

Further Light on the Christmas Story

S P Townsend

First Edition May 2023

Copyright © S P Townsend 2023

The right of S P Townsend to be identified as author of this work has been asserted by him in accordance with the UK Copyright, Designs and Patents Act 1988

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Copyright owner.

All Scripture quotations, unless otherwise indicated, are taken from the Holy Bible, New International Version®, NIV®. Copyright ©1973, 1978, 1984, 2011 by Biblica, Inc.™ Used by permission of Zondervan. All rights reserved worldwide. www.zondervan.com The “NIV” and “New International Version” are trademarks registered in the United States Patent and Trademark Office by Biblica, Inc.™

Contents

Introduction.....	1
Joseph and Mary – Their Relationship and Living Arrangements.....	1
The Census and the Trip to Bethlehem	4
The Death of Herod the Great.....	6
Further Insights From the Birth of John the Baptist	7
Implications From the Visit of the Wise Men	9
The Seventy Sevens Prophecy in Daniel 9	17
Final Remarks.....	21
Appendix 1.....	22
Appendix 2.....	24
Appendix 3.....	26

Introduction

Many aspects of the familiar Christmas story are shrouded by uncertain tradition and even myth. To a large extent this does not trouble us. We are content to remember and celebrate the wonderful fact that “the Word became flesh and dwelt amongst us ... full of grace and truth” (John 1: 14), without being particularly concerned that he probably wasn’t born on December 25th, and it maybe didn’t happen in “the bleak mid-winter.” Moreover the morphing of the beneficent St Nicholas of Myra into the Santa Claus that excites and entertains us today seems to cause little angst, even for the most devout amongst us.

It is actually somewhat ironic that so many aspects of the Christmas story are so clouded in mystery. Luke, the gospel writer, took great pains not only to investigate events thoroughly but also to pin them very precisely onto the map of civil history familiar to the first recipients of his work. But sadly so much of that secular history has since become obscure. Take, for example, the census decreed by Caesar whilst Quirinius was governor of Syria. Luke must have intended this reference to fix the time of the nativity very precisely. Instead it has become one of the most hotly disputed aspects of his entire narrative.

Some of the misunderstandings of the Christmas story, particularly in the west, derive from uncertain translations of some parts of the original Greek text. For example, the word translated “inn” in the Authorised Version of Luke 2: 7 would have been better rendered “guest room.” Thankfully many of the more recent translations of the New Testament available today have addressed some of these issues. But undoubtedly many of the more significant misunderstandings come from the tendency we have to fill in missing parts of the story with details from our own cultural background rather than that of first century Palestine.

In what follows various aspects of the birth of Christ are re-examined in the light of fresh understanding from recent studies, and from new information that is now widely accessible.

Joseph and Mary – Their Relationship and Living Arrangements

Both Matthew and Luke in their nativity accounts refer to Mary as being “pledged to be married” to Joseph (Matt 1:18; Luke 2:5). Often in the UK and elsewhere people have understood this to mean that they were engaged, but not yet actually married. However later verses in Matthew’s account do not support this interpretation. First of all Matthew says that Joseph had been intending to divorce Mary (Matt 1:19); divorce doesn’t make sense unless they were actually legally married. Secondly the angel instructed Joseph to take Mary home as his wife, which Joseph proceeded to do (Matt 1:20-24). It seems from this that Joseph and Mary did indeed complete the social and legal requirements of marriage. Why then did the Gospel writers say they were “pledged to be married” at the time they made the journey to Bethlehem? If indeed Mary was by then Joseph’s wife, why did they not simply describe Mary as being married to Joseph? To understand what both Matthew and Luke were clearly saying we need to look more closely at the marriage conventions in Jewish society in the first century AD.

Marriage for a devout Jewish couple in the first century was a three-stage process, the first two of these possibly being separated by a number of years¹. The first stage was betrothal or espousal. This was a formal commitment of the couple to each other for marriage, involving a legal contract (called a ketubah) under which the groom was required to pay a bride price to the bride’s father. The betrothal could be arranged between the two sets of parents without the prior knowledge of the couple to be married, possibly whilst the couple were still children. Under another typical scenario the groom, being of age, could arrange a betrothal with the bride’s father without necessarily obtaining the bride’s prior consent. In any case betrothal was legally binding, and could only be broken by a formal process of divorce. The bride price might not be paid immediately, but had to be paid before the second stage could be completed.

The second stage involved the consummation of the marriage. Consummation was the act of sexual union between the couple (called chuppah). This was subject to much more public scrutiny than it is in our modern western society. The groom would arrange a date of consummation with the bride’s father

¹ See, e.g., <https://www.bible.ca/marriage/>

or guardian, once the bride price had been fully paid. On the set day the groom would make his way to the bride's house accompanied by his companions. The bride would await him, along with her bridesmaids. The couple would then enter the nuptial room, and there consummate their marriage. A special cloth or sheet was first laid on the marriage bed, in order to catch any bleeding suffered by the bride during sexual intercourse. Bleeding was expected, and indeed demanded as a proof of virginity. After consummation the blood-stained "proof of virginity" cloth was handed over to witnesses nominated by the bride's father, and thereafter kept securely as evidence that the bride was indeed a virgin (ref. Deut 22: 13-21).

