered, too, and probably with special emphasis as to how these events pertained to the Hebrew calendar and culture.

The particular conjunctions which we shall look at took place from 9 B.C. to 2 B.C., and two of them specifically are classic examples of so-called triple conjunctions (*i.e.*, a series of three conjunctions), while yet another one can be thought of in a broad sense as being another type of triple-conjunction, though not the usual kind; in addition, during the midst of this, there was also an event which I shall call, for lack of a better term, a triple rendezvous.

Larson looks at two of the pertinent conjunctions. And the first of the two conjunctions which he does in fact look at is one of the two classic triple- conjunctions which I myself shall likewise cover herein.

The various conjunctions which we shall be looking at in this book are not the only conjunctions which took place during this period, but these are the only ones which I have found to be potentially significant with respect to our story. That is not to say that there aren't any other conjunctions during this period which might also have been significant. It's just to say that if there were any other significant ones, then regretfully, I have not yet noticed them. Suffice it to say for the moment that herein, we shall consider the following things:

1. The Planetary Conjunctions Of Venus In 9 B.C.
2. The Position And Appearance Of The Moon During Purim In 9 B.C.
3. The Signs In The Heavens Of August And September Of 3 B.C.
4. The Conjunction Of Jupiter and Venus In June Of 2 B.C.

Of all of these events, it is the conjunction of Jupiter and Venus in June of 2 B.C. which shall give us the clearest sign as to when Jesus was born. Now, all that being said, let us proceed directly to a consideration of these celestial events themselves.

1. The Planetary Conjunctions Of Venus In 9 B.C.
 - a. The Conjunction Of Venus And Jupiter In January Of 9 B.C.

In the ancient Roman world, Venus was deemed to be the goddess of womanhood and fertility.¹³² Jupiter, meanwhile, was regarded as the king of the gods.¹³³ So as Larson has pointed out, from the perspective of the ancient world, Venus could of course symbolize the mother (Mary), and Jupiter, the king (Jesus).

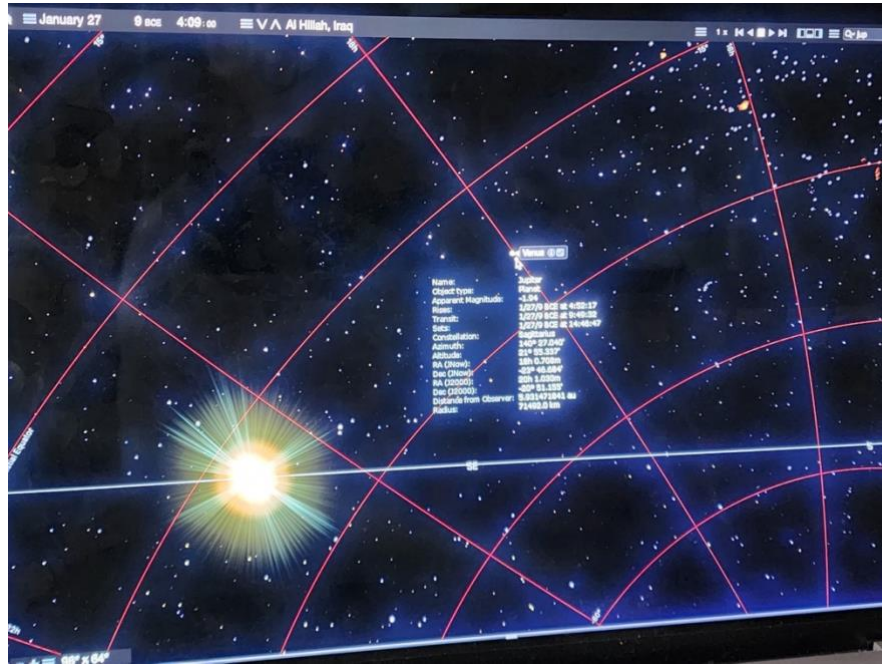
Now, as seen from Babylon (where one or more of the Magi may have come from),¹³⁴ on the morning of January 27, 9 B.C., a close conjunction of these two planets took place in the heavens. Here is a photo of how this would have looked from Babylon (Al Hillah) with the glare of sunlight and the computer's artificial foreground removed:¹³⁵

¹³² <https://greekgodsandgoddesses.net/goddesses/venus/>

¹³³ <https://greekgodsandgoddesses.net/gods/jupiter/>

¹³⁴ <https://en.wikipedia.org/wiki/Magi>

¹³⁵ Delta T 615 (by interpolating the Delta T between NASA'S lunar eclipse catalog numbers 04800 and 04801): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE.



Jupiter and Venus conjunction January 27, 9 B.C. at 0409 UTC, as seen from Babylon (Al Hillah, Iraq).

Images provided courtesy of Starry Night Education. Photograph by the author.

Here the artificial horizon of the computer program has been removed and has been replaced by the Horizon Line (the white line running left and right). Notice, by reference to that line, that this conjunction occurred just at sunrise.

The celestial coordinates for this event are shown by the grid of red lines. For those who are not familiar with celestial coordinates, I have placed a primer about them in the Appendix. (In the Appendix find A PRIMER ON CELESTIAL COORDINATES.) Being familiar with celestial coordinates will be very helpful for the reader throughout this book, so I do recommend to those who are not already familiar with celestial coordinates that they read that primer in the Appendix. In any event, suffice it to say for the moment, at least, that the lines of celestial coordinates which correspond to the north/south lines of coordinates here on earth (the lines of longitude) are known in astronomical terms as the lines of Right Ascension (commonly abbreviated RA, with each specific letter being pronounced: “R”, “A”). And as is shown here, Jupiter at this time had an RA of 18h 0.708m (18 hours 0.708 minutes). (Venus at this time had the exact same RA, although the computer program does not allow the RA for both planets to be shown simultaneously.)

Venus probably would have been bright enough to be still visible.¹³⁶ Jupiter, being not quite as bright,¹³⁷ would have faded from view by then, though probably only by about eight minutes or

¹³⁶ with a brightness of magnitude -3.99 (“minus three point nine nine”); see <https://telescopenights.com/stars-in-the-daytime/>

¹³⁷ with a dimmer magnitude of -1.94 (“minus one point nine four”)

so.¹³⁸ Even so, as morning twilight developed following the time that each of them had risen (about two hours and fifteen minutes beforehand), anyone in Babylon could have seen the two coming into alignment before Jupiter disappeared from view, and would have known to a relative degree of certainty how close the exact alignment of the two would be at sunrise.

Their exact alignment (which the Magi would have been able to deduce from their knowledge of astronomy), coming precisely at sunrise, is something which they may have been deemed significant, for sunrise marks the birth of a new day and can be symbolic of the start of a new era.

b. The Conjunction Of Venus And Saturn In 3752 (9 B.C.)

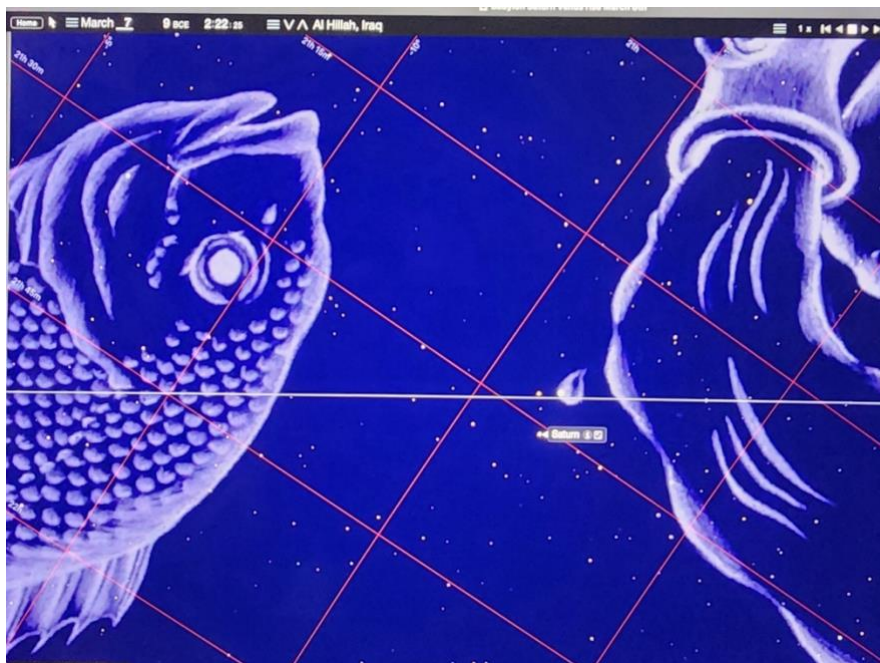
In the ancient world, Saturn was deemed to be the father of certain gods, including Jupiter.¹³⁹ So the conjunction of Venus and Saturn which took place a month and a half later, on March 8th of 9 B.C., shows a certain symbolic encounter between Saturn, the father of Jupiter, and the symbol of motherhood (Venus). Here again though, conjunctions of Venus and Saturn, like conjunctions of Venus and Jupiter, are not rare. But this one was surrounded by another celestial event which was taking place at the time, as well as by certain religious, cultural events; and some of these events, when all put together, could have had a very special meaning for Magi who were Jewish, as we shall now see.

First of all, here we see Venus and Saturn as they would have appeared from Babylon on the morning of March 7th of 9 B.C. and also on the morning of March 8th of 9 B.C. See the following photos:¹⁴⁰

¹³⁸ On that note, allow me to add that I myself have seen Jupiter only eight minutes before the sun rose one morning when it was somewhat removed from the sun (at an altitude of 52 degrees). This was at 6:47 A.M. Central Standard Time on November 19, 2015, as viewed from the outskirts of Rockford, Illinois. (Note: as a practical matter, one can generally see a star or a planet (such as Jupiter) closer to sunrise than one can see it following sunset because in the morning, one can locate it while the sky is still completely dark and then follow it along until it disappears, whereas in the evening, one usually will not know precisely where to look for the object until it slowly becomes obvious in the darkening sky.)

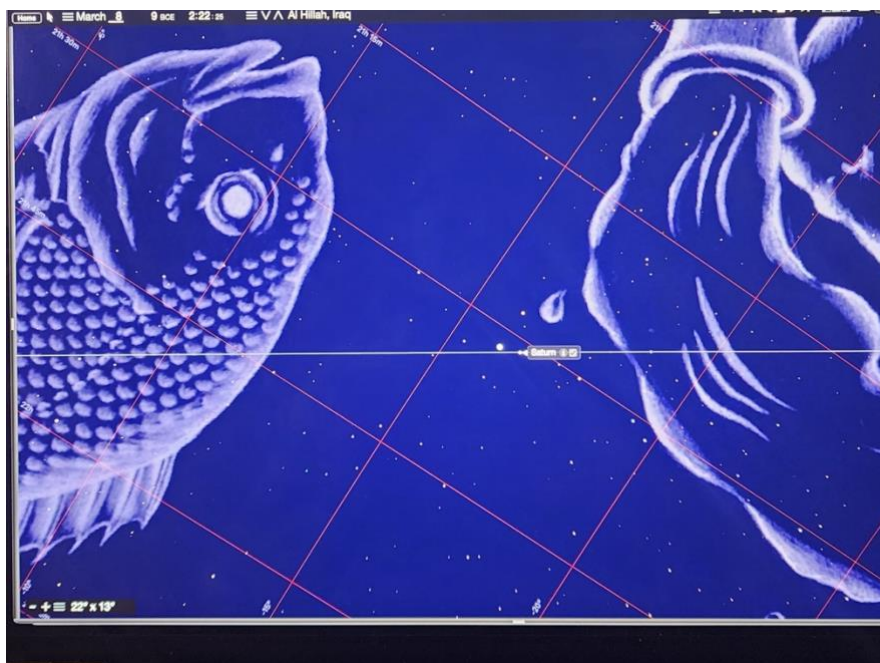
¹³⁹ <http://www.betemunah.org/mazaroath.html>

¹⁴⁰ Delta T 614 for each event during that month (by interpolating the Delta T between NASA'S lunar eclipse catalog numbers 04800 and 04801): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE



Venus and Saturn March 7, 9 B.C. as seen from Babylon (Al Hillah, Iraq) at 02:22:25 UTC (5:22:25 A.M. local time). Venus (the white dot in the water drop) has already risen and is just above the Horizon Line, to the upper right of Saturn. (Note: Delta T 614 for all observations in March of 9 B.C.)

Images provided courtesy of Starry Night Education. Photograph by the author.



Venus and Saturn as seen from Babylon (Al Hillah, Iraq) at 02:22:25 UTC (5:22:25 A.M. local time) one day later, on March 8, 9 B.C. Venus is no longer in the water drop and has moved over to the left (east) of Saturn. It is seen as a white dot just above the Horizon Line.

Images provided courtesy of Starry Night Education. Photograph by the author.

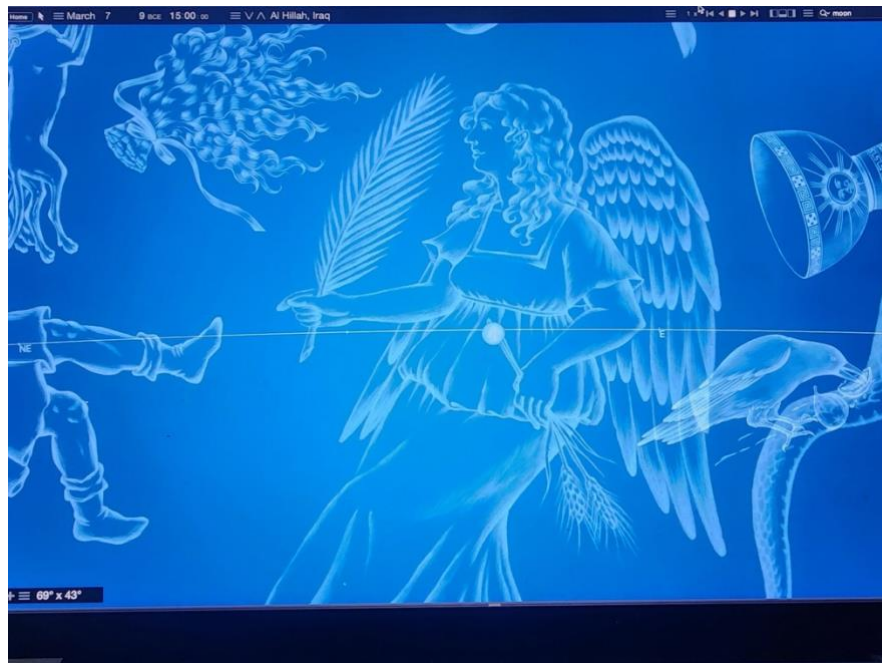
In these photos, the celestial grid lines which show Right Ascension (*i.e.*, the lines by which a conjunction is determined) are those which run from lower right to upper left. Two objects are said to be in conjunction when the RA of each of them is identical.

Notice that on the morning of March 7th, Venus was to the right (west) of Saturn on the celestial grid, and had not yet reached the RA of Saturn, though on the following morning (March 8th), Venus would be just past the RA of Saturn (just to the left of Saturn on the celestial grid). Thus, in between these two times, the actual conjunction of the two planets came and went.

In fact, the conjunction occurred while both planets were well below the horizon, at around midnight on the morning of March 8th, as seen from Babylon. As I alluded to above, although any Magus living there would therefore not have seen the conjunction, he certainly would have known from his observations of the heavens that this conjunction would have taken place, and even approximately when it would have taken place.

i. The Moon At The Conjunction Of Venus And Saturn In 3752 (9 B.C.)

Now, here's what else was happening during that time. In this next photo we are looking toward the eastern horizon just after sunset as seen from Babylon on March 7th (*i.e.*, just a few hours before the conjunction of Venus and Saturn would take place). Venus and Saturn are below the western horizon already. Here I have the artificial horizon removed and instead, the horizon line (the white line running left and right in the middle of the screen) is shown in its place. This image shows the full moon in Virgo as it was rising, at sunset:



The full moon rising in Virgo as seen from Babylon (Al Hillah, Iraq), March 7, 9 B.C. The white horizontal line marks the horizon.

Images provided courtesy of Starry Night Education. Photograph by the author.

In ancient Persia there was a goddess named Anahita who was goddess of the moon and also of the river, and likewise was similar to Venus. She was deemed to be a virgin, and her name means “pure” or “immaculate one”.^{141, 142}

Now, with respect to Anahita being a Persian deity, bear in mind that during the time in which the ancient Babylonians held the Jews captive in Babylon, the Persians overthrew the Babylonians and then ruled in their place over the Jews throughout the remainder of the Jews’ captivity in Babylon. So to any magus in Babylon in 9 B.C., gentile or Jew, the rising of the full moon (which, as I said, was associated with the Persian goddess Anahita) to light up the night sky while Venus (likewise associated with Anahita) and Saturn went through a conjunction below the horizon at around midnight that night probably would no doubt have been a noteworthy thing.

Next, we should keep a little history and geography in mind. The ancient city of Babylon occupied both sides of the Euphrates River, and the Babylonian Empire (which the Persians had conquered) lay all around the city on both sides of the river, and from there beyond the horizon in all directions. So as seen from the west bank of the Euphrates River, the full moon could be seen rising in the midst of Virgo from right out of the river (which Anahita was also the goddess of).

Yet even that is not all. As we consider this night further, we should keep something in mind about the constellations: Although we have no specific images of the constellations from ancient times to show us just exactly what the ancients themselves envisioned in the night sky, we do at least know what persons, gods, animals, or other things were supposed to be represented by the various constellations, and we do know, at least for the most part, which stars were in those constellations.

All that being said, look at the above photo once more, and consider what part of the virgin the full moon is in. Notice that, at least generally speaking, the full moon began that night in the midst of the area in and around the womb of the virgin.

Now let us look at what happens to the moon on the night of March 7th as the night progresses until 5:48 A.M. (2:48 UTC) on the morning of March 8th, just a few hours after the conjunction of Saturn and Venus:

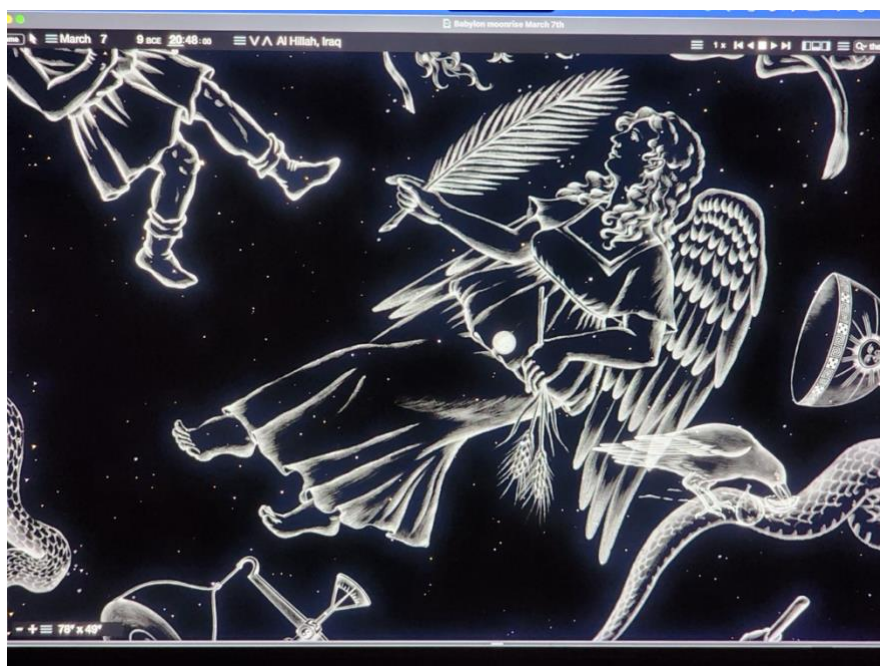
¹⁴¹ <http://www.goddess-guide.com/moon-goddess.html>

¹⁴² <http://www.ancient-symbols.com/persian-symbols.html>



The moon in the area of the womb of Virgo at 17:48 UTC on the evening of March 7th, 9 B.C., as seen while looking east from Babylon (Al Hillah, Iraq).

Images provided courtesy of Starry Night Education. Photograph by the author.



The moon approaching the birth canal of Virgo at 20:48 UTC on the evening of March 7th, 9 B.C., as seen while looking to the southeast from Babylon (Al Hillah, Iraq).

Images provided courtesy of Starry Night Education. Photograph by the author.



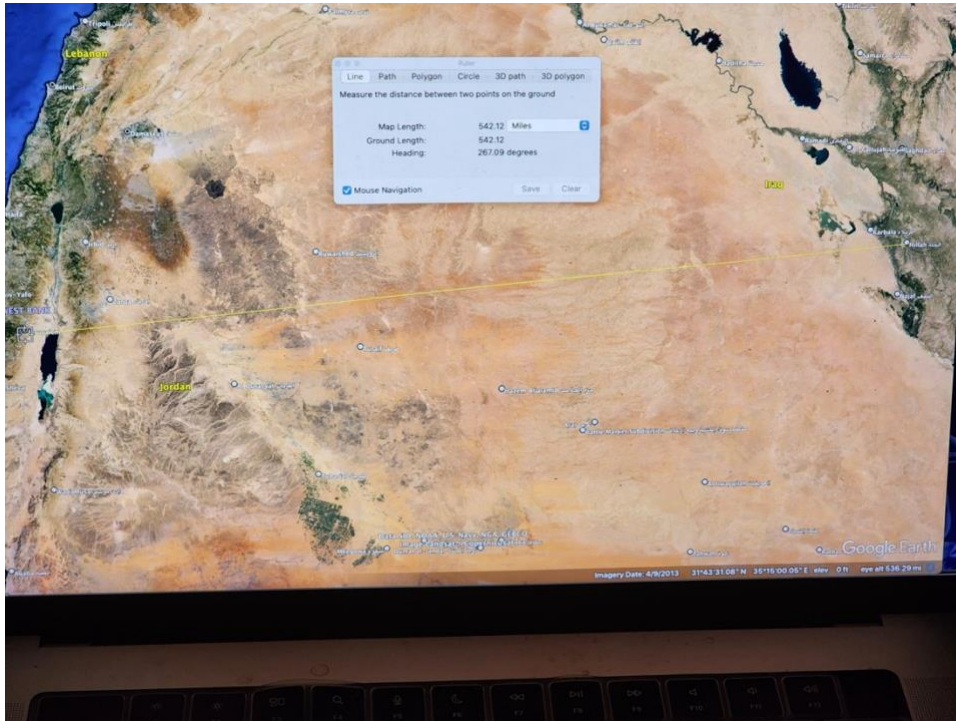
The moon in the midst of the birth canal of Virgo at 23:48 UTC on the evening of March 7th, 9 B.C., as seen while looking to the southwest from Babylon (Al Hillah, Iraq). Images provided courtesy of Starry Night Education. Photograph by the author.



The moon at the end of the birth canal of Virgo at 02:48 UTC on the morning of March 8th, 9 B.C., as seen while looking west from Babylon (Al Hillah, Iraq) during morning twilight. Images provided courtesy of Starry Night Education. Photograph by the author.

As we can see, throughout the course of the night, the moon moves from the area of the womb of the virgin through the area of the birth canal. And at that, even Virgo herself moves into the position for giving birth to a child.

Now Jerusalem, as seen from Babylon, lies out beyond the horizon at a heading of about 267:



Looking from Babylon (Al-Hillah, Iraq) to Jerusalem/Bethlehem along a heading of 267 degrees from Babylon (as is shown in the box, and as is illustrated by the yellow line running roughly east and west).

Image from Google Earth Pro: <https://google-earth-pro.en.softonic.com/mac>.
Photograph by the author.

And as we can see above, at that time on this morning (5:48 A.M.; 02:48 UTC), the Moon had an azimuth¹⁴³ of 267 degrees as seen from Babylon (Al-Hillah), *i.e.*, the heading out toward Jerusalem.

Also, at this time (around sunrise), as seen from over on the east bank of the Euphrates River, the virgin would be seen plunging back into the river. (For reasons which we shall consider shortly, this aspect of first coming forth from the water and then plunging back into it may have special significance with respect to the goddess Venus.)

Surely the imagery of the virgin appearing to go through pregnancy and labor all night long, and then finally moving into the delivery position just above the horizon when looking out towards

¹⁴³ "Azimuth" is an astronomical term which corresponds to a heading (*i.e.*, a compass heading) in terms of navigation on land: <https://astronomy.swin.edu.au/cosmos/A/Azimuth>

Jerusalem, as the moon moved from the womb to the end of the birth canal, would not have been lost on any of the Magi in Babylon, just by that fact itself. For quite understandably, during ancient times, rivers were associated with life and fertility. After all, the attribute of the flowing water of a river bringing forth new life (especially following spring floods) does have a certain parallel to human reproduction, in which the flow of the ejaculate of the male into the riverbed (so to speak) of the female produces new life.

So when this symbolism would be added to the conjunction of the father of the gods (Saturn) with the goddess of womanhood and fertility (Venus), it no doubt would have been of particular interest to the Magi. For in light of the fact that this imagery shows a birth from a virgin, a prophecy from the Book of Isaiah would seem to come into play here, as follows.

ii. A Sign From The Book Of Isaiah

Here is one of the things which we find about the birth of the Messiah in the Book of Isaiah:

[14](#) “Therefore the Lord Himself will give you a sign: Behold, a virgin will be with child and bear a son, and she will call His name Immanuel. (Isaiah 7:14; NASB)¹⁴⁴

The Apostle Matthew would refer to this verse in his Gospel:

[23](#) “BEHOLD, THE VIRGIN SHALL BE WITH CHILD AND SHALL BEAR A SON, AND THEY SHALL CALL HIS NAME IMMANUEL,” which translated means, “GOD WITH US.” (Matt. 1:23; NASB)¹⁴⁵

Some critics of the Gospel of Matthew have argued that Matthew went too far when he used this passage from the Book of Isaiah to support his statement that Jesus had a virgin birth. But certain astronomical evidence which we shall look at later on may help settle that debate.

iii. From The Dust Of The Ground

As you consider this, also bear in mind something which the Bible says about the nature of man: It says that God formed man from the dust of the Earth.^{146, 147} And in fact, biochemically speaking, that is what our bodies truly are. That being said, the Magi (particularly Jewish Magi) may have deemed it significant that this conjunction of the father of the gods with the symbol of fertility herself took place not up above ground and before their eyes in the heavens, but rather in secret, hidden within the earth, so to speak, just as the conception of a human being takes place: hidden away in secret, and in the Earth (the womb). For as I said, the Bible says that we are formed from

¹⁴⁴ <https://biblehub.com/nasb/isaiah/7.htm>

¹⁴⁵ <https://biblehub.com/nasb/matthew/1.htm>

¹⁴⁶ Genesis 2:7; <http://biblehub.com/nasb/genesis/2.htm>

¹⁴⁷ Genesis 3:19; <http://biblehub.com/nasb/genesis/3.htm>

the Earth itself; and so when a child is conceived within the womb, it is conceived within the Earth, so to speak (*i.e.*, the child's mother).

I can't help but wonder then, if perhaps the Magi concluded, on the basis of all the symbolism of the night, that the heavens themselves were signifying, in Platonic fashion, that God would be bringing about the conception and birth of His Son here on Earth, and within the Earth (the womb of His mother), just as was being shown by the display in heaven above by the moon, Saturn, and Venus.

iv. Purim And The Conjunction Of Venus And Saturn In March Of 9 B.C.

And yet, there is even more to it than this. For this night came in the midst of an important Jewish holiday, particularly for the descendants of those Jews who remained in Babylon: the holiday known as Purim (pronunciation: <https://www.merriam-webster.com/dictionary/Purim>). The story of Purim is interesting just by itself. And for important reasons which should become clear shortly, I have chosen to state at least the basics of this holiday here in the text itself rather than relegate the entire discussion of Purim to the Appendix. For further details beyond what is stated here, in the Appendix find THE DATES FOR CELEBRATING PURIM IN 3752 (9 B.C.), along with a discussion of the very unusual phenomenon of the full moon occurring in this particular year on the first night of Purim rather than on the second night.

The Jewish holiday of Purim pertains to events which took place in the Persian Empire during the latter part of the Jews' Babylonian captivity, after the Persians had overthrown the Babylonians and had occupied their land, including Babylon itself.¹⁴⁸ Specifically, these events took place in the month of Adar in the year 3288 (March of 473 B.C.).^{149, 150} This was during the reign of Persian king Ahasuerus, more commonly known as Xerxes (Xerxes I).¹⁵¹ This was about fifty years after the first ancient reference to that group of persons who would eventually come to be known as the Magi class of priests occurred.¹⁵² Xerxes is also, by the way, the Persian king who was portrayed in the movie *300*.¹⁵³

Now at this time, one of King Xerxes' officials, a Jew named Mordecai, refused to bow down before another official of the king, an Amalekite Persian named Haman. (Esther 3:2)¹⁵⁴ Haman became so furious that he vowed to kill not only Mordecai, but also all the Jewish people, and he tricked King Xerxes into agreeing to his plot. And in planning his plot, he cast lots ("purs") to determine the proper month and date on which to commit his slaughter, and it is from "purim" (the plural of "purs") that we get the name "Purim". (Esther 3:7-11)¹⁵⁵

¹⁴⁸ The story is told in full in the Book of Esther in the Bible: <https://biblehub.com/nasb/esther/1.htm>

¹⁴⁹ http://www.chabad.org/holidays/purim/article_cdo/aid/645309/jewish/What-Is-Purim.htm

¹⁵⁰ <https://www.jewfaq.org/holiday9.htm>

¹⁵¹ https://www.ancient.eu/Xerxes_I/

¹⁵² <https://www.iranicaonline.org/articles/magi>

¹⁵³ <https://www.imdb.com/title/tt0416449/plotsummary/>

¹⁵⁴ <https://biblehub.com/nasb/esther/3.htm>

¹⁵⁵ <https://biblehub.com/nasb/esther/3.htm>

Fortunately for the Jewish people who were still in Babylon and various other cities in that area, Mordecai found out about this. (Esther 4:1)¹⁵⁶ Likewise fortunate for the Jewish people was the fact that Xerxes had recently deposed his queen, Vashti, and had replaced her with a woman named Esther. Queen Esther, as it turns out, was Jewish (her Jewish name was Hadassah), and she was a cousin of Mordecai; and in fact, she had been raised by Mordecai, for her parents were dead. (Esther 1:1-2:20)¹⁵⁷

Mordecai approached Esther with news about the plot and begged her to intercede with the king on behalf of her people. (Esther 4:6-8)¹⁵⁸ This presented grave danger to Queen Esther, for by Persian law, it was punishable by death to approach the king unless one was first summoned by the king, subject only to the king's decision to release the person from the death penalty by extending to that person his golden scepter. (Esther 4:11)¹⁵⁹

This made Queen Esther hesitant to approach her husband, the king; but upon Mordecai's urging, she did so anyway, after first sending word to Mordecai that she was resigned to the fact that if she would perish for doing so, then that was simply the way it was going to have to be. The only thing she asked in return was that all of the Jewish people would fast with her for three days as she prepared to face the king. (Esther 4:15-17)¹⁶⁰

The Jewish people fasted with her, and then Xerxes did in fact allow his queen to speak to him when she came to him unsummoned. (Esther 5:1-8)¹⁶¹ She soon revealed to him the secret that she herself was Jewish, which would mean that she would be subject to being killed by Haman's plot if it were to be discovered that she was Jewish. Xerxes became enraged, and he would not stand for this. (Esther 7:1-7)¹⁶²

Thus, thanks to the courage of Queen Esther, her people were spared death, and in the purging of the kingdom which followed, Haman was hung on his own gallows, which he had built so that he could hang Mordecai (who lived). (Esther 7:8-10)¹⁶³ Haman's sons were likewise hanged. Simultaneously, the Jews were allowed to rise up against Haman's allies, and they slew large numbers of them. (Esther 8:1-9:19)¹⁶⁴

This was a liberation of the Jewish people from the jaws of death that would be unparalleled until Allied tanks and troops stormed into the Third Reich and rescued the Jewish people from the Holocaust some 2,400 years later. Queen Esther and Mordecai, by the full authority of Xerxes, then instituted the Feast of Purim to celebrate and commemorate this. (Esther 9:20- 32)¹⁶⁵ And it remains

¹⁵⁶ <https://biblehub.com/nasb/esther/3.htm>

¹⁵⁷ <http://biblehub.com/nasb/esther/1.htm>

¹⁵⁸ <http://biblehub.com/nasb/esther/4.htm>

¹⁵⁹ <http://biblehub.com/nasb/esther/4.htm>

¹⁶⁰ <http://biblehub.com/nasb/esther/4.htm>

¹⁶¹ <http://biblehub.com/nasb/esther/5.htm>

¹⁶² <http://biblehub.com/nasb/esther/7.htm>

¹⁶³ <http://biblehub.com/nasb/esther/7.htm>

¹⁶⁴ <http://biblehub.com/nasb/esther/8.htm>

¹⁶⁵ <http://biblehub.com/nasb/esther/9.htm>

an important event in Jewish culture to this day. Needless to say, it likewise would have been an important holiday for Jews living 2,000 years ago, and above all, for the descendants of those who had remained behind in Babylon, the very land where these events had taken place.

As was mentioned, Purim is further discussed in the Appendix, and therein you will find a detailed discussion of how and why we can determine that the conjunction of Venus and Saturn came during Purim in 9 B.C.

v. Venus And Pisces

With that in mind, let us look at where the sun was during Purim in 3752 (9 B.C.):



The sun in Pisces during Purim in the year 3752 (9 B.C.)

Images provided courtesy of Starry Night Education. Photograph by the author.

Here we see that the sun would be in Pisces during Purim 2,000 years ago (as is still the case today).

Now, according to ancient legend, Venus (Aphrodite, as the Greeks called her) was borne from the sea by large fishes who brought her up to the land; later on, she escaped from danger with her son (Cupid) when they were transformed into fish (specifically, the two fish which make the sign Pisces) and they plunged into the sea.¹⁶⁶ And as we have seen, the Persian goddess Anahita was associated with not only the moon but also with Venus and with the river. And as we have likewise seen, the virgin (the constellation Virgo) appeared to rise up out of the river at sunset (as

¹⁶⁶ <http://www.stellardays.com/Signs/Pisces.aspx#page=Myth>

seen from the west bank of the Euphrates) and then plunge back into near sunrise (as seen from the east bank), thereby fulfilling in a single night these two aspects of the story of Venus rising up out of the water and then plunging back into it. So the fact that the sun was in Pisces at this time, combined with Virgo rising up out of the river and then plunging back into it as the full moon moved from the area of the womb into the birth canal, may have been yet another reason for the Magi in Babylon to believe that the signs which they were seeing in the heavens that night in 9 B.C. pertained not only to fertility (the birth of a child), but also to the Jewish people specifically, since the people of Babylon did associate the Jewish people with Pisces, as we have seen.

vi. The Position Of Saturn And The Fall Of Babylon

As was noted previously, during the latter part of the Jews' captivity in Babylon, the Persians overthrew the Babylonians and ruled over the Jews for the remainder of their captivity in Babylon. With respect to that, two things are worth noting here. First of all, although the Babylonians believed in taking their conquered subjects out of their homeland (which they did to the Jews),¹⁶⁷ the Persians held the opposite view. They believed in leaving their conquered subjects in their own homeland.¹⁶⁸

This would come into play when the Persians, after having conquered the Babylonians and occupying their land, decided to release the Jews from their captivity and allow them to go back to Israel.¹⁶⁹ Bear in mind then, that without the Persian overthrow of the Babylonians, the return of the Jewish people to their homeland might never have happened. So the Persian conquest of the Babylonians is of immense importance to the Jewish people generally, and to the eventual fulfillment of Jewish prophecies by Jesus specifically. For without the Persian conquest, how would the Jews' exile in Babylon have ever ended? And if the Jews did not go back to Jerusalem, then how could Jesus have fulfilled the prophecies about the Messiah?

Second, the position of Saturn on the night that the Persians overthrew the Babylonians during Tishri in the year 3223 (the night of October 11th, 539 B.C.)¹⁷⁰ is strikingly close to where Saturn was during Purim in the year 3752 (March 7th and 8th, 9 B.C.). This by itself would be uncommon, for Saturn takes over twenty-nine years to go around the sun once and come back to the same position in the sky.¹⁷¹ See the following photos:¹⁷²

¹⁶⁷ <http://www.ucg.ca/booklets/bible-and-archaeology-part-2/downfall-judah-exile-babylon>

¹⁶⁸ <https://tavaana.org/en/content/cyrus-great-and-religious-tolerance>

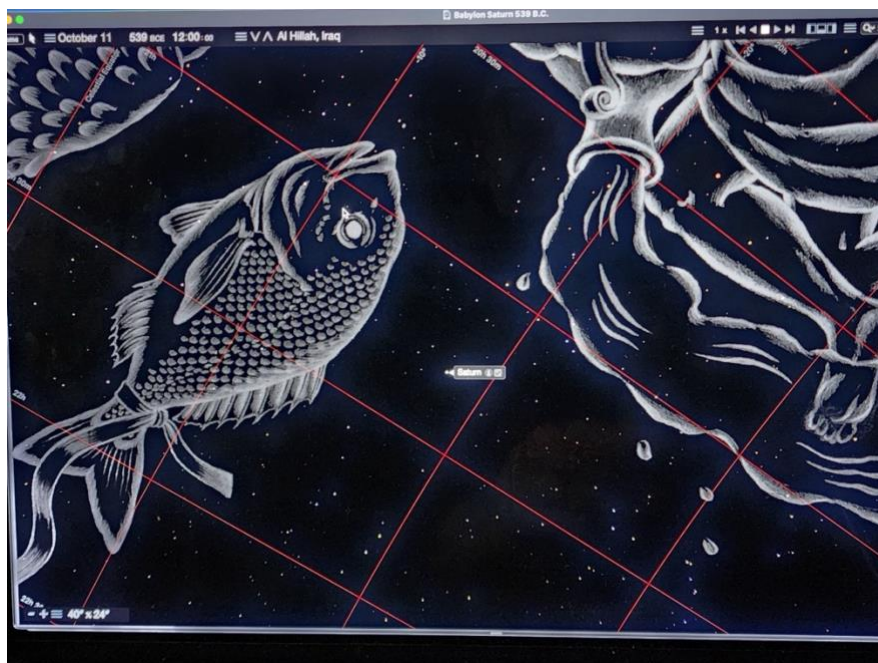
¹⁶⁹ https://www.newworldencyclopedia.org/entry/Babylonian_Exile

¹⁷⁰

https://books.google.com/books?id=1zi2i_C1aNkC&pg=PA352&lpg=PA352&dq=babylon+per%20sia+16+tasritu+october+539&source=bl&ots=DaKt42gnRh&sig=bnK0ThnqsBxB4ryfwqJ8%20Q7-1PE&hl=en&sa=X&ved=0ahUKEwjP-%20NHf7YrZAhW10YMKHXBTC0Q6AEIKTAA#v=onepage&q=babylon%20per

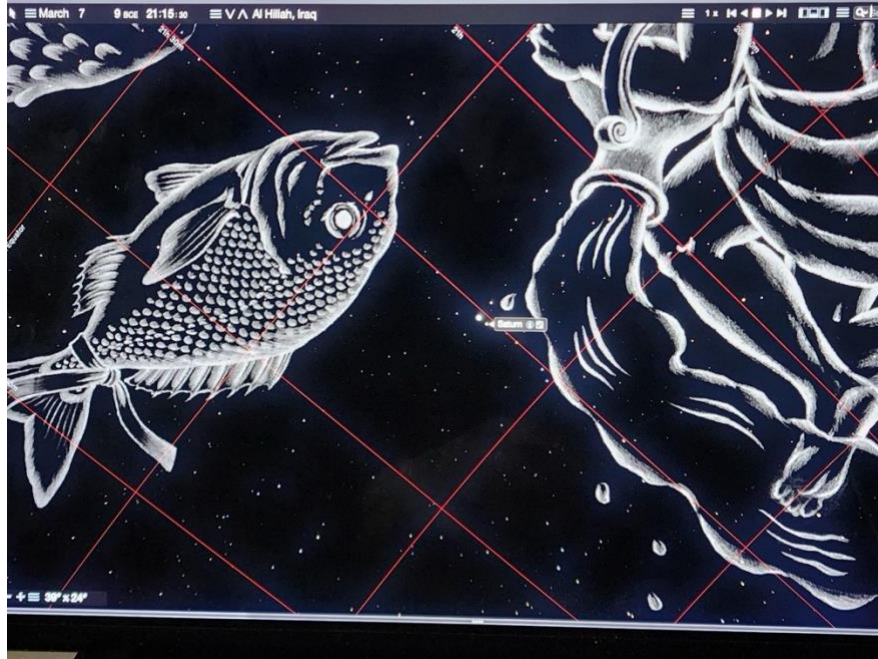
¹⁷¹ <https://solarsystem.nasa.gov/planets/saturn/overview/>

¹⁷² Delta T 614 for each event during March of 9 B.C. (by interpolating the Delta T between NASA'S lunar eclipse catalog numbers 04800 and 04801): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE. For October of 539 B.C. I used the



Saturn on October 11, 539 B.C., when Babylon fell.
Images provided courtesy of Starry Night Education. Photograph by the author.

Starry Night option for setting Delta T according to the 6.3.3 version (similar to the 6.3.9 version, which I originally used) because the year of this event, 539 B.C., is outside of the range of the years affected by the computer discrepancy (*i.e.*, 500 B.C. to 500 A.D.), which is discussed in detail elsewhere.



Saturn on March 7, 9 B.C.

Images provided courtesy of Starry Night Education. Photograph by the author.

In essence, Saturn of 3752 (9 B.C.) was having a quasi-conjunction with Saturn of 3223 (539 B.C.). Now, to appreciate the extent to which their positions were in common with each other, let us briefly consider the concept of a celestial orb. A celestial orb is the distance around a celestial object within which certain ancient civilizations deemed the object to exert its influence. For Saturn, this was generally considered to be about 9 to 15 degrees.¹⁷³

As it turns out, the distance between Saturn's position in 3752 (9 B.C.) is separated from the position of Saturn in 3223 (539 B.C.) by only about five degrees.¹⁷⁴ So in terms of Saturn's orb, these two positions were each within the influence of Saturn (according to ancient thought) at its other appearance, albeit at two different times.¹⁷⁵

More specifically, the positions of Saturn in 3223 (539 B.C.) and 3752 (9 B.C.) were both along the eastern edge of the constellation Aquarius, the so- called water carrier. This is a matter of particular relevance in Jewish history, for it has particular relevance with respect to the Persians' conquest of Babylon while many of the Jewish people were still present there.

¹⁷³ <http://zoroastrianastrology.blogspot.com/p/astronomy.html>

¹⁷⁴ In between these two dates, Saturn would have completed nearly 18 complete orbits around the sun. (A year on Saturn---10,759 earth days---is just over 29 earth years: <https://solarsystem.nasa.gov/planets/saturn/overview/> .)

¹⁷⁵ What is likewise interesting is to consider (just as a sidenote) is that on the night that Babylon fell, it was the case that Mars, the Babylonian (and Roman) god of war--- <http://www.idolphin.org/Nimrod.html>, <https://www.learnreligions.com/mars-roman-god-2562632>---had just entered into the orb of Saturn, where it would remain for about a month and a half, something which perhaps may have influenced the assessment of the Persian king, King Cyrus, as to what the proper timeframe would be for attacking Babylon.

The details of the overthrow of Babylon by the Persians make for a fascinating study all by themselves. For instance, it is from the account in Chapter 5 of the Book of Daniel in the Bible, describing events which took place when the Persians overthrew the Babylonians in a single night, that we get the famous phrase, "The handwriting is on the wall."¹⁷⁶ That modern saying of ours is not an exact quote from the Bible, but it does generally reflect what the Bible says about one of the events of that evening, nonetheless.

It is also the case that the famous handwriting on the wall itself, the Hebrew words *mene, mene, tekel, upharsin*, may be represented by certain signs in the heavens which were present that night. So I do recommend reading about the events of that night; but those points are at least somewhat off-topic, and so I have placed them in the Appendix. (In the Appendix find THE CELESTIAL ASPECTS OF THE FALL OF BABYLON AND CHAPTER FIVE OF THE BOOK OF DANIEL.) Suffice it to say here in the text that both positions of Saturn in this quasi-conjunction with itself probably would have had significant meaning for any Magi in Babylon who were Jewish, which we shall consider at this point.

Now, it's possible that at least some of these details might have escaped the notice of even trained Magi. But as I pointed out previously, certainly any Hebrew Magi, at least, would have had more than ample reason to search the heavens in meticulous detail during this time for signs of the coming Messiah. So I think it is not too much to believe that any Magi who were Jewish and living in Babylon at the time would have probably noticed at least many of these signs which I have pointed to here in the text, and quite possibly all of them, including perhaps the connection with the night when Babylon fell to the Persians (which, as I said, I discuss in the Appendix).

In any event, they certainly would have to have noticed that the events which they saw in 3752 (9 B.C.) took place during Purim. And I think it quite likely that any of these signs which Jewish Magi living in Babylon may in fact have noticed would have contributed to the development of their belief that heaven itself, over the next several years, was signifying that the liberation of the Jewish people by the birth of the Messiah was drawing nigh.

c. The Significance Of The Year 3752 (9 B.C.) Itself On The Hebrew Calendar

As we noted earlier, the year which we shall consider as being the most likely for the birth of Jesus is 3759 (2 B.C.); and that year, apparently, was a *shemita* year. The thing is then, if 3759 (September of 3 B.C. to September of 2 B.C.) was a *shemita* year, then seven years earlier, the year 3752 (September of 10 B.C. to September of 9 B.C.) was also a *shemita* year. And to any Magus who was a Hebrew, the fact that a whole cascade of events in the heavens pointing to the birth of the King of the Jews started with events in one *shemita* year (*i.e.*, the conjunction of Jupiter with Venus in January of 9 B.C.) and then apparently came to a head and pointed to His birth itself seven years later---likewise during a *shemita* year---is something which would probably have gotten the attention of any Hebrew Magus.

¹⁷⁶ <https://idioms.thefreedictionary.com/the+handwriting+is+on+the+wall>

d. A Lesson For Researchers To Learn From All Of This

All that being said, let us pause a moment to consider another point which should be addressed here as well. Namely, consider for a moment the fact that outside of this book, this conjunction of Venus and Saturn is not discussed commonly (if at all) with respect to the Star of Bethlehem. Apparently, that is because no one else has noticed the many connections which we have just looked at or their significance with respect to Jewish culture, connections which may have been perceived by the Magi (particularly Jewish Magi in Babylon).

Yet, with today's understanding of planetary motion, this information has been there for all of us to see for years now, with all of its hidden attributes which may have influenced the Magi in their thinking about the heavens pointing to the upcoming birth of the King of the Jews, and which I think probably did in fact influence their thinking in that respect; however, as Larson has pointed out, it is only now, in the day and age of personal computers, that mining the heavens for this data has become practical. What this shows us then, is that it may be the case that when one is doing research on any given topic, a great wealth of information may lie in wait, ready to be discovered by anyone who will scratch the surface to see what lies beneath. And that is an important point for researchers in any topic to keep in mind at all times.

2. The Triple Conjunction Of Jupiter And Saturn From June To
December Of 7 B.C.

As can be seen on Starry Night, a triple conjunction (*i.e.*, a series of three conjunctions) of the planet Jupiter with the planet Saturn took place from June 4, 7 B.C. through December 13, 7 B.C. Now, in order to understand what a triple conjunction is, we will first have to learn about a phenomenon which astronomers call retrograde

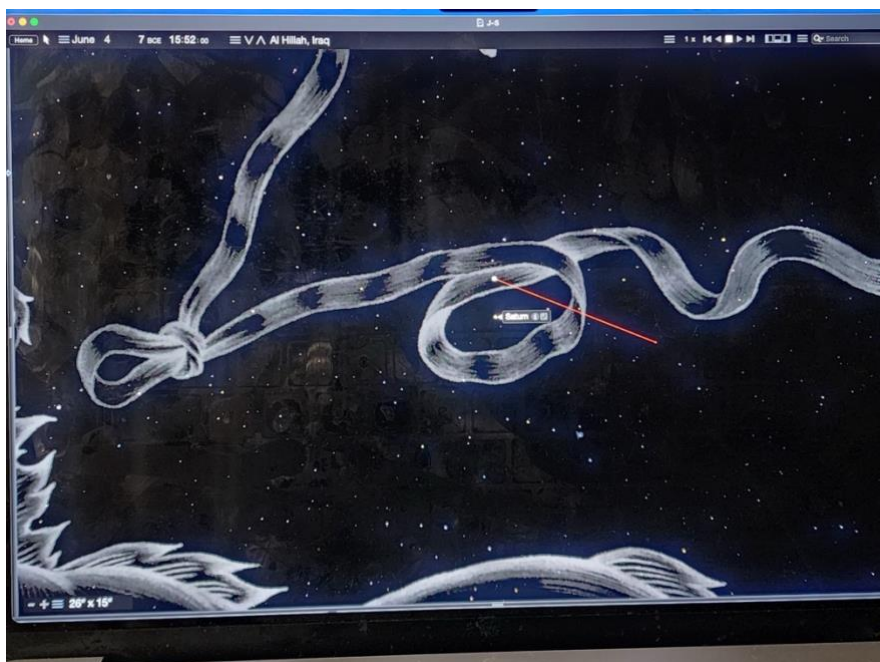
(pronunciation:

<https://dictionary.cambridge.org/us/pronunciation/english/retrograde>) motion.

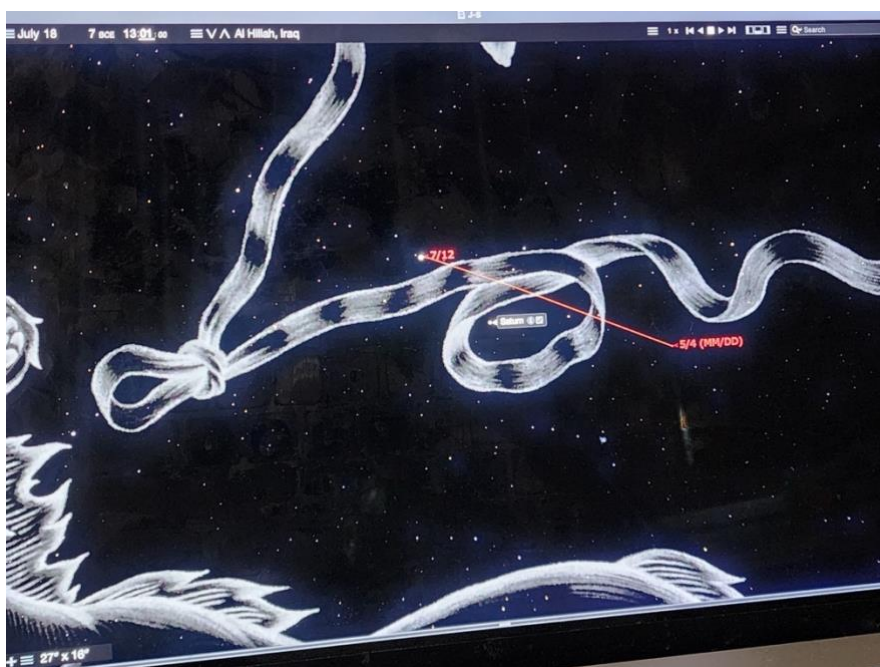
a. Retrograde Motion

The strange phenomenon of a planet seeming to move forward, then slowing down, then stopping, then moving backward (first slowly, then quickly), then slowing down and stopping a second time, and then resuming its normal forward motion against the background of stars pertains to a phenomenon which astronomers call retrograde motion. A complete discussion of this phenomenon of the retrograde motion of the planets is given in the Appendix. (In the Appendix find RETROGRADE MOTION.)

Here below is a look at how Jupiter first moved past Saturn at its first conjunction of the three, when it was in normal forward (prograde) motion. (A red line shows its motion through the heavens starting from one month before this conjunction.) As the following pictures show, it then stopped and came back around when it was in retrograde motion and passed Saturn again (for its second conjunction), and then continued onward in retrograde motion until it stopped again, and returned to normal forward motion, passing Saturn yet again for its third conjunction. It did this while it was in the constellation Pisces, which, as I have pointed out, was considered by the Babylonians to be the sign of the Jew. (Note: The red line extending out from Jupiter in this first photo shows its motion against the background of stars over the course of time, starting one month before the first of the three conjunctions.)



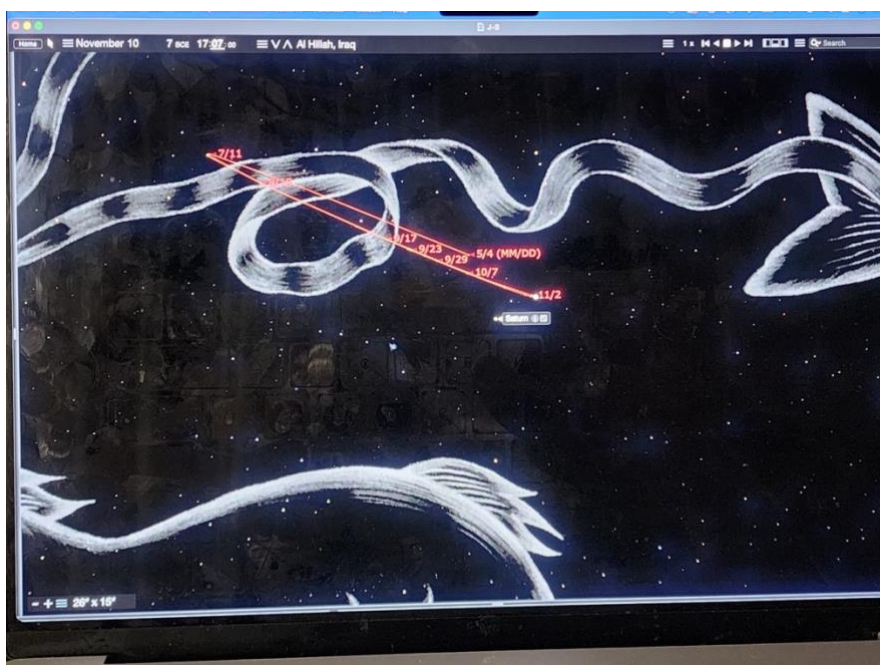
Jupiter's path in prograde motion (normal forward motion) through Pisces from May to June of 7 B.C. (along the red line, from right to left), at its first conjunction with Saturn. Images provided courtesy of Starry Night Education. Photograph by the author.



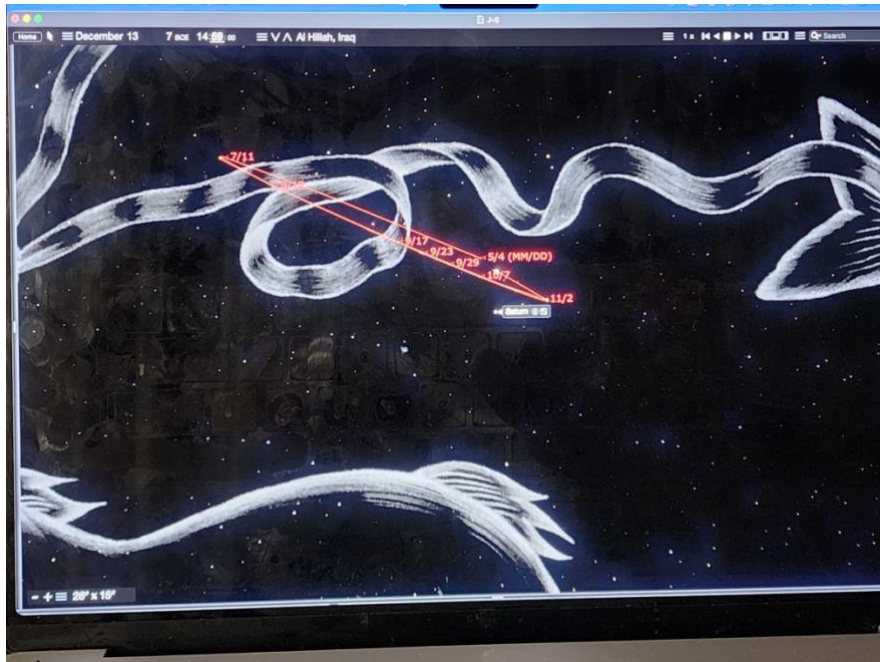
Jupiter continues on (toward the upper left) and appears to slow down and come to an apparent stop against the background of stars as it prepares to enter retrograde motion following its first conjunction with Saturn in July of 7 B.C. Images provided courtesy of Starry Night Education. Photograph by the author.



Jupiter, now in retrograde motion (the lower red line, left to right), appears to speed up as it appears to go backwards and passes Saturn again for its second conjunction in September of 7 B.C.
Images provided courtesy of Starry Night Education. Photograph by the author.



Jupiter continues on (the lower red line, toward the lower right), still in retrograde motion, and it again appears to slow down and stop as it prepares to leave retrograde motion and return to normal forward (prograde) motion after its second conjunction with Saturn in November of 7 B.C.
Images provided courtesy of Starry Night Education. Photograph by the author



Jupiter, having returned to normal forward (prograde) motion (the middle red line, right to left), appears to regain speed and passes Saturn yet again for its third conjunction in December of 7 B.C. Images provided courtesy of Starry Night Education. Photograph by the author.

Now, as some planetarium shows have pointed out over the years, as Jupiter moved past Saturn three times, it appeared (from the northern hemisphere) to form a crown over Saturn. Planetarium shows and Larson have also made that same comment about the triple conjunction of Jupiter with the star Regulus which followed a few years later, which we shall likewise consider shortly.

What is more, not only was it rare for there to be a triple conjunction of Jupiter and Saturn in Pisces, but in fact, as can be seen on Starry Night, this was the first triple conjunction of Jupiter with Saturn in Pisces since 980 B.C. Apparently, that was prior to the time that the Magi class of priests arose,¹⁷⁷ so the Magi at the time of Jesus might not have even known about any triple conjunction of Jupiter and Saturn in Pisces in the entire history of the human race other than the one they were looking at in 7 B.C.

Such was the state of affairs in the heavens at that time. And as we shall now see in this next part, that was followed a few years later by signs which pointed to the birth of Jesus, starting with signs which pointed to the announcement of His upcoming birth by the Archangel Gabriel.

¹⁷⁷ <https://www.iranicaonline.org/articles/magi>

PART TWO

FROM THE ANNUNCIATION TO THE BIRTH OF JESUS

In order to understand some of the important points about the topics which we shall next consider, it will be extremely important to understand how the Hebrew calendar works. And so for that reason, I shall cover that issue here in the text rather than relegate it to the Appendix.

I. The Workings Of The Hebrew Calendar

In light of the fact that one or more of the Magi may have been Hebrews, we must understand that if we look at the things in the heavens only from a contemporary (gentile) sense of timing, we might misinterpret the events which the Magi may have observed, or we might miss certain points altogether. With that in mind, let us now look at how the timing of various events in the heavens 2,000 years ago corresponded to the Hebrew calendar.

Allow me to begin our discussion of the Hebrew calendar by first taking a quick look at society's modern secular calendar. First of all, the modern secular calendar is a strictly solar calendar. The version which society uses today was initiated in 1582 A.D. by the Roman Catholic Church pursuant to a decree issued by Pope Gregory XIII, and so it is known, as was mentioned above, as the Gregorian calendar.¹⁷⁸ It is a modified version of the Julian calendar, which was developed by Julius Caesar in 46 B.C. and then initiated on January 1, 45 B.C.¹⁷⁹ The Gregorian calendar seeks to keep track of the years and the days of the years through precise measurements of Earth's revolving around the sun and also by adding a leap day (during leap years) according to a fixed schedule, which is just slightly different for the schedule of leap years on the Julian calendar; and that is, in fact, the main point of difference (though not the only difference) between the Julian calendar and the Gregorian calendar.

The Hebrew calendar, by contrast, is a lunar-solar calendar.¹⁸⁰ It keeps track of the years and the days of the years principally by keeping track of the moon's monthly rotation around the Earth, but with corrections added from time to time by variations in the length of a month and also by adding, during leap years, as much as a whole extra month, if need be. This is because the orbit of the moon around the Earth cannot be precisely correlated to the orbit of the Earth around the sun in any one, given year, and eventually this discrepancy adds up to the point that, from time to time, an extra month, or sometimes a day or two, must be added to a Hebrew year.

The principal unit of the Hebrew calendar, like the principal unit of the Gregorian calendar, is the month. Since the Bible commands the Hebrews to observe certain feast days on specific days of certain months, it is of great importance generally to know when it is that any given month begins. More specifically, with respect to the topic of this book, it is the case that certain events in

¹⁷⁸ <https://www.britannica.com/topic/Gregorian-calendar>

¹⁷⁹ <https://www.britannica.com/science/Julian-calendar>

¹⁸⁰ <https://jewfaq.org/calendar.htm>

the heavens (as we shall see) do in fact take on a deeper meaning when considered in light of the feast days on the Hebrew calendar during which they occurred.

A. The Two Ways Of Ascertaining The Start Of A Hebrew Month

1. The Eyewitness Testimony Method

Throughout the history of the Jewish people there have been two main ways of determining the beginning of a Hebrew month. The original method was by the sanctification of a month by a religious court (the Sanhedrin) pursuant to the court's acceptance of eyewitness testimony.¹⁸¹ The witnesses (if any) would appear before the court if they thought they had seen the crescent new moon above the western horizon following sunset the evening beforehand, and they would tell the court what they believed they had seen. Traditionally, it was the sighting of the crescent new moon which would mark the beginning of the first day of any new month.

Now, in common understanding, a Hebrew day begins at sunset on one day and continues until the following sunset¹⁸² (although some have said that in earliest times, a Hebrew day might have begun at sunrise).^{183, 184, 185, 186, 187} Regardless of what may have been the case in earliest times, at the time of Jesus, a day was deemed to begin at sunset. (See Luke 23:50-54.)¹⁸⁸ So within this book, we shall deem each Hebrew day to begin at sunset and end at the following sunset. That being the case, the first day of a new month would begin at the sunset which would have taken place just minutes before the crescent new moon would first be sighted. If the court accepted the testimony of two witnesses who said that they had seen the crescent new moon, the court would sanctify the new month and declare that the new month had begun.¹⁸⁹

The reader may find it to be helpful to consider this method of determining the start of a month in more detail, and so I recommend that in the Appendix you find the section entitled THE DETAILS OF THE EYEWITNESS TESTIMONY METHOD OF DETERMINING THE START OF A HEBREW MONTH.

2. The Modern Method Of Rabbi Hillel II

In the year 4119 (358/359 A.D.), a change in how the months could be sanctified had to be made. The Roman government started making it harder and harder for the Sanhedrin to conduct its business of hearing testimony regarding the first sighting of the crescent new moon, and then

¹⁸¹ http://www.chabad.org/library/article_cdo/aid/526874/jewish/The-Jewish-Month.htm

¹⁸² http://www.chabad.org/library/article_cdo/aid/526873/jewish/The-Jewish-Day.htm

¹⁸³ http://jbqnew.jewishbible.org/assets/Uploads/362/362_day.pdf

¹⁸⁴ <https://judaism.stackexchange.com/questions/47635/is-there-really-evidence-that-the-rabbis-changed-the-days-beginning-from-sunris>

¹⁸⁵ <http://www.isawthelightministries.com/daystarts.html>

¹⁸⁶ <http://barnabasnagy.com/blog/evening-to-evening-pagan-babylonian-pharisaical-day-reckoning>

¹⁸⁷ <http://www.12hoursabbath.com>

¹⁸⁸ <http://biblehub.com/nasb/luke/23.htm>

¹⁸⁹ http://www.chabad.org/library/article_cdo/aid/526874/jewish/The-Jewish-Month.htm

sanctifying a new month on that basis. So at that time, under the leadership of Rabbi Hillel II,¹⁹⁰ who was then the Nasi (prince, or president) of the Sanhedrin,¹⁹¹ certain scholarly rabbis, through great research and study, overcame the problems associated with using calculations for ascertaining when a new moon would occur, and they came up with a new way (the second way) of determining when a month would begin. They did it by developing a precise mathematical formula that is believed to be a system which will be accurate going all the way out to the Hebrew year 6000 (2239/2240 A.D.).¹⁹² And that is the system which we do use today to determine the beginnings of Hebrew months generally, and the start of the Jewish new year specifically.

It is an amazingly accurate system, especially given the absence of a knowledge of modern physics and the lack of sophisticated technology (such as telescopes) which the rabbis had available to them back then. It is in fact highly accurate at predicting the precise moment when each new moon will occur (*i.e.*, the *molad* of the new moon).¹⁹³

As it turns out, it is in fact this great precision itself which can produce, paradoxically, some peculiar results when we look back at earlier years, before this system was developed, as we attempt to ascertain when it was that various months and Jewish holidays would have been observed in antiquity. For the modern method can accurately predict the actual beginning of a month, even in looking back to ancient times, on a day when the moon would have been so thin of a crescent, and would have appeared so close to the sun in the evening sky, that it could not have been seen by anyone without modern optics (and sometimes, perhaps not even then).

We must keep this in mind whenever we look at calendars which purport to show when it was that various months began and when each new year began during times before the initiation of this mathematical calculation method, a method which, as I say, was developed under Hillel II three and a half centuries after Jesus was born. For the people living 2,000 years ago certainly could not have taken advantage of this excellent system prior to the time that it came into existence. And so, the marking of the beginning of any month or year back then could have been ascertained only by the eyewitness testimony method, and not by the formula developed later under Rabbi Hillel II.

Now, this is not to suggest that the method developed by Rabbi Hillel II is a faulty method of determining the start of any given month. In fact, the exact opposite is the case. Rather, it's just to say, for emphasis, that people living before its development could not possibly have taken advantage of it and its great accuracy. And so, in ancient times, the days on which they may have marked the start of any given month, and on which they would have celebrated certain holidays, might have been different than the days that would have been chosen to observe these events if they had had this mathematical formula available to them. Keep in mind as well the fact that Hillel II never intended for this system to be used for looking backwards in time, anyway.

¹⁹⁰ <https://www.geni.com/people/Hillel-II-Nesiah-President-of-the-Sanhedrin/6000000010960425904>

¹⁹¹ <https://www.mayimachronim.com/an-eye-opening-history-of-the-sanhedrin/>

¹⁹² http://www.artscalendararticles.mysite.com/blank_1.html

¹⁹³ http://www.chabad.org/library/article_cdo/aid/216238/jewish/Molad-Times.htm

Fortunately, today we have computers which can show us how the sky looked in ancient times. As was mentioned at the beginning of the book, I have used the computer program known as Starry Night (a later version of the one which Rick Larson also used) for my own research. This computer program allows us to see where the crescent new moon would have been with respect to the sun and the horizon for the start of each month as seen from Jerusalem (or from any other location) around the time when Jesus was born. In some cases, this computer program will clearly affirm the start date for certain months as being the same under either the testimony method or under the calculation method.

In some other cases, by contrast, this computer program will clearly show that the people living in ancient times could not have seen the crescent new moon (due to the glare of early evening twilight) on the day that the calculation method would indicate that the new month would have begun. In such cases, since only the eyewitness testimony method was available for ascertaining the start of any given month in ancient times, we can know that the calculation method is not giving us the true, actual date on which the ancient Israelites themselves could have first seen the crescent new moon, and which therefore would have marked the start of a new month or year in antiquity.

In some cases, however, it will be a close call. For the computer graphics cannot show the same degree of subtlety of shades of light and dark, and of colors, which the human eye can perceive. Plus, smoke, dust, haze, or even clouds could have hampered observation attempts at any given time, and in light of this, we would have no way of knowing today with certainty as to just exactly how the sky might have looked on any particular evening back then.

On that note, allow me to refer you to the subsection of the Appendix entitled When Can The Crescent New Moon First Be Seen With The Unaided Eye? I encourage the reader to read that section, for I shall refer back to it later on in this book. But for the moment, let us next look at the two ways of determining the start of a Hebrew new year.

B. The Two Ways Of Determining The Start Of A Hebrew New Year

The original method of marking the start of a year in Hebrew culture is given in the Bible. The other method was developed many years later.

1. The Biblical Method Of Determining The Start Of A Hebrew New Year

The Bible says that the month which we now call Nisan¹⁹⁴ (and which the Bible, in Deuteronomy 16:1, calls the month of Abib,¹⁹⁵ or Aviv¹⁹⁶) is to be the first month for the counting of months. (Exodus 12:2)^{197, 198} The month of Nisan occurs during spring. The Jewish holy day of Pesach

¹⁹⁴ https://www.chabad.org/library/article_cdo/aid/2164005/jewish/Nisan.htm

¹⁹⁵ <http://biblehub.com/kjv/deuteronomy/16.htm>

¹⁹⁶ <http://biblehub.com/niv/deuteronomy/16.htm>

¹⁹⁷ <http://biblehub.com/kjv/exodus/12.htm>

¹⁹⁸ https://www.chabad.org/library/article_cdo/aid/3921740/jewish/The-Jewish-Month.htm

(Passover), I should note, is celebrated during Nisan.¹⁹⁹ Jews today still refer to the month of Nisan as the first month.²⁰⁰

2. The Post-Exile Method Of Determining The Start Of A Hebrew New Year

Rosh Hashanah is the second way of marking the start of a year in Jewish culture, and it is, of course, the more well-known way (and the modern way) of doing so. In fact, however, as a technical matter, Rosh Hashanah is actually the modified Jewish new year. Prior to the Babylonian Captivity,²⁰¹ the Jews did not celebrate the start of the new year in the same way as is done now, near the start of autumn, and simply considered the first day of Nisan (the first month) to be the first day of the new year. During the Captivity, the Jews took up the practice of observing the new year twice, as the Babylonians themselves did: once in the spring (pertaining to one annual cycle of harvesting, as the Jewish people themselves did at that time), and then again around the start of autumn (pertaining to a second annual cycle of harvesting).

The Jews also took up the practice of giving the names of each of their months a Hebrew variation of the names for the months of the Babylonian calendar, and those names are still in use in Jewish culture today. Prior to the captivity, only four of the months---the first month, Aviv/Abib, now known as Nisan; the second month, Ziv, now known as Iyar; the seventh month, Eitanim, now known as Tishri/Tishrei; and the eighth month, Bul, now known as Heshvan/Chesvan/Marchesvan--had a name, and all the other months were simply referred to by number; and at that, the named months have been commonly referred to by their number anyway.²⁰² Furthermore, the holiday now known as Rosh Hashanah was originally called Yom Teruah: the Day of Shouting, or the Day of Blasting ("the Feast of Trumpets").^{203, 204} See a website known as Nehemia's

Wall for a further discussion of this: <https://www.nehemiaswall.com/yom-teruah-day-shouting-became-rosh-hashanah> .

Now, as we have already noted, under the eyewitness testimony method of determining the start of a month, it would not be possible to know for certain in advance as to when any given new month would begin. With respect to any holiday which comes sometime after the start of a month, this would not be a problem; for once the start date of the month had been determined, there would be time to make adjustments in one's schedule in order to observe the holiday on time.

If the holiday took place on the first day of a month, however, one could not possibly know

¹⁹⁹ https://www.chabad.org/holidays/passover/pesach_cdo/aid/871715/jewish/What-Is-Passover-Pesach.htm

²⁰⁰ http://www.chabad.org/library/article_cdo/aid/526874/jewish/The-Jewish-Month.htm

²⁰¹ <https://www.jewishencyclopedia.com/articles/4012-captivity>

²⁰² http://www.chabad.org/theJewishWoman/article_cdo/aid/987524/jewish/Why-Babylonian-Names-for-Jewish-Months.htm

²⁰³ <https://www.learnreligions.com/feast-of-trumpets-700184>

²⁰⁴ See also: <https://www.jpost.com/opinion/op-ed-contributors/why-is-rosh-hashana-in-the-autumn>

in advance when the start of the observance of the holiday might be. For even if it would be considered highly probable that the month of Elul, for example (which is the month which occurs just before Rosh Hashanah), would be a 29-day month in a given year, clouds could obscure the western horizon at the end of the 29th day, making it impossible to see the crescent new moon at that time. And this would result in Elul being deemed a *malei* (30-day) month when really it should have been deemed to be a *chaser* (29-day) month instead. So how would one know for certain as to just exactly when to plan for the start of Rosh Hashanah/Yom Teruah, which begins on the first day of the seventh month, Eitanim/Tishri (*i.e.*, the month after Elul)?

A web site known as Chabad.org points out that the way the rabbis traditionally dealt with this problem was to make Rosh Hashanah a two-day holiday (although in the Bible, the Law of Moses itself requires only one day). That way, if the crescent new moon were to be spotted on the first day of Rosh Hashanah, this would be considered to be the fulfillment of the Torah (Biblical) requirement of when to mark the holiday, and the continued observance of the holiday on the second day of Rosh Hashanah would be deemed to be the fulfillment of a rabbinical obligation to continue the celebration of the holiday. However, if the crescent new moon were to be spotted on the second day of Rosh Hashanah, then the observance of Rosh Hashanah on the second day would be considered to be the fulfillment of the Torah obligation to mark the holiday, and the observance of the holiday on the first day of Rosh Hashanah would then be deemed retroactively to be the fulfillment of the rabbinical obligation to mark the holiday.²⁰⁵ Yet another web site points out that the holiday may have become a two-day holiday in part due to the difficulty in informing the Jews who remained behind in Babylon after the Captivity ended just exactly when it was that the new moon had been spotted in Jerusalem.²⁰⁶ Technically, one might still think of Rosh Hashanah as being a two-day holiday, although as a practical matter, Jews today commonly observe only the first day of that holiday. In any event, the first day of Rosh Hashanah is the first day of the month of Tishri.

II. The Signs In The Heavens Of August And September Of 3 B.C.

As we draw closer now to the time of Jesus' birth, we shall next turn our attention to certain events which may have marked the Annunciation and also the conception of Jesus in the heavens. The Annunciation, as noted previously, is a Christian term referring to the announcement by the Archangel Gabriel to Mary that she would be the mother of the Messiah,²⁰⁷ and we shall begin our study of that event with a look at something which took place in the heavens immediately prior to the Annunciation. Then we shall look at signs which I believe took place during the Annunciation itself.

A. The Conjunction Of Venus And Jupiter In August Of 3 B.C.

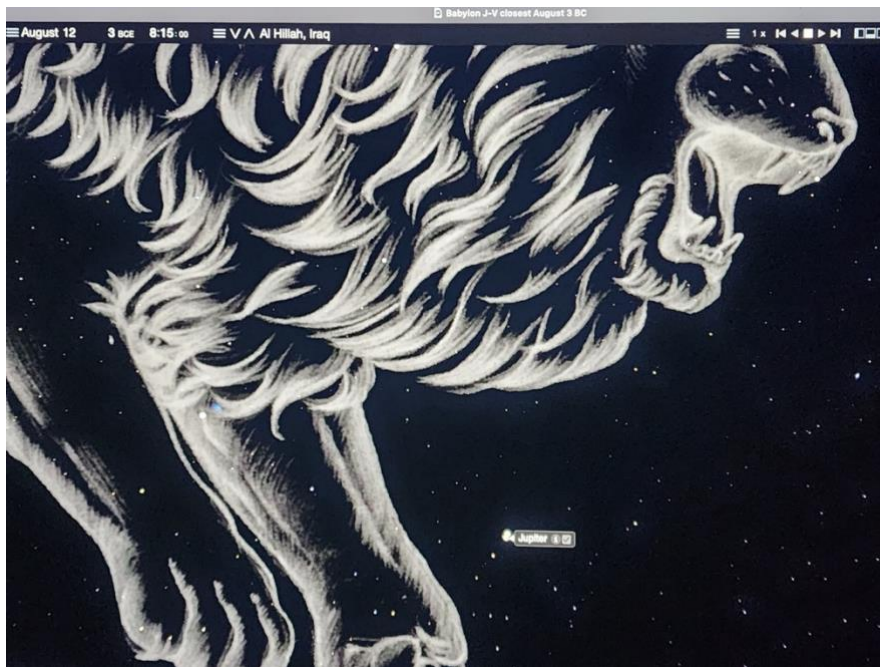
²⁰⁵ https://www.chabad.org/library/article_cdo/aid/4381/jewish/Why-Rosh-Hashanah-Is-Two-Days.htm

²⁰⁶ <http://www.interfaithfamily.com/holidays/rosh hashanah and yom kippur/Rosh Hashana h The Jewish New Year.shtml>

²⁰⁷ <https://www.merriam-webster.com/dictionary/annunciation>

Relatively little seems to have taken place in the heavens between the end of the triple conjunction of Jupiter with Saturn in 7 B.C. (referred to in the section above) until August of 3 B.C. But at that point, things started to heat up again, as one might expect; for as we saw earlier, based on what the Bible says about how old Jesus was when His earthly ministry began, and based on what we know about when He died, the timeframe for His birth would most likely be anywhere between 4 B.C. and 2 A.D., with His conception perhaps coming as early as late in the year 5 B.C. With that in mind, we should examine the extremely close conjunction of Venus (the mother) and Jupiter (the king) in August of 3 B.C., for it might hold special interest for us.

The conjunction itself took place on August 12, 3 B.C. The actual closest apparent approach of these two planets, was at about 8:15 UTC, which was about 25 minutes after the conjunction itself took place, at 7:51 UTC:²⁰⁸



Jupiter and Venus on August 12, 3 B.C (with daylight removed) at their closest approach, as seen from Babylon. Venus, the white dot on top of Jupiter, is virtually merged with Jupiter.

Images provided courtesy of Starry Night Education. Photograph by the author.

This was during daylight as seen from either Israel or Babylon, making the conjunction with Jupiter impossible to see from either of those locations. But as was noted earlier, the Magi would have had sufficient knowledge of astronomy to be capable of knowing that this conjunction would be taking place nonetheless. On that note, I again refer the reader to the section of the Appendix entitled HOW ANCIENT PEOPLE COULD HAVE KNOWN THAT CELESTIAL EVENTS WHICH THEY COULD

²⁰⁸ Delta T 548 for all observations in the month of August, 3 B.C. (as determined by the Delta T at NASA's lunar eclipse catalog number 04818): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPANCY AND OUR LADY OF GUADALUPE

NOT SEE WOULD BE TAKING PLACE.

As we can see in this photo, when we eliminate the glare of daylight, we can see that this conjunction was so close that if one had in fact been able to see the two planets, there would only have been the tiniest amount of space (about one-fifteenth of a degree; *i.e.*, about four minutes of arc) between the two planets when they reached their closest point. That being the case, the Magi might not have known for certain whether the two planets (if anyone could have seen them) would have appeared to merge together (and indeed, they almost would have appeared to do so anyway). In any case then, this conjunction probably would have at least caught the Magi's attention.

The fact that this took place in August is of potential significance, for in any given year, certain days in the month of August might fall within the Hebrew month of Av or in the month of Elul. Each of these months has a special place in Hebrew culture. The month of Av, for instance, is when the Babylonian forces under King Nebuchadnezzar overran the defenses of Jerusalem and destroyed Solomon's Temple. Specifically, that was done on the 9th of Av (Tisha B'Av) in the year 3175 (586 B.C.). And so, principally for this reason, as well as other bad things which happened on Tisha B'Av throughout the years, the month of Av is considered to be the most sorrowful month of the Jewish year.^{209, 210}

As can be determined from the perspective of the eyewitness testimony method of determining the start of a month (as illustrated by Starry Night), the month of Av began that year at sunset on July 13th. For even though some might say that it began at sunset on the 12th, that could only be said if one were to use the method of determining the start of a month which was established by Rabbi Hillel II three and a half centuries later.

On July 13th of 3 B.C. the crescent new moon was in the constellation Leo, which was just above the western horizon in the evening sky (as was commonly the case during July back then for Leo, and likewise today). As mentioned before, Leo (and the brightest star thereof: Regulus) was associated with royalty in the ancient world,^{211, 212, 213, 214} and Leo was also associated by many with the Jewish people.²¹⁵

²⁰⁹ <https://www.oneforisrael.org/holidays/tisha-bav-acquainted-with-the-bitterest-grief/>

²¹⁰ <https://www.jewishvirtuallibrary.org/the-first-temple-solomon-s-temple>

²¹¹ <https://www.star-facts.com/regulus/>

²¹² <https://www.ancient-symbols.com/persian-symbols.html>

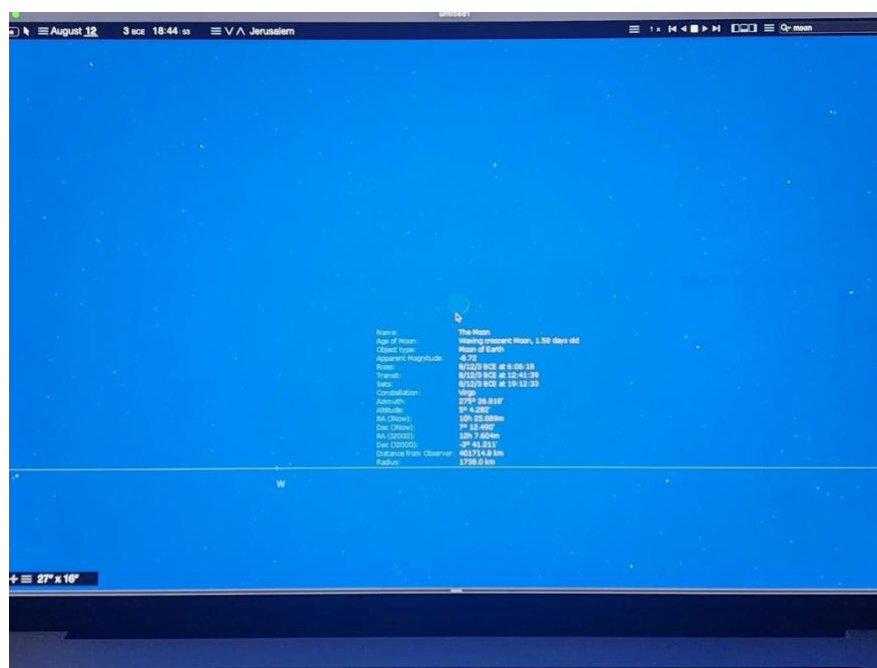
²¹³ <https://www.space.com/5182-leo-lion.html>

²¹⁴ <https://www.star-facts.com/regulus/>

²¹⁵ <https://religionfacts.com/lion-judah>

That being said, let us now consider what day it was on the Hebrew calendar which corresponded to the daylight hours of August 12th that year, when the extremely close conjunction of Jupiter and Venus took place. The daylight hours of August 12th came twenty-nine days after the daylight hours of the 1st of Av (the daytime hours of July 14th). This means that the daylight hours of August 12th were either on the 30th of Av or on the 1st of the following month, Elul, depending on whether Av in that year had 30 days or not.

As we can see from Starry Night, in that year, the month of Elul would have begun at sunset on August 12th, when the moon was just over one and a half days old:



The crescent new moon just above the horizon in evening twilight on August 12, 3 B.C.
Images provided courtesy of Starry Night Education. Photograph by the author.

So this conjunction took place on the 30th day of Av. And yet, as is discussed in the Appendix,²¹⁶ when one month is 30 days long on the Hebrew calendar, the 30th day of that month isn't just a day within that month itself. Rather, it also shares in a significant way with the upcoming month; for in such situations, the 30th day is also considered to be the first day of a two-day Rosh Codesh²¹⁷ of the following month. This means that in that year, August 12th took part in a significant way in

²¹⁶ In the Appendix again find: THE DETAILS OF THE EYEWITNESS TESTIMONY METHOD OF DETERMINING THE START OF A HEBREW MONTH.

²¹⁷ The term in Hebrew for the start of a month is Rosh Codesh, or Rosh Kodesh (pronunciation: <https://vimeo.com/212852461>); it means "Head of the Month": http://www.chabad.org/library/article_cdo/aid/526874/jewish/The-Jewish-Month.htm. It is similar to Rosh Hashanah (pronunciation: <https://www.youtube.com/watch?v=KdmkElmbGR0>), the "Head of the Year", which itself marks the start of a modern Hebrew new year: http://www.chabad.org/library/article_cdo/aid/526875/jewish/The-Jewish-Year.htm.)

both the month of Av and the month of Elul.

Let us now consider the month of Elul. In Hebrew culture, Elul itself is an important month, because this is when preparations begin for the joyous High Holy Days of Rosh Hashanah and the Day of Atonement (Yom Kippur) during the following month (i.e., during Tishri).²¹⁸ Since the month of Elul is supposed to be a time of preparation for the High Holy Days, it is not surprising that some important rituals are performed during Elul.

For instance, it is customary to blow the ram's horn, or "shofar", every morning except on Shabbat (the Sabbath; Saturday) during Elul. Special prayers of repentance, known as *selichot*, are commonly prayed every morning before sunrise during the final days of Elul^{219, 220} (although Mary, being a woman, probably would not have been expected to participate in *selichot* if the practice of *selichot* was common at that time, for those prayers would have to be completed by a certain time of day, and women are not bound to participate in Jewish religious rituals which must be completed by a certain time of day).²²¹

In essence then, the month of Av---a time of sorrow and despair---is followed by Elul, a time of joyful expectation, a time of looking forward to the most important feasts on the Hebrew calendar, feasts which mark a time of renewal in both an earthly sense (Rosh Hashanah, the new year) and in a spiritual sense (Yom Kippur, the Day of Atonement). So as it turns out, this conjunction of Jupiter and Venus took place on the one day which formed, in that year, the bridge which took God's people out of the sorrowful month of Av and into Elul, a type of thing which would be characteristic of Messiah Himself when He would come, for He would deliver God's people from their captivity of sin and set them free.

What we have seen here in the months of Av and Elul that year may not seem to be so compelling as to cause the Magi to go to Jerusalem, and in particular not enough to cause them to take the desperate act of leaving the safety of the city walls of Jerusalem just to make certain that they could make it down to Bethlehem on one night in particular. But as I said, the combination of signs which they saw (including the additional signs we shall consider), when taken together, may have presented a compelling message to them, and this one aspect here may very well have been a part of that message, even if only a small part by itself alone.

B. When Was The Annunciation Itself?

We shall now examine a second possible reason as to why the month of August in this year might be of particular interest. For although the Bible does not state the specific month (or year) in which Jesus was born, it does tease the reader with a tantalizing clue as to which month it was in which the Annunciation may have taken place. This clue is found in the story of the Annunciation from the Bible:

²¹⁸ https://www.chabad.org/library/article_cdo/aid/2263462/jewish/Tishrei.htm

²¹⁹ <https://www.myjewishlearning.com/article/the-month-of-elul/>

²²⁰ https://www.chabad.org/library/article_cdo/aid/4762/jewish/What-Is-Rosh-Hashanah.htm

²²¹ <http://www.aish.com/jl/m/w/Women--Mitzvot.html>

[26](#) Now in the sixth month the angel Gabriel was sent from God to a city in Galilee called Nazareth, [27](#) to a virgin engaged to a man whose name was Joseph, of the descendants of David; and the virgin's name was Mary. [28](#) And coming in, he said to her, "Greetings, favored one! The Lord *is* with you." [29](#) But she was very perplexed at *this* statement, and kept pondering what kind of salutation this was. [30](#) The angel said to her, "Do not be afraid, Mary; for you have found favor with God. [31](#) "And behold, you will conceive in your womb and bear a son, and you shall name Him Jesus. [32](#) "He will be great and will be called the Son of the Most High; and the Lord God will give Him the throne of His father David; [33](#) and He will reign over the house of Jacob forever, and His kingdom will have no end." [34](#) Mary said to the angel, "How can this be, since I am a virgin?" [35](#) The angel answered and said to her, "The Holy Spirit will come upon you, and the power of the Most High will overshadow you; and for that reason the holy Child shall be called the Son of God. [36](#) "And behold, even your relative Elizabeth has also conceived a son in her old age; and she who was called barren is now in her sixth month. [37](#) "For nothing will be impossible with God." [38](#) And Mary said, "Behold, the bondservant of the Lord; may it be done to me according to your word." And the angel departed from her. (Luke 1:26-38; NASB)²²²

Now, since this passage about the Annunciation starts out by saying that this event took place in the sixth month, the first question we need to ask is, "What did the author of this Gospel (the Apostle Luke) mean when he started out by saying that the angel Gabriel was sent to Mary 'in the sixth month'?"

In answering that, since the verse immediately preceding this passage says that Elizabeth remained in seclusion for five months after she learned she was pregnant,²²³ Luke's reference to the sixth month in this verse probably at least overlaps with the sixth month of Elizabeth's pregnancy. But we may be assuming too much if we assume that the reference to the sixth month is simply a reference to the sixth month of Elizabeth's pregnancy, and nothing more than that. For there is yet another way of looking at this: It might be the case that the verse refers to the sixth month of the Hebrew calendar. This makes the question of when Elizabeth got pregnant a subject of some debate. The exact details themselves of that debate are not directly relevant here, but if you wish to take a look at them, in the Appendix find "THE DEBATE OVER WHEN ELIZABETH BECAME PREGNANT".

In any event, the question then becomes, "*Which* Hebrew calendar do we need to refer to ... the ecclesiastical one (based on the Bible), or the civil calendar (the one based on Rosh Hashanah)?" Now, as was also noted above, the common method used in Judaism for numbering the months (both then and now) is to base the numbering on the original method of counting months, with the month of Nisan (Aviv, or Abib) as the first month, which marks the start of the so-

²²² <http://biblehub.com/nasb/luke/1.htm>

²²³ Luke 1:24-25: <https://biblehub.com/nasb/luke/1.htm>

called ecclesiastical year on the Hebrew calendar. The sixth month of the ecclesiastical calendar is known as the month of Elul, which, as we have just seen, is a month of preparation in anticipation of the High Holy Days during Tishri (the seventh month). And as we have also seen, in 3 B.C., when the month of Elul came to an end, a *shemittah* year began.

Now as it turns out, oddly enough, in order to go on from here and consider more fully the question of whether the Annunciation took place during the sixth month of the ecclesiastical calendar (Elul) during 3758 (3 B.C.), we must first look at the possibility that Jesus may have been conceived during the following month (Tishri): specifically, during Rosh Hashanah (marking the start of the year 3759), as some have claimed.

1. Was Jesus Conceived During Rosh Hashanah In 3759 (3 B.C.)?

Rick Larson takes the position that Jesus was conceived during Rosh Hashanah in September of 3 B.C., at the start of the Hebrew year 3759, and several online authors have speculated that that may have been when Jesus was either born or conceived. However, we have a threshold issue to consider regarding that issue. For there is a common tradition that Mary conceived Jesus on the same day as the Annunciation. So here we have at least a potential conflict between the idea that the Annunciation took place during the sixth month, Elul, and certain evidence which we shall look at which suggests that Jesus was conceived around or during Rosh Hashanah, which occurs at the start of the seventh month, Tishri. And so we then face the question, “Can that apparent conflict be resolved?”

In that respect, there are two things to consider. We start with the fact that the Bible says nothing about how much time elapsed between the Annunciation and the conception of Jesus, whether that was one hour or one year, etc. We are therefore free to consider at least the possibility that even though the Annunciation may have taken place in the month of Elul, the conception of Jesus might not have taken place during that same month. The second thing to consider is the various forms of evidence which suggest that the Annunciation and the conception of Jesus actually did take place in two different months.

On that note, consider an online Hebrew/Roman calendar which shows that Rosh Hashana in 3759 was supposedly observed on September 10th and 11th of 3 B.C.: <http://www.cgsf.org/dbeattie/calendar/?roman=3bc>. However, as is also seen on this calendar, this is a web site which has used the method that was developed three and a half centuries later by Rabbi Hillel II to ascertain when Rosh Hashanah would have been observed that year. Note for example the notation near the bottom which indicates when the *molad*---the exact moment of new moon---would occur each month throughout that time, something which is strictly a characteristic of Hillel II’s calculations, and is not part of the eyewitness testimony method for determining the start of a month.

Since we have already noted that Rabbi Hillel II’s method of ascertaining the start of Rosh Hashanah certainly could not have been used before that method even existed, we now come face-to-face with the question of whether we can determine just exactly when it was that Rosh Hashanah would have been celebrated that year according to the eyewitness testimony method of

determining the proper dates for the start of the various months. Answering that question is a very important part of our inquiry; yet because the procedure for ascertaining the answer to that question is a bit off-topic from the main topic of this book, I have decided to place the detailed discussion of that point in the Appendix; so in the Appendix find WHEN WAS ROSH HASHANAH OBSERVED IN 3759 (3 B.C.)?

Suffice it to say for the moment that, for the reasons I state in that portion of the Appendix, I have concluded that Rosh Hashanah that year was observed on Thursday, September 12th (starting at sunset on Wednesday, the 11th) and continuing until Friday, September 13th (until sunset).

a. A Cryptic Message In The Book Of Revelation

The reason why Larson and others believe that Jesus may have been conceived (or was perhaps born, as some think) at Rosh Hashanah in 3759 (3 B.C.) stems from their view of a seemingly cryptic passage from the Book of Revelation, also known as the Apocalypse in Roman Catholic versions of the Bible (e.g., the Douay-Rheims Bible).²²⁴ Here is that passage:

1 A great sign appeared in heaven: a woman clothed with the sun, with the moon under her feet and a crown of twelve stars on her head. 2 She was pregnant and cried out in pain as she was about to give birth. 3 Then another sign appeared in heaven: an enormous red dragon with seven heads and ten horns and seven crowns on its heads. 4 Its tail swept a third of the stars out of the sky and flung them to the earth. The dragon stood in front of the woman who was about to give birth, so that it might devour her child the moment he was born. 5 She gave birth to a son, a male child, who “will rule all the nations with an iron scepter.”^a And her child was snatched up to God and to his throne. 6 The woman fled into the wilderness to a place prepared for her by God, where she might be taken care of for 1,260 days. (Rev. 12:1-5; NIV)²²⁵

(Note: footnote a notes that this particular prophecy parallels Psalm 2:9.²²⁶)

As we shall now see, the imagery of verse 1 is strikingly similar to what one would see in the heavens for about two days, at various times of the day, starting in the afternoon of September 11th of 3 B.C. As we look at this particular celestial event, let us also keep in mind that throughout the period 2,000 years ago, it would not be uncommon for Rosh Hashanah to occur when the sun would be at least somewhere (from head to toe) within the constellation Virgo, and that the moon, at some point during the holiday, might sometimes then be seen under her feet. So the fact that the sun was then in Virgo and the moon was under her feet at certain times during Rosh Hashanah in this particular year is not, by itself, particularly noteworthy; nonetheless, that fact itself, when

²²⁴ “Apocalypse” is an English variation of the Greek word *apokalupsis*, which means “uncovering”, “unveiling”, or in other words, the revelation of something. See: <http://biblehub.com/greek/602.htm>

²²⁵ <http://biblehub.com/niv/revelation/12.htm>

²²⁶ <http://biblehub.com/niv/psalms/2.htm>

combined with the other celestial aspects which we shall consider herein, does become significant.

- i. The Moon As Seen From Israel On September 11th Of 3 B.C. Here is the sky shortly after sunrise on September 11th of 3 B.C.:²²⁷



Virgo, the sun, and the moon shortly after sunrise, as seen from Nazareth on September 11, 3 B.C.
Images provided courtesy of Starry Night Education. Photograph by the author.

²²⁷ Delta T: 547 for all observations in September of 3 B.C. after September 1st, (by interpolating the Delta T between NASA's lunar eclipse catalog numbers 04818 and 04819): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE

In this illustration I have used a function of Starry Night to illustrate an image of the constellation Virgo, the virgin, and to eliminate the glare of daylight. (Of course, the images of the constellations themselves would not actually be visible, either now or in ancient times.) Now, as you can see, at this point in time the illustration of the constellation Virgo shows a woman clothed with the sun, paralleling what we find in the aforementioned verse, Revelation 12:1;²²⁸ this is something which Larson and others have pointed out.

Also, we can see here the thin crescent moon. At this point, however (*i.e.*, shortly after sunrise on this day), unlike the description given in the Book of Revelation, the moon, as seen from Nazareth (or Jerusalem), is not under the virgin's feet at this particular moment, as Revelation 12:1 says it would be. Scripture seems to emphasize that the moon, as John saw it, was specifically under her feet, and not simply at her feet, or beside them. For the Greek word which is translated "under" is the word *hupokato* (hoop-ok-at'-o), which means "under", "underneath", or "below".²²⁹ In turn, that word itself is a combination of the Greek words *hupo* (hoop-o') and *kato* (kat'-o), which mean "under" ("under authority") and "below" ("bottom", "down", or "under"), respectively.^{230, 231}

So at this time, we find the moon beside her feet, where it shall remain for most of the day, and not under her feet; however, as can be seen later on that day, starting at about 2:00 P.M. (1400 local), the moon moves into position under her feet:

²²⁸ <https://biblehub.com/nasb/revelation/12.htm>

²²⁹ <https://biblehub.com/greek/5270.htm>

²³⁰ <https://biblehub.com/greek/5259.htm>

²³¹ <https://biblehub.com/greek/2736.htm>



The crescent new moon moves into position beneath the feet of Virgo about 2:00 P.M. (1400 local) as seen from Nazareth on September 11, 3 B.C.

Images provided courtesy of Starry Night Education. Photograph by the author.

And at that time, the view of the heavens very closely matches what the Apostle John wrote about in the Book of Revelation, and it remains that way for just over three hours, past 5:00 P.M. (1700 local):



The moon beneath the feet of the virgin at 5:00 P.M. local (Standard) time (15:00 UTC) as seen from Nazareth on September 11, 3 B.C.

Images provided courtesy of Starry Night Education. Photograph by the author.

Following 5:00 P.M., the moon can still be seen under the virgin's feet, but at about 5:30, the head of the virgin starts to dip below the horizon. Here below we see Virgo at sunset (which was at 5:50), which is when the month of Tishri---and with it, the Jewish new year---would have begun:

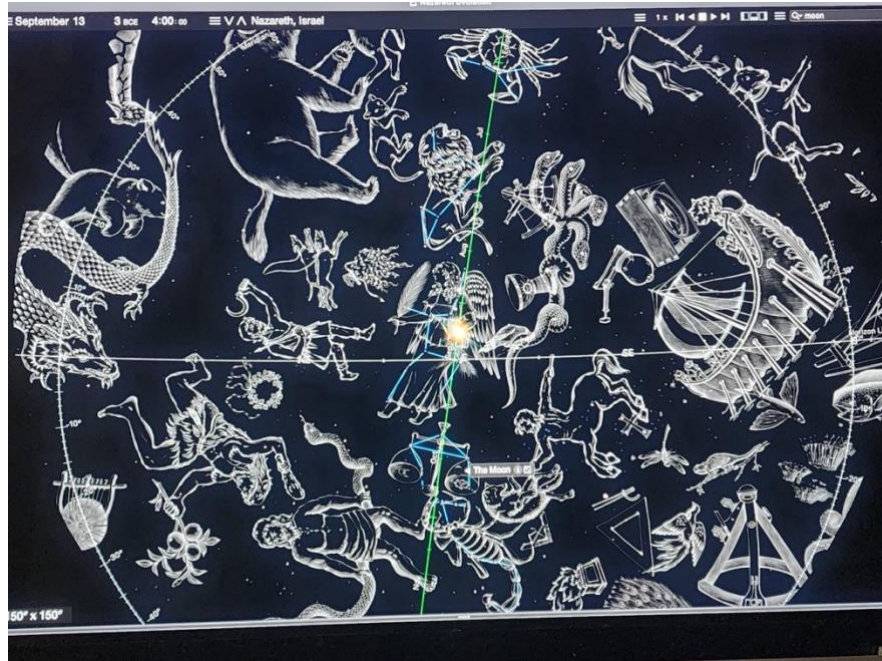


The moon and Virgo at sunset as seen from Nazareth (or Jerusalem) on September 11, 3 B.C., marking the end of the month of Elul and the start of the month of Tishri, and with it the Jewish New Year (Rosh Hashanah/Yom Teruah) to start the year 3759.

Images provided courtesy of Starry Night Education. Photograph by the author.

Also, at various different times throughout the next few days, the moon would again appear beneath the feet of the virgin.

At this point it is worth repeating the fact that an *aster* can be a constellation. And each day, as Virgo rises---whether by day or by night, during Rosh Hashanah or not, either now or in ancient times---she appears to have a crown of twelve stars (constellations) on her head: specifically, the remaining 11 constellations of the Zodiac, plus the constellation Ophiuchus, forming a ring all around the sky and then coming back up again to meet her:



Virgo, the sun, the moon, and the ecliptic---the path of the sun throughout the sky (green line), with some of the constellations of the Zodiac (shown with illustrations and in stick-figure format by blue lines)---as well as the constellation Ophiuchus (the serpent handler at the bottom, just left of the green line) shortly after sunrise as seen from Nazareth on September 13, 3 B.C.

The horizon is shown by the horizontal white line.

Images provided courtesy of Starry Night Education. Photograph by the author.

What is worth noting here is that as Virgo rose on September 13th (i.e., the second day of Rosh Hashana), which is when she may have conceived Jesus in her womb (as shall be discussed in a moment), she not only did so with the crown of 12 constellations (stars) on her head, but it is also the case that the moon was once more beneath her feet, albeit beneath the horizon (as seen here within the balance represented by the constellation Libra, which lies between Virgo, the virgin, and Scorpius, the scorpion).

ii. The Sun And The Anatomy Of The Virgin

Let us now look at Virgo once more to illustrate yet another point:



Virgo as seen from Nazareth in the mid-afternoon (2:54 P.M.; 14:54 local) on September 11, 3 B.C. Images provided courtesy of Starry Night Education. Photograph by the author.

As we view this image, bear in mind, as I said previously, that we do not have exact images from the earliest times as to precisely what the images of the constellations are supposed to look like. But we do know for the most part which stars are supposed to be part of the constellations, and what type of person, animal, or object each constellation is supposed to illustrate.

With that in mind, I cannot help but notice that with the glare of daylight removed, the sun, at this point, is at least generally in the vicinity of one of the ovaries and the start of one of the Fallopian tubes of the virgin (the left ovary and left Fallopian tube, specifically). When ovulation takes place, an egg leaves one of the ovaries and enters the start of the adjacent Fallopian tube; and it is at the beginning of the Fallopian tube that conception then commonly takes place.²³² And the sun, at this point, is located near this particular area, where it would remain for the next few days. I believe this is part of a poetic, artistic illustration by God representing the power of the Holy Spirit acting upon Mary when she ovulated and then soon afterwards conceived Jesus.

iii. The Sun And The Overshadowing Of The Virgin

With all this in mind, let us also go back to the first chapter of the Gospel of Luke and consider one particular point which the Angel Gabriel said to Mary. The Bible says,

35 The angel answered and said to her, “The Holy Spirit will come upon you, and the power of the Most High will overshadow you; and for that reason the holy Child shall

²³² <https://my.clevelandclinic.org/health/articles/9709-pregnancy-am-i-pregnant>

be called the Son of God. (Luke 1:35; NASB)²³³

Let us consider for a moment the Greek word which is translated “overshadow” in this passage. It is the Greek word *episkiazo* (pronunciation: <https://www.youtube.com/watch?v=R8MdUM2v9zA>).²³⁴ *Episkiazo* means to obscure something by overpowering it with a brilliant light. For instance, it is used in Matthew 17:5, in the context of the Transfiguration. The Transfiguration was an event in which Jesus took three of His apostles up on a high hill. During the Transfiguration, Jesus revealed His glory---a dazzling, brilliant glory---and His face shone like the sun. Moses and Elijah also appeared with Jesus and spoke with Him. The Apostle Peter then began speaking and, as the Scripture says,

5 While he was still speaking, a bright cloud overshadowed them, (Matt 17:5a; NASB)²³⁵

As mentioned, the word *episkiazo* is translated “overshadowed”.

What the Bible describes here is similar to what you may have seen in movies or on television when the camera is focused on a person or object in the foreground and an extremely intense light, such as a nuclear explosion, suddenly appears in the background. The overpowering brilliance of the light can cause the person or object in the foreground to disappear.

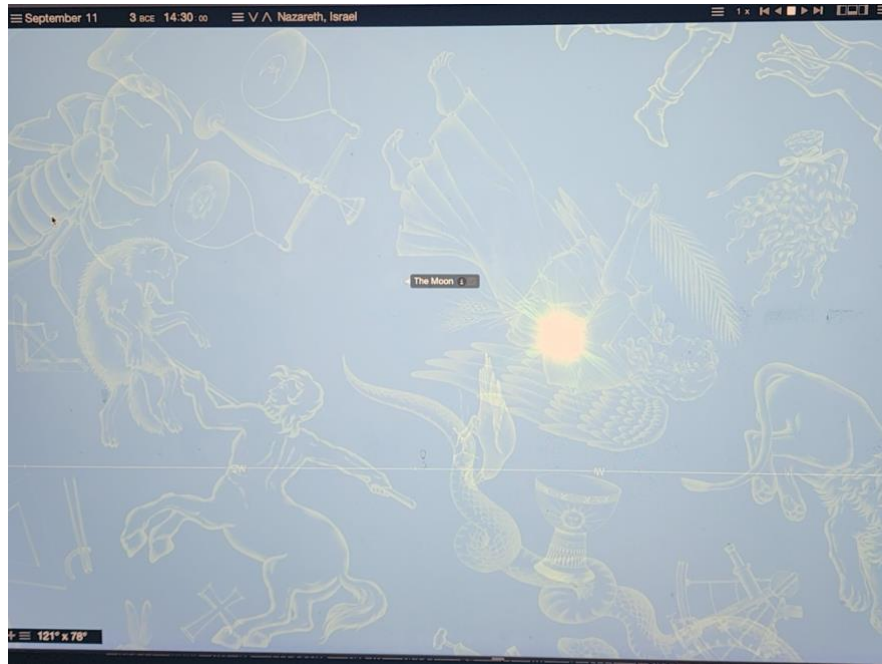
With that in mind, let us next consider how *episkiazo* might apply in the context of what the angel Gabriel said to Mary at the Annunciation. Consider once more the photo above of the sky over Israel in the afternoon of September 11, 3 B.C.

²³³ <http://biblehub.com/nasb/luke/1.htm>

²³⁴ <http://biblehub.com/greek/1982.htm>

²³⁵ <http://biblehub.com/nasb/matthew/17.htm>

Now consider the scene above, but this time with the glare of daylight added back in, and see at what happens:



Virgo as seen from Nazareth in the late afternoon (14:30 UTC; 4:30 P.M. local) of September 11, 3 B.C. with the glow of daylight included.
Images provided courtesy of Starry Night Education. Photograph by the author.

Here we see that the light of the sun overshadows the light of the stars (as it would have done all day long) and makes them disappear.

This is an example of *episkiazo*, since the light of the sun obscures (“overshadows”) the stars of the constellation. And it remarkably parallels what the angel Gabriel said to Mary: that the power of the Most High would overshadow her.²³⁶ For notice please that the light of the stars of the constellation Virgo are overshadowed by the light of the sun while the sun itself, as I have mentioned, sits over the general vicinity of one of the ovaries and the start of one of the Fallopian tubes at that time and for the next few days.

This is an example of the Echo of Heaven. For here we see a poetic depiction of an event happening on Earth---that is, within Mary---which echoes back to the heavens something which the stars and the moon and the sun themselves shout forth: the ovulation of Mary, and the conception of Jesus.

²³⁶ Luke 1:35 (<http://biblehub.com/nasb/luke/1.htm>)

b. A Point Of Comfort For Mary And Her Family

What we have seen here is at least consistent with the idea that the Annunciation occurred during the month of Elul in 3 B.C. and that Jesus was conceived during the month of Tishrei. And the events which we are about to consider reinforce that idea, for they point toward the conclusion that Jesus was born nine months later, in June of 2 B.C.

If such is the case (and I personally believe that it is so), then it would probably have been comforting to Mary and her family that her cousin Elizabeth had gotten pregnant when she did, for Elizabeth probably would have gotten pregnant in late February or early March of 3 B.C. And since certain Jewish feasts would have taken place between that time and the month of Elul, most notably Pesach (Passover), it would be reasonable to believe that Mary and her family may have met up with Elizabeth and her husband Zacharias (Zechariah) in Jerusalem during at least one of those feasts.

That being the case, since we see from Scripture that it was no secret that Zacharias had had a vision when the angel told him he would have a son (Luke 1:5-25),²³⁷ it should come as no surprise if Elizabeth and Zacharias had shared with Mary's family the miraculous details surrounding Elizabeth's pregnancy before the Annunciation took place (even though Elizabeth remained generally in seclusion at the time). So then, when the Annunciation did take place, Mary's parents would have been more prepared to handle the shock that their daughter had become pregnant, and that she was telling them that an angel had appeared to her, that he had told her that she would conceive by the power of the Most High, and that her child would be the Messiah.

This would fit in with the fact that Mary was then allowed to go stay for three months with Elizabeth (without her parents, apparently). (Luke 1:39-40, 56)²³⁸ In fact, Mary and her parents may have met up with Elizabeth and Zacharias in Jerusalem during the High Holy days (Rosh Hashanah and Yom Kippur), which apparently followed shortly after the Annunciation, and Mary may have gone to stay with them at that time instead of returning home to Nazareth with her parents. (It may also have been the case that that is the time when Mary and her parents first found out about Elizabeth's pregnancy, rather than a few months beforehand, since Elizabeth would be just coming out of seclusion then.)

Of course, I do not know for a fact if this is how all of this developed, though I certainly hope that this was so, at least in terms of Mary and her parents finding out about Elizabeth's pregnancy and the visit of the angel to Zacharias before the Annunciation. For all told, this would no doubt have been a source of great comfort to Mary and to her parents, and would have tended to alleviate the shock which they each no doubt received from the Annunciation.

²³⁷ <https://biblehub.com/nasb/luke/1.htm>

²³⁸ <https://biblehub.com/nasb/luke/1.htm>

c. The Sun, The Moon, And The Second And Third Triple Events Of Jupiter

We shall next consider another triple conjunction, one which started the same night that Rosh Hashanah ended that year (3 B.C.). Starting shortly after Midnight (UTC) on the night of September 13/14, 3 B.C. (and going until May 7, 2 B.C.), Jupiter went through a triple conjunction with the star Regulus, followed shortly thereafter by the completion of what I call a triple rendezvous with a particular point of interest in the heavens. As mentioned above, the triple conjunction of Jupiter with Regulus (at the start of these events) is the event with which Larson begins his inquiry. And this is also the other triple conjunction (the first one being the triple conjunction of Jupiter and Saturn) which planetarium shows have also demonstrated over the years, as I said.

Now, as Larson has pointed out, both the passage from Genesis in which Jacob identifies Judah as a lion's cub and the passage quoted previously from the Book of Revelation about the child who will rule are verses which refer to a rod, or scepter, a symbol of rulership. Likewise, the reference to a rod of iron in that passage from the Book of Revelation parallels what we find in Psalm 2:9.^{239, 240} And as we have also seen, the prophecy of Balaam in the Book of Numbers, quoted above, makes reference to the one who is to come as being someone who bears a scepter.

A scepter is a symbol of the authority of the one who holds it.²⁴¹ And in light of Jacob's prophecy about a scepter in Genesis, as well as Balaam's prophecy, and also Psalm 2:9, it is easy to see how the Magi could have deemed this triple conjunction of Jupiter and Regulus in Leo---coming on the heels of the triple conjunction of Jupiter and Saturn in Pisces---to be a sign of a king coming forth from his father. And since the first of these events took place in the constellation which the Babylonians considered to be the sign of the Jew (involving Jupiter and Saturn in Pisces), followed by this event in Leo, the constellation which signifies a lion (the symbol of the Tribe of Judah), it is easy to see how the Magi could have taken these signs together as signifying the coming forth of the King of the Jews.

In fact, what is particularly worth noting is that, as can be determined from Starry Night, this would have been the very first time in all of recorded human history (*i.e.*, going back to at least 4000 B.C.) that a triple conjunction of Jupiter with Saturn in Pisces would have then been followed by a triple conjunction of Jupiter with Regulus the very next time that Jupiter went past Regulus. And over the next several months, as was the case with respect to Jupiter and Saturn at the triple conjunction of those two planets, Jupiter drew a crown (this one being over Regulus) when Jupiter had its triple conjunction with that star, as Larson pointed out. See the following photos:

²³⁹ <http://biblehub.com/niv/revelation/12.htm>

²⁴⁰ <http://biblehub.com/niv/psalms/2.htm>

²⁴¹ <https://www.merriam-webster.com/dictionary/scepter>



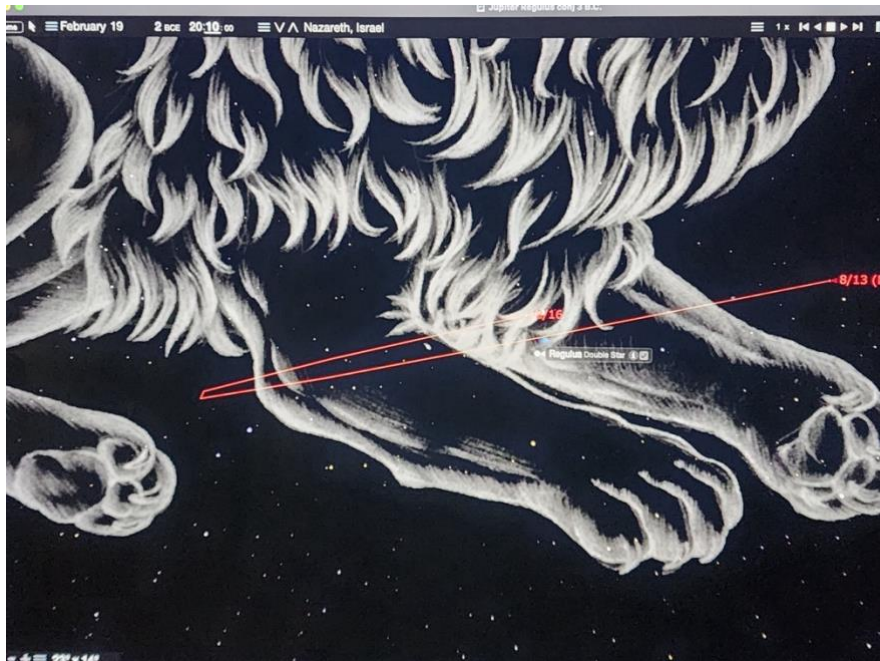
Jupiter's first conjunction of the triple conjunction with Regulus from September of 3 B.C. to May of 3 B.C. Red line shows the movement of Jupiter (from right to left) against the background of stars in normal forward (prograde) motion in the month leading up to the first conjunction.

Images provided courtesy of Starry Night Education. Photograph by the author.



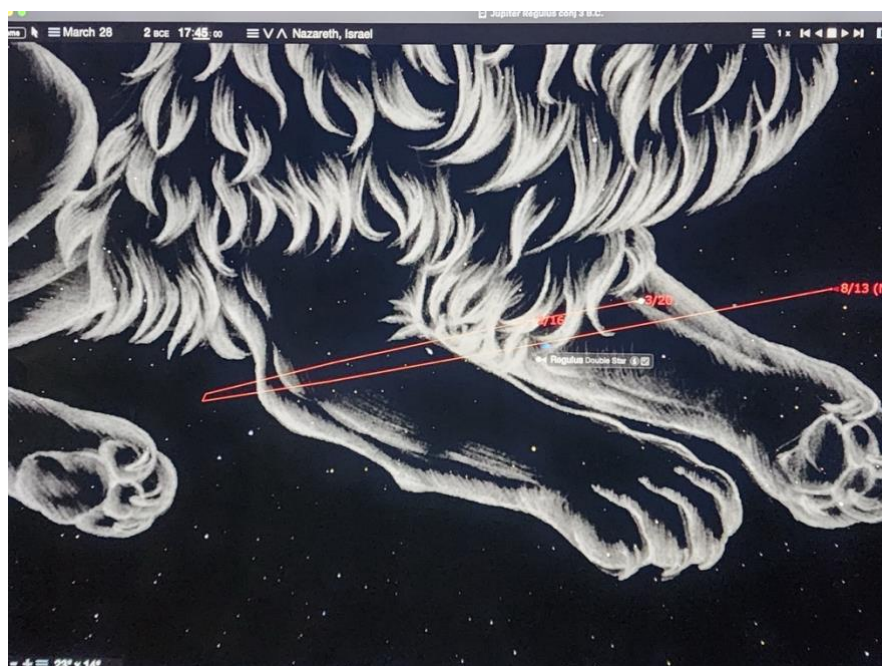
Jupiter continues on past Regulus (from right to left) from May until November of 3 B.C. in normal forward motion, and then appears to slow down gradually and come to a stop as it prepares to enter retrograde motion. (The moon is also shown.)

Images provided courtesy of Starry Night Education. Photograph by the author.



Jupiter, now in retrograde motion (the upper red line, left to right), gains apparent speed and comes back to enter its second conjunction with Regulus in February of 2 B.C.

Images provided courtesy of Starry Night Education. Photograph by the author.



Jupiter continues on in retrograde motion (the upper red line, left to right) after the second conjunction and appears to slow down and then come to a stop as it prepares to resume normal forward (prograde) motion in March of 2 B.C.

Images provided courtesy of Starry Night Education. Photograph by the author.



Jupiter, now back in normal forward motion (the middle red line, right to left), regains apparent speed and returns to Regulus to reach its third conjunction with that star in May of 2 B.C., completing the crown over Regulus.

Images provided courtesy of Starry Night Education. Photograph by the author.

Accordingly, it is very highly likely that this confluence of events---one which was unprecedented in human history, one which symbolizes kingship and the Jews---would have caught the attention of the Magi.

As it turns out, there is even more evidence to be found which suggests that Mary conceived Jesus in her womb during Rosh Hashanah that year when we go back and look more closely at certain evidence that the Annunciation did in fact take place with a specific degree of timing just before that, during the month of Elul, which is what we shall do now.

2. The Conjunctions Of Venus And Mercury In 3 B.C.

In considering when the Annunciation took place, there is one other god of ancient lore whom we should take into account: Mercury (as the Romans called him), the messenger of the gods, whom the Greeks called Hermes. Now, Mercury (Hermes) was said to be the only god on Mt. Olympus who was capable of passing freely between the realm of the mortals and the realm of the gods.²⁴² So with respect to the Annunciation, we might wish to consider whether the heavens suggest that there was any connection between the goddess representing motherhood (Venus) and the messenger of the gods (Mercury). And so, we might wonder whether there were any conjunctions of Venus and Mercury during this time.

During the month of Elul in 3 B.C. there were actually two conjunctions of Venus and Mercury. First, Mercury came forth from the sun and entered into a conjunction with Venus on August 23rd. Next, it moved out past Venus from there, and then came back around for a second conjunction with Venus on the night of August 31st/morning of September 1st. Ordinarily, such a sequence of events is fairly common for these two planets. But there are two reasons why the second conjunction of Venus and Mercury on this occasion is particularly noteworthy.

First of all, this second conjunction, like the conjunction of Venus and Jupiter a few weeks earlier, brought these two planets even closer to each other (within one-third of a degree of each other) than they were at the first of these two conjunctions that year, so this could serve as a fitting illustration of the angel bringing a message to Mary. Second, the context in which this conjunction took place is especially noteworthy; for as we have just noted, not only did this conjunction take place during the sixth month of the ecclesiastical calendar, but it also took place during the timeframe of years when we might expect to find the conception and birth of Jesus, and so also perhaps, within a timeframe in which we might expect to find a close conjunction illustrating the messenger of the gods bringing a message to the symbol of womanhood and fertility. To consider the context in which this conjunction took place more fully, let us next look at a certain Greek Orthodox tradition about the Annunciation.

²⁴² <https://www.greekmythology.com/Olympians/Hermes/hermes.html>

a. Astronomy, Biology, And The Greek Orthodox Tradition About The Annunciation

There is a Greek Orthodox tradition which goes into greater detail in describing the Annunciation than Scripture itself does. In so doing, this Orthodox tradition does not contradict Scripture; rather, it simply adds certain details which Scripture itself does not mention. Personally, I do not accept human tradition, such as this one, as being on par with Scripture itself in terms of reliability. But traditions are worth at least some consideration anyway, because the mere fact that they do not have the exact same reliability as Scripture does not mean, by that fact alone, that the tradition itself is necessarily false in every respect, or even necessarily in any respect at all. For instance, bear in mind that at one point, Jesus made reference to sayings from His culture, and not from Scripture itself, to help illustrate the truth of a matter:

¹ The Pharisees and Sadducees came up, and testing Jesus, they asked Him to show them a sign from heaven. ² But He replied to them, “When it is evening, you say, ‘*It will be fair weather, for the sky is red.*’ ³ “And in the morning, ‘*There will be a storm today, for the sky is red and threatening.*’ Do you know how to discern the appearance of the sky, but cannot *discern* the signs of the times? (Matt. 16:1-3; NASB)²⁴³

So, here we see that when it came to quoting a source or making reference to a saying, the only thing which Jesus focused on was whether the saying was true or not, regardless of whether it could be found in Scripture or in everyday culture. (Simply bear in mind as well that He did not place the words of men on the same level of authority as Scripture itself. Matt 15:7-9: https://biblehub.com/nasb/_matthew/15.htm.)

²⁴³ <http://biblehub.com/nasb/matthew/16.htm>

Furthermore, the Greek Orthodox tradition about the Annunciation comes to us from a text written around 140 to 170 A.D., the so-called Gospel of James, or Protoevangelium of James (a book which is not actually in the Bible).²⁴⁴ So this tradition does go back all the way to a time which was within 100 years of the time when Jesus' Apostles lived and the New Testament itself was being written; and this, in turn, means that it is at least reasonably possible that this tradition was already in existence even back during the time of the Apostles themselves, either in oral form or in a now-lost, non-canonical manuscript.

Now, according to this Orthodox tradition, the Annunciation took place in two parts. It says that the Annunciation started out when Mary was alone at the well drawing water one morning. At that point, the angel Gabriel called out to her. Mary looked around and could see no one. She became startled and ran home. The Annunciation then continued while she was at home.

There are two particularly odd things about this account that I wish to focus on, and they each tend to diminish the overall credibility of the story. The first one we should consider is that it says that Mary was alone at the well in the morning. That by itself is highly unusual, and it compromises the credibility of the story. For since the village well was the sole source of water for everyone in the village, one could expect most families to draw water for the day early each morning. So if Mary was alone at the well one morning when the angel Gabriel first called out to her, then Mary was probably at the well either unusually early in the morning, before the usual morning crowds would start to gather there, or perhaps halfway between the usual time for breakfast and lunch. Although even then, at mid-morning, it probably would be common for at least a few people to be somewhere in the vicinity of the well (perhaps to draw water, or perhaps just for socializing).

Of course, it might also have been the case that Mary chose for some reason to go to the well when it was pouring rain, and no one else wished to be there. That would be rather odd as well, though, if for no other reason than the fact that if it were pouring rain, one could simply place a jar outside one's door to collect at least some rainwater, and then go to the well later on to get more water when it had stopped raining. So I think that the most likely time for Mary to have been at the well, if this Greek Orthodox tradition holds true, would have been unusually early in the morning. Let us keep this in mind as we examine the other details.

²⁴⁴ <http://www.gnosis.org/library/gosjames.htm>

i. The Positions Of Venus And Mercury On September 1, 3 B.C.

Now, the conjunction itself of Mercury and Venus would have appeared to take place at 11:19 P.M. (21:19 UTC) on the night of August 31st, as would have been seen from Nazareth, had the two planets been above the horizon at that time (which was not the case for either one). Following that, the planet Venus rose one hour and sixteen minutes before the sun reached the horizon in Nazareth the following morning, September 1, 3 B.C. And the actual closest approach itself of the two planets took place around 8:00 A.M. (0600 UTC), almost three hours after sunrise, and about four hours after Mercury and Venus had risen:²⁴⁵



Venus and Mercury in Leo (in the right-rear leg of Leo, just above the head of Virgo) at their closest approach on September 1, 3 B.C. (shown with daylight removed). The red lines show their movement across the heavens (from upper right to lower left) in the preceding 24 hours.

Images provided courtesy of Starry Night Education. Photograph by the author.

Now, in our modern cities, one can usually notice the start of morning twilight about one hour before sunrise. But without the glare of city lights, one can notice the start of morning twilight about an hour and fifteen to twenty minutes before sunrise. In other words, if Mary did get up around the crack of dawn to go to the well, she could easily have risen out of bed just as the planet Venus itself was rising above the horizon, which was less than a minute after Mercury rose.

²⁴⁵ Delta T 548 for all observations in the month of August, 3 B.C. (as determined by the Delta T at NASA's lunar eclipse catalog number 04818): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE.

Venus would have been quite bright at that time,²⁴⁶ while Mercury would have been fairly bright as well (though not quite as bright).²⁴⁷ So just as a side note, if Mary did get up at that time to go to the well, and if it was clear along the eastern horizon, she probably would have noticed the sight of these two planets together.

ii. The Position And Phase Of The Moon On The Morning Of September 1, 3 B.C.

Now, the moon on the morning of September 1, 3 B.C. was one day before reaching third quarter phase. A third quarter moon comes at the start of the final phase of what is called a “lunation”²⁴⁸---i.e., the moon’s monthly orbit around planet earth---before becoming renewed again with a new moon, which itself comes about one week after third quarter. A third quarter moon is one of the two “half moons” which are seen each month. For further information on this, in the Appendix find HALF MOON.

A half moon---whether in the evening sky, as a first quarter moon, or else in the early morning sky, as a third-quarter moon (as was the case here)---can provide enough illumination for you to find your way around when your eyes are used to the dark. Furthermore, on the morning of September 1, 3 B.C., the moon was near what is called perigee (pronunciation: <https://dictionary.cambridge.org/us/pronunciation/english/perigee>).

You see, the moon’s orbit is elliptical, and perigee is the point in each monthly orbit of the moon when the moon is closest to earth.²⁴⁹ On that particular morning, the moon was only 228,188 mi (367,232.2 km) from earth, as opposed to an average distance of 238,900 mi (384,000 km). Thus, the moon would have appeared to be noticeably larger than average (probably nearly ten percent larger), and therefore would have been giving off even more light than it normally would have around third quarter. And since this was one day before third-quarter, the illuminated portion of the moon would have been even more than simply a half moon.

As can be seen on Starry Night, about thirty-six minutes before sunrise that morning, the moon was on the meridian (pronunciation: <https://dictionary.cambridge.org/us/pronunciation/english/meridian>) as seen from Nazareth. The meridian is a theoretical line running from a point on the horizon straight north of where you are²⁵⁰ to the point directly over your head (known as the zenith²⁵¹) and then continuing on to where the line meets the horizon at the point straight south of you.²⁵² In other words, when an object is on the meridian, it is at its highest point in the sky for any given 24-hour period before it starts to head back

²⁴⁶ at magnitude -3.93 (“minus three point nine three”), according to Starry Night

²⁴⁷ at magnitude -0.96 (“minus zero point nine six”), according to Starry Night

²⁴⁸ <https://www.merriam-webster.com/dictionary/lunation>

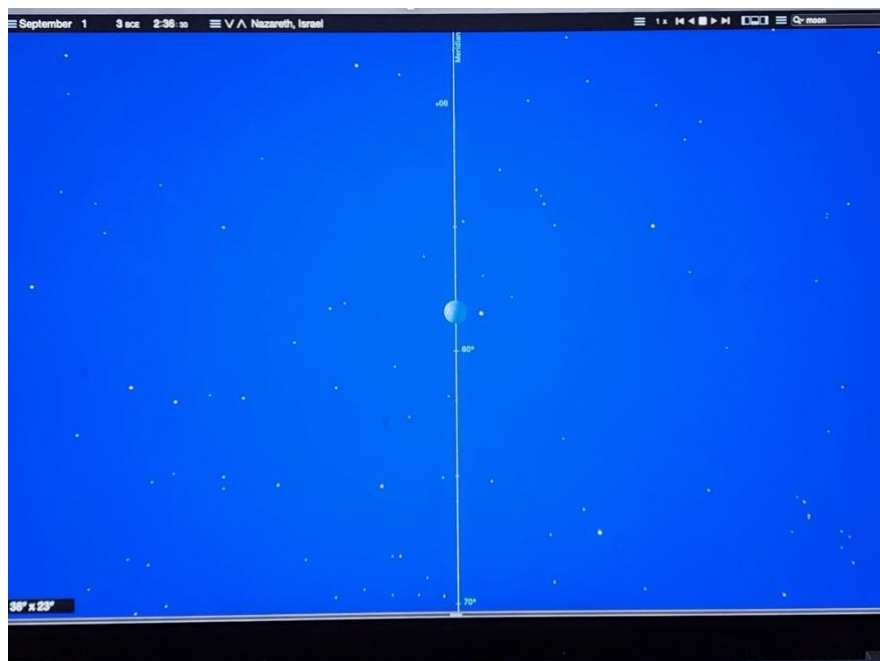
²⁴⁹ <https://www.universetoday.com/48792/moon-orbit/>

²⁵⁰ This would be for the northern hemisphere. For the southern hemisphere, it would be at the point straight south of you, to a point straight north of you.

²⁵¹ <https://www.merriam-webster.com/dictionary/zenith>

²⁵² <https://www.merriam-webster.com/dictionary/meridian>

down to the horizon in the west. In fact, at this point in time on this night, the moon was only about nine degrees from the actual zenith itself (which would be at a height of 90 degrees above the horizon). This illustration is a view as seen from Nazareth on that morning showing the moon and the zenith, with a white vertical line added to show the meridian:



The moon on the meridian as seen from Nazareth thirty-six minutes before sunrise on September 1, 3 B.C. (Also shown is the zenith: 90 degrees).
Images provided courtesy of Starry Night Education. Photograph by the author.

As it turns out, this particular configuration would have been even more favorable than a full moon in terms of giving Mary extra light to work with around dawn, because just as dawn breaks, a full moon will always be very close to the horizon, thereby casting long shadows every bit as much as it would be giving off extra light. So the most favorable phase of the moon from which to receive some extra light to do one's work right around the crack of dawn would be at this time: just before third quarter, when the moon would be on the meridian, high overhead, and producing only very short shadows instead of being low to the horizon (as a full moon would be at dawn), where it would be casting lengthy shadows.

The significant thing to keep in mind here is that by this point, it was only half an hour before sunrise, so with the combination of moonlight and early morning twilight, there would have been enough light for several minutes before and after this time for one to go about one's business, such as going to get water from the well; at the same time, however, it was also still so early that one would not expect to see many people walking around in the village yet, or over near the well, if anyone would even be up at all. In fact, the light of the moon on this particular morning would probably have been enough for Mary to have started her journey from her house to the well perhaps as much as twenty minutes before this.

She may very well have done so, for as we shall see shortly, there is one reason in particular to think that Mary may have wanted to carry as many jugs as she could have on this particular morning, including perhaps one jug balanced on her head; and though she may have been highly experienced and skilled at that, one still would expect her to walk at least a little more slowly in that configuration than if she had just been carrying a jug or two in her hands. So, she may have wanted to get started on her way to the well as early as she possibly could.

In addition, let us also consider the fact that even though crime probably would not have been a problem in Nazareth in that day and age, wild animals could be about at night. However, once the first light of dawn came, one would expect any night predators to start heading back to their dens. With that in mind, the extra light from the moon may have helped encourage her to start out a little bit earlier than she would have if there had been no moonlight, as long as the light of dawn itself had at least begun: In this case specifically, she may have started out ten to twenty minutes before the moon reached the meridian (*i.e.*, about forty to fifty minutes before sunrise). So this would be a timeframe---when dawn was readily advancing, and when the moon would lend its light at well---which would fit the Greek Orthodox tradition about Mary being alone at the well one morning when the Annunciation started.

iii. The Calendar Aspect

Now, this may all be interesting, but of course, we must ask why it is that Mary, or anyone else for that matter, would be up unusually early either on this day or on any other day to draw water from the well. The answer may lie in what day of the week this was.

As we can see from a Hebrew/Roman calendar, September 1st that year was a Sunday: <http://www.cgsf.org/dbeattie/calendar/?roman=3bc>. What that means is that no one would have had the opportunity to draw water during daylight hours from the well following sunset on Friday, a

day and a half earlier, because no work could be performed on Shabbat (the Sabbath; Saturday), which would have begun at sunset on Friday. In fact, for this reason, it may have been quite common every week for the early Sunday morning crowd at the well to be unusually large, and Mary may have simply wanted to avoid waiting in a line that would be longer than it would be on the other days of the week by taking advantage of the extra light from the moon to go to the well unusually early on this morning.

She may have done that in the past, in fact, if at any time the moon had happened to be close to third quarter on a Sunday morning. In any event, it appears that Mary was quite clever (and quite courageous as well, by going out before it was fully daylight); for I believe that she made use of astronomy to implement an idea---either her own idea, or one which she got from someone else--in a very smart way which helped her to draw water without waiting in line, and yet without also interfering with any else's plans to draw water. (Allow me to add, just as a side note, that at this point, the planets Mercury and Venus were well above the horizon, with the planet Mercury just barely higher than the planet Venus.²⁵³)

iv. The Emotional Impact Of The Lighting

Here is another aspect of the Greek Orthodox tradition to consider: As I mentioned, this tradition says that when the angel called out to Mary at the well, and she looked around and could see no one, she became frightened and then went back home. As the tradition states:

*And Mary looked around to the right and the left to see where this voice came from. And trembling she went into her house.*²⁵⁴

This by itself contains the second peculiar thing about this Orthodox tradition that I wish to focus on, one which likewise compromises the apparent credibility of this Orthodox tradition. For normally, if it were broad daylight, and people were milling around anywhere within sight, one would wonder why Mary would become so frightened that she would feel the need to run all the way home, and even start trembling, in fact.

One might think that the more likely reaction by Mary, if this were during broad daylight, would be for her to wonder whether someone was just playing a joke on her, and that in any event, circumstances probably would not seem so threatening that she would literally start trembling; or even if she did feel threatened during broad daylight, one would think that instead of just abandoning the task of drawing water from the well and heading home, she would draw near to anyone else who was about, or even cry out for help, because other people could be expected to be in plain view somewhere close to the village well.

If, however, she was alone by herself at the well half an hour or so before sunrise, when it was still relatively dark out, and with only just barely enough light for her to go about her work, and if no

²⁵³ Mercury was above Venus by less than five minutes of arc (*i.e.*, less than one-twelfth of a degree).

²⁵⁴ <http://campus.udayton.edu/mary/holyfootstep.html>

one else could be seen anywhere at all, it would be much easier to understand why and how she could become so frightened when she heard someone call her name (though she could see no one) that she would actually start trembling and then feel the need to go home.

Interestingly enough, shortly after that, the progression of morning twilight would cause Mercury, which was not as bright as Venus, to disappear first, whereas Venus would remain for a while, and would be the last object in the sky (other than the moon and the sun) to be visible that morning.²⁵⁵ With that in mind, consider once again the following passage about the Annunciation:

[38](#) And Mary said, “Behold, the bondservant of the Lord; may it be done to me according to your word.” And the angel departed from her. (Luke 1:38; NASB)²⁵⁶

At a minimum then, it is interesting to note that in the heavens that morning, for a period of several minutes, Venus (the woman) remained, while the messenger (Mercury) departed from her.

Now, all things considered, with respect to the conjunctions of Venus and Jupiter and Mercury, normally I might not bother you with a presentation of these conjunctions because conjunctions of these planets are not rare. They are in fact somewhat common (particularly for Venus and Mercury), and so also is the phenomenon in which Mercury first moves past Venus and then comes back around for a second conjunction.

Notwithstanding all that, I have brought these conjunctions to your attention for the following reasons. To reiterate: First, these very close conjunctions did take place during the sixth month of the Hebrew ecclesiastical calendar (Elul), and at that, during a year in which we might expect to find the conception of Jesus; and thus, these conjunctions should be considered in terms of whether or not they illustrate anything about the Annunciation and the conception of Jesus.

Second, these conjunctions did take place in Leo, the sign commonly associated with royalty and, to a significant extent, with the Jews as well, which likewise could be relevant to the Annunciation and Jesus’ conception.

Third, with the way that the morning developed, it turns out that the planets, the moon, and even the calendar all came together in a noteworthy way to add support to some highly unusual aspects about this very early Orthodox tradition about the Annunciation, aspects which normally would impeach the credibility of the story to begin with, but which, in light of the astronomy of the matter, actually lend credence to the story instead.

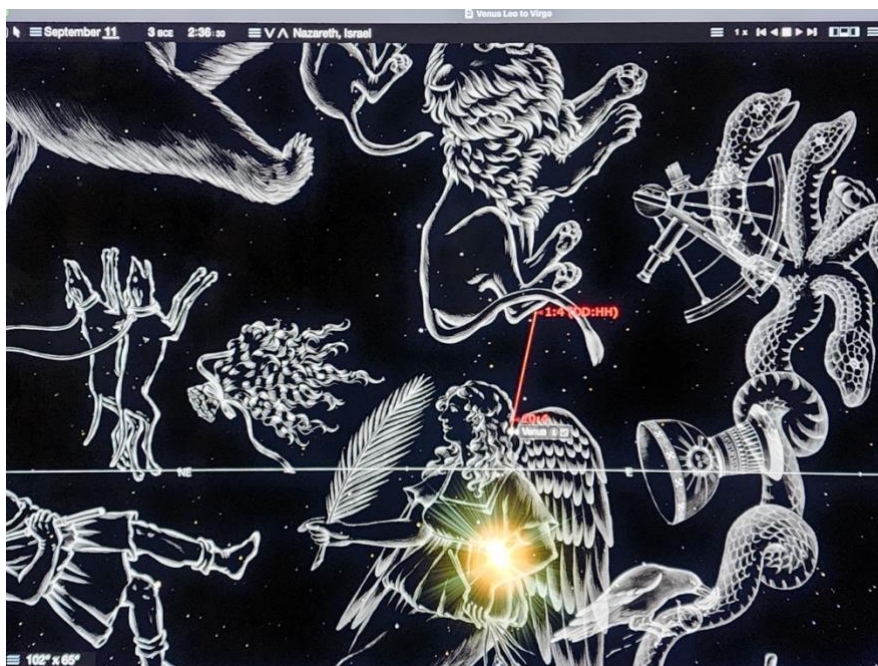
And fourth, there is biological evidence which also tends to support these points, as follows.

²⁵⁵ Venus had a magnitude of -3.93 (minus three point nine three), and Mercury had a magnitude of -0.95 (minus zero point nine five). (See <https://telescopenights.com/stars-in-the-daytime/>.)

²⁵⁶ <http://biblehub.com/nasb/luke/1.htm>

v. Biology And The Annunciation

Let us now consider what happened to Venus and the sun over the course of the next ten days. On September 11th, as previously noted, the sun itself entered the general area of one of the virgin's (Virgo's) ovaries and Fallopian tubes, where conception takes place. And before that, between September 1st and September 11th, the planet Venus itself transitioned from the constellation Leo to the constellation Virgo:²⁵⁷



Venus transitioning from Leo to Virgo, as shown by the red line (from upper right to lower left), from September 1 to September 11, 3 B.C. The Horizon Line (white horizontal line) is also shown. Images provided courtesy of Starry Night Education. Photograph by the author.

Of particular significance here, I believe, are several facts, one of which is that within this overall timeframe, the planet Venus entered into the area of the head of the virgin. As it turns out, although most of the estrogen which a female produces once she reaches puberty comes from her ovaries, some of it is produced in the brain.^{258, 259, 260} And it is estrogen, of course, which causes the brain of a young female to begin thinking from the perspective of a woman and a mother instead of

²⁵⁷ Delta T: 547 for all observations in September of 3 B.C. after September 1st, (by interpolating the Delta T between NASA's lunar eclipse catalog numbers 04818 and 04819): <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>, as modified according to the method explained in the Appendix in the section entitled THE COMPUTER DISCREPENCY AND OUR LADY OF GUADALUPE.

²⁵⁸ <http://www.healthline.com/health-news/strange-your-brain-makes-estrogen-too-121013>

²⁵⁹ <https://www.healthline.com/health-news/strange-your-brain-makes-estrogen-too-121013#The-Brain-Givethand-Taketh-Away>

²⁶⁰ <https://pubmed.ncbi.nlm.nih.gov/18253054/> (Note: click on DOI: [10.1159/000111559](https://doi.org/10.1159/000111559) to access a link to a PDF version of the article.)

from the perspective of a girl.²⁶¹

Now, just exactly how it is that all of this could tie biology into the Annunciation is something which occurred to me shortly before I began preparing this book. It pertains to the fact that, as I learned in high school biology class, and then studied again in pharmacy school, our usual way of thinking about a woman's monthly reproductive period is slightly off base. Specifically, we usually think of a woman's monthly cycle as beginning at the time that she starts bleeding (commonly for three to five days),²⁶² and that is how we refer to a woman's menstrual cycle both in lay terms and in medical terminology.

As it turns out, however, we do not base this perspective on the start of a menstrual cycle strictly on biology per se; rather, the only reason we refer to the start of her bleeding as the start of her monthly cycle is that her bleeding is the one and only sign of her monthly reproductive cycle which can be seen externally. However, it is what takes place internally, unseen by us, that constitutes the actual biological basis for the start of a woman's reproductive cycle.

You see, prior to the time that a woman starts bleeding, the uterus has been building up tissues to receive a fertilized ovum, should one happen to pass through her uterus. In other words, what we think of as being the start of a woman's reproductive cycle (*i.e.*, when she gets her "period") is not really the *start* of any given month's reproductive cycle at all. Instead, the bleeding marks only the *beginning of the end* of her cycle; and a woman's new monthly cycle in fact begins with what is known as the Follicular Phase,²⁶³ which is when she starts building up her uterine tissues once again to receive a fertilized ovum. This occurs only after she stops bleeding.

As I said, a woman's reproductive cycle isn't commonly described this way, either in lay terms or in medical terminology. Nonetheless, look at it this way: When a girl reaches menarche (*i.e.*, when she is just entering puberty),²⁶⁴ and has her first monthly bleeding, if her first-ever reproductive cycle had not already been going on for some time---that is, if the hormonally-based buildup of her uterus hadn't been taking place already within the preceding weeks--- then there would be no tissues from her uterus for her to slough off at the start of her first period, and no bleeding would take place at all. So when she starts bleeding for the very first time, she is actually nearing the completion of a reproductive cycle, her first-ever reproductive cycle, which actually would have begun about three and a half weeks before she started bleeding.

The reason I mention all of this is that a woman usually ovulates in her next monthly cycle around the fourteenth day as measured from the time she had started bleeding in her previous cycle (although this can vary somewhat).²⁶⁵ This time---during ovulation---is the prime time for

²⁶¹ <https://psychologydictionary.org/article/what-effects-does-estrogen-have-on-an-adolescent-girl/> <https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=85&ContentID=P00559>

²⁶² <https://my.clevelandclinic.org/health/articles/10132-normal-menstruation>

²⁶³ <https://www.mindbodygreen.com/articles/menstrual-cycle-phases>

²⁶⁴ <https://medical-dictionary.thefreedictionary.com/menarche>

²⁶⁵ <http://americanpregnancy.org/getting-pregnant/ovulation-faq/>

conception to take place.²⁶⁶ But as I said, most women bleed for about three to five days, and so it is not uncommon for the fourteenth day (as measured from the day when she started bleeding in her previous cycle) to come just ten days after her body has in fact started to build up the uterus to receive a fertilized ovum: *i.e.*, the eleventh day total, in many cases, of her new monthly reproductive cycle.²⁶⁷

Can you see where I'm going with this? The day that I believe the heavens themselves recorded the Annunciation with a conjunction of Venus and Mercury and other signs was on the 1st of September. And the image of the moon coming under the feet of the woman clothed with the sun, and with the sun positioned near one of her ovaries and Fallopian tubes, came ten days later, on the 11th of September. It then occurred to me that this would be consistent with the idea that the angel Gabriel may have come to Mary and made his announcement (the Annunciation) on the day that her reproductive cycle began (quite possibly, her first reproductive cycle ever) on September 1st, and that Mary then ovulated ten days later, on September 11th.

This all ties together to show us that these various different events which took place on Earth do echo back to heaven those things which, as Larson has pointed out with respect to his own observations, were written into the celestial mechanics of the heavens from the very time the Earth itself came into existence. For the placement of the sun, moon, and planets on that morning in 3 B.C. were all ordained from the time that our solar system first began, as is attested to by Kepler's Laws of Motion.²⁶⁸

As Larson said in his documentary in a different context, the very fact that various things of this nature were ordained from the very beginning of time is indeed poetry of terrible beauty.

vi. A Look At Jewish Law And The Virgin Birth

Now, as I mentioned before, over the years there has been some debate as to whether the Apostle Matthew may have read too much into a prophecy by the Prophet Isaiah, in which the prophet had said that the Messiah would be born to a virgin, and whether this would refer to a virgin in the ordinary sense (*i.e.*, a sexually mature woman who was not yet active sexually), or whether this would be a young, prepubescent girl. And I can't help but wonder if these signs in the heavens which we just considered are signs which help resolve that debate. Let us look once again at what the Scriptures say to consider that issue in depth.

In the Gospel of Matthew, the Apostle Matthew wrote:

²⁶⁶ <http://www.babyhopes.com/articles/ovulation-conception.html>

²⁶⁷ https://www.mindbodygreen.com/0-16167/get-to-know-the-4-phases-of-your-menstrual-cycle.html?sscid=31k5_biiu0&utm_source=sas&utm_medium=affiliate&utm_campaign=742098

²⁶⁸ <https://www.physicsclassroom.com/class/circles/Lesson-4/Kepler-s-Three-Laws>

[22](#) Now all this took place to fulfill what was spoken by the Lord through the prophet: [23](#) “BEHOLD, THE VIRGIN SHALL BE WITH CHILD AND SHALL BEAR A SON, AND THEY SHALL

this: CALL HIS NAME IMMANUEL,” which translated means, “GOD WITH US.” (Matt. 1:22-23; NASB)²⁶⁹

The Old Testament verse, in turn, to which Matthew was referring to is

[14](#) “Therefore the Lord Himself will give you a sign: Behold, a virgin will be with child and bear a son, and she will call His name Immanuel. (Isaiah 7:14; NASB)²⁷⁰

In the Book of Isaiah, the Hebrew word which is translated “virgin” is the word *almah* (or, *ha’almah*).²⁷¹ In the Gospel of Matthew, the Greek word which is translated “virgin” is the word *parthenos* (pronunciation: <https://www.synonyms.com/pronounce/parthenos>).²⁷² As for myself, I believe that Jesus had a virgin birth, for I am a Bible-believing Christian, and Matthew plainly takes the position that such was the case; see also Luke 1:26-35.²⁷³ But more to the point, for purposes of this discussion, I believe that the astronomical evidence pertaining to the Annunciation renders moot the question of whether the prophet Isaiah was referring to a virgin specifically or more simply instead to a young girl. For if the entrance of the planet Venus into the region of the head of Virgo (as is shown above) is in fact intended to signify the initiation of the production of estrogen within the brain²⁷⁴ (a relatively recently discovered medical phenomenon known as estrogen rapid signaling),²⁷⁵ then this might show us a sign of the very beginning of puberty for Mary.

This would mean not only that this is the point at which she was achieving sexual maturity and therefore was becoming capable of conceiving Jesus (and would therefore be a virgin in the usual sense), but that also, at the same time, all of her friends, her family, her neighbors, and the rabbi and elders at her synagogue would still consider her to be a young girl in the sense of being prepubescent. For she would not yet have completed her first reproductive cycle, even though it may in fact have started right at that point. If such were the case, then from two different perspectives, she could be thought of as being a virgin in the usual sense, and yet, at the same time, she would have been perceived by all those around her (including those who would be looking for signs of the coming Messiah) as still being a prepubescent girl.

In addition, there is an excellent discussion of the Jewish legal ramifications of the fact that Jesus’ mother Mary was betrothed at the time that she conceived and gave birth to Jesus: <https://www.youtube.com/watch?v=KgmKOipSRWc>. The fact that she was betrothed meant that there was a presumption in Jewish law that she was a virgin. However, at this point, she would not simply be a “virgin”, but would be instead a “virgin betrothed”, the principal difference being that since she was betrothed, she was, in Jewish law, already a legal member of the family of Joseph, the earthly father of Jesus, whom the Bible says was of the House of David. (Matt. 1:1)²⁷⁶ This in turn meant that her child, Jesus, would be legally entitled to the throne of King David because Mary was already betrothed to Joseph when Jesus was born (and in fact, such was her legal status even before she conceived Him in her womb). Yet simultaneously, as I said, the fact that Mary was betrothed also established a presumption in Jewish law that she was a virgin. All of this reinforces

²⁷⁰ <http://biblehub.com/nasb/isaiah/7.htm>

²⁷¹ <http://biblehub.com/hebrew/5959.htm>

²⁷² <https://biblehub.com/greek/3933.htm>

²⁷³ <https://biblehub.com/nasb/luke/1.htm>

²⁷⁴ <https://pubmed.ncbi.nlm.nih.gov/21320576/>

²⁷⁵ <https://pubmed.ncbi.nlm.nih.gov/18253054/> (Note: click on DOI: [10.1159/000111559](https://doi.org/10.1159/000111559) to access a link to a PDF version of the article.)

²⁷⁶ <https://biblehub.com/nasb/matthew/1.htm>

the claim that Jesus was conceived by the power of the Holy Spirit (Luke 1:26-35),²⁷⁷ and that therefore He was also the Son of God.

b. Signs Which Were Intended For Us Instead Of The Magi

Now, I know that some may object to this aspect of my presentation on the grounds that it is irrational to think that the astronomical and biological aspects of the Annunciation, Mary's ovulation, and the conception of Jesus could be evidence related to the Star of Bethlehem on the grounds that the Magi themselves would have known nothing about these things. Technically, this is not entirely correct, as we shall see later. But even if it were entirely correct, this would be no valid objection at all, and in fact this objection itself is irrationally based.

The reason I say that is this: The issue which we face is whether God Himself has placed signs in the heavens attesting to the truth of His Word. And if the issue is whether God Himself has placed signs in the heavens attesting to the truth of His Word, then why would we conclude that every single one of these signs would necessarily have been intended only for the Magi?

You see, the thing that this so-called objection completely overlooks is the possibility that at least some of these things are signs which were intended not for the Magi at all, but are instead signs from God who placed them there awaiting the day when we ourselves would discover them today, 2,000 years later. In other words, it is plausible that we ourselves today are the actual intended recipients of at least some of these signs, this message from God from long ago attesting to us---and not just to the Magi of old---about the truth of His Word.

i. A Lesson From Arthur C. Clarke

In that respect, this may be the inverse of the central basis of the short story *The Sentinel*, and likewise the follow-up book to that short story, *2001: A Space Odyssey*, each of which was written by Arthur C. Clarke. Clarke was a famous writer who, in 1945, had been the first one to popularize the idea that instant worldwide communications could be achieved by positioning satellites in geosynchronous orbits.²⁷⁸ These days, the global positioning satellite system (GPS) is based upon the use of such satellites.

In his works *The Sentinel* and *2001: A Space Odyssey*, modern astronauts uncover a monolith which had been buried on the moon. It then sends a signal into the vast reaches of the heavens the first time sunlight touches it after they had dug it up. As it turns out, the monolith was designed in such a way that it would be discovered by us almost automatically (by its intense magnetic field) once we would have sufficiently-advanced technology to travel to the moon, for our natural, scientific curiosity would lead us to it.

The signal which it would then send out when sunlight touched it was intended to tell those

²⁷⁷ <https://biblehub.com/nasb/luke/1.htm>

²⁷⁸ https://en.wikipedia.org/wiki/Arthur_C._Clarke

who had left the monolith behind many eons earlier that the monolith had in fact been uncovered and exposed to sunlight, thereby telling those who had left it there long ago that our technology had advanced to the point that we could travel to the moon and that, as a result of our natural curiosity, we had uncovered the monolith.²⁷⁹ (As a side note, I once had the rare privilege of engaging in a brief dialogue with Dr. Clarke at a science fiction convention regarding another topic. In the Appendix find MY QUESTION TO ARTHUR C. CLARKE.)

With respect to the Star of Bethlehem and what we can discover now about the relationship between astronomy and the Annunciation, we must consider the possibility that this time, in contrast to what we see in the works of Arthur C. Clarke, it is we ourselves who are the ones receiving a message, a message which was sent to us from the heavens eons ago (as opposed to a signal being sent *from* us, *into* the heavens, at *this* point in time). This signal is finally confirming to us, now that we have developed sufficient technology to uncover these signs, that what we have heard about in Scripture for thousands of years really is true, and that the One who made us has sent us a signal, a signal made ready by Him eons ago for that day when we---following our natural, scientific curiosity---would eventually uncover His signal, a signal which would then tell us today that He really is there, and that He really has been there all along.

c. Independent Confirmation

Supporting this idea is the fact that the astronomical evidence of the Annunciation and the conception of Jesus are also attested to by biology. We must ask, "What in the world does astronomy have to do with biology?" And the answer to that is, "Nothing." But then, that's just the point. For astronomy and biology are two totally separate, disconnected disciplines. So when biology comes together with astronomy to attest to the same thing, biology is then making a totally independent confirmation of the astronomical aspect.

Likewise, the position of the moon on the morning of September 1, 3B.C., which supports the Orthodox tradition about the Annunciation (*i.e.*, in that the moon would have given off just enough light for Mary to go to the well quite early, and be alone while she was there)---along with the extremely close conjunction of Mercury and Venus on that morning, plus the overshadowing of the stars of the constellation Virgo by the sun during Rosh Hashanah, and the simultaneous entry of the sun into the area of an ovary and Fallopian tube of the image of that constellation---are all separate, independent events which constitute prime examples of support for the idea that looking to the heavens for signs which God may have placed there is a practice which is acceptable for us today, and was not just for the Magi of old. This is true if for no other reason than the fact that it took until we had developed our modern technology today to uncover these facts (both in terms of astronomy and biology) with this technology which the Magi themselves did not have.

The fact that the calendar likewise gives us a clear reason as to why Mary might want to be at the village well unusually early on that morning (*i.e.*, to arrive before the expected large weekly crowds on a Sunday morning) comes together to provide us with yet another separate, completely

²⁷⁹ Note: This point was not clearly made in the movie version of *2001: A Space Odyssey*, though it was expressly covered in the book version.

independent confirmation of the truthfulness and accuracy of the otherwise seemingly odd and questionable Greek Orthodox tradition. And the peculiarities of the Orthodox tradition (*i.e.*, being at the well alone, and being so fearful that she would feel the need to go home), once they are corroborated by these points, suddenly no longer tend to cast doubt upon the Orthodox story of the Annunciation, but instead tend to reinforce the accounts of the Annunciation (including this Greek tradition) and the virgin birth of Jesus which are attested to in the Bible.

3. A Summary Of The Timeline Of The Annunciation, Mary's Ovulation, And The Conception Of Jesus

All in all, I cannot say with absolute certainty as to when the Annunciation, Mary's ovulation, and the conception of Jesus took place; but I am strongly convinced within my own mind that the following statements do correctly show the timeline of the events which we have just looked at:

- First, August 12th of 3 B.C.---which, during daylight hours, was the last day of Av that year (the 30th day of Av)---a day which also marked the first day of the two-day Rosh Codesh of Elul; and Elul, as we have seen, is an important month of preparation for what is to come: the High Holy Days of Rosh Hashanah and Yom Kippur during the following month. It is at this time---at the commencement of the month of preparation (Elul), which is a time of transition from a time of sorrow to a time of joy (from Av to Tishrei)---that Venus (the mother) and Jupiter (the king) come extremely close together, giving a foretaste of things to come.
- Second, on September 1st, in the midst of Elul, Venus and Mercury have an equally close conjunction, and the Annunciation takes place.
- Third, starting around September 6th (likewise during Elul), Venus enters into the head of Virgo, and would not begin to emerge from the head until September 13th. This may have been the time during which Mary experienced estrogen rapid signaling, and when she may have started to develop her self-identity both as a woman and as a potential mother.

- Fourth, ten days after the Annunciation, either during the afternoon of September 11th (which was at the conclusion of the month of Elul), or else right after sunset on September 11th (at the start of the month of Tishri and Rosh Hashanah), Mary ovulates, followed shortly thereafter (by about a day and a half, as we shall see) by the conception of Jesus in her womb.

From all of this I conclude that the reference in the Gospel of Luke to the Annunciation having taken place in “the sixth month” has a double meaning: It refers to the sixth month of Elizabeth’s pregnancy, and at the same time it refers to the month of Elul, the sixth month of the ecclesiastical calendar.

This is not unprecedented in Scripture. Double meanings for words can be found in more than one place in Scripture, most notably in Chapter Five of the Book of Daniel. For a further look at that, I again refer you to a section in the Appendix entitled THE CELESTIAL ASPECTS OF THE FALL OF BABYLON AND CHAPTER FIVE OF THE BOOK OF DANIEL, and in particular, Parts A and B of that portion of that section in the Appendix.

Interesting as all these things may be, what really brings them together is not simply these things by themselves alone, but also another conjunction, a conjunction of Jupiter and Venus in June of 2 B.C. So let us now look at that conjunction. For what took place at that time points with additional clarity to the birth itself of the King of the Jews, and significantly, this conjunction took place nine months after the signs that we just looked at which point to the conception of Jesus.

This completes Volume 1 of The Star of Bethlehem Decoded. All four volumes plus the Appendix can be found at StarOfBethlehemDecoded.com.