The third and final stage of marriage followed immediately after the second, involving the groom taking the bride into his own home as his wife. The bride and groom, along with their companions, would go in procession from the bride's home to the groom's house. There they would celebrate with a wedding feast that in some cases might last for days. From that time on the couple would live together as husband and wife.

Only when all three stages had been completed were a couple considered to be fully married. Nevertheless, they could be referred to as husband and wife at any time after the ketubah contract had been signed, and indeed were legally so. Betrothal was essentially a legal marriage that had not yet been consummated. This was the status of Joseph and Mary when first introduced by Matthew and Luke, and indeed according to Matthew it continued to be their status until after Jesus was born (Matt 1:25). Both Matthew and Luke were careful to make this status clear to their readers, each in his own way. Luke stated that the couple were betrothed or espoused (i.e. husband and wife but not sexually united) even though Mary was pregnant (Luke 2:5). Matthew stated that Joseph took Mary as his wife, but had no sexual union with her until after the birth (Matt 1:24,25). The literal translation of the Greek used by Matthew is "took [to himself] his wife and knew her not until she bore a son." Again the meaning conveyed is that they were husband and wife but not sexually united. Both accounts are therefore consistent with Joseph taking Mary into his own home as his wife before their trip to Bethlehem.

Clearly the second stage of the marriage process, chuppah, did not take place prior to the birth of Jesus. Without chuppah, and the evidence of the "proof of virginity" cloth, everyone in the locality would have become aware of the scandal. And Joseph, by completing the marriage without objection or formal complaint, would have been vilified as the guilty party. This helps us understand why Matthew records the angel as saying, "Do not be afraid to take Mary home as your wife" (Matt 1: 20). Joseph had to confront a very real personal agony. He was a righteous man (Matt 1:19) but his decision meant that from that time on his public reputation would have been in tatters.

An interesting question is what ages Joseph and Mary were when she became pregnant. Typically in their culture a married couple would begin to live together as soon as the husband was able to support his wife independently, and they had both attained the age of puberty. Very often the girl might still be a young teenager, and her husband perhaps a few years older. Of relevance is the statement by the people of Nazareth, recorded by both Matthew and Mark, referring to Jesus' four brothers James, Joseph (or Joses), Simon and Judas and "all" his sisters, which is thought to imply at least three (Matt 13: 55-56; Mark 6: 3). If these were all offspring of Joseph and Mary then it implies both of them were relatively young when they set up home together.

However there is another possibility. There is a tradition in the Eastern Orthodox Church that Joseph was a widower when he took Mary as his wife, and that the brothers and sisters referred to by the people of Nazareth were from his first marriage². If so then Joseph would have been much older than Mary, and by the time Jesus commenced his public ministry he might well have passed away, thus explaining his absence from the scene at that time. Nevertheless there is one major objection to this view; if Joseph and Mary had six or seven other children in their care at the time of the birth of Jesus, how come there is no mention of them in the Nativity accounts? When alerting Joseph of Herod's plan to kill the new baby the angel said, "Take the child and his mother and escape to Egypt" (Matt 2: 13). It seems quite clear that only three of them made that journey.

² See [https://www.newworldencyclopedia.org/entry/Joseph_\(father_of_Jesus\)](https://www.newworldencyclopedia.org/entry/Joseph_(father_of_Jesus))

From the historical documents currently available it does not appear to be possible to come to a firm conclusion about the ages of Joseph and Mary at the time of the Nativity. The best we can say is that the most likely scenario, based on normal practice in their day, is that Mary was in her mid-teens and Joseph was perhaps a decade older, having by then learned his trade and set up business as a carpenter.

There seems little doubt that Joseph and Mary resided in Nazareth after he took her home as his wife. Before she moved in with Joseph Mary certainly resided in Nazareth, for Luke records the angel Gabriel going to Nazareth to announce the conception and birth to Mary (Luke 1:26-27); he also says that Mary “returned home” after visiting Elizabeth, having originally commenced her journey at Nazareth (Luke 1:56). It also seems evident that Joseph’s normal place of residence, and hence the couple’s marital home, was also in Nazareth. Luke records the couple travelling from Nazareth at the time of the census (Luke 2: 4), and then says that after the birth of Jesus, and after all the required legal procedures were completed, they returned to “their own town of Nazareth” (Luke 2: 39).

There is the possibility of some uncertainty regarding Joseph’s home, since Luke says that everyone went to “his own town” to register for the census, and that consequently Joseph went to Bethlehem (Luke 2:3-4). Luke uses almost the same Greek wording for “his own town” as he uses later for “their own town” regarding the couple’s return to Nazareth. However it seems that Luke’s use of this phrase in verse 3 does not infer place of ordinary residence, since Luke speaks of the requirement to travel to the town concerned. It was Joseph’s family origin that required him to register in Bethlehem. Historical documents relating to Roman censuses confirm that subjects could be required to return to their ancestral homes to register, and that heads of household would include in their census returns all such returning individuals who were staying with them.³

Luke’s statement that Joseph and Mary returned to Nazareth after they had completed everything required by the Law of the Lord (Luke 3:39) sheds some light on the activities of the couple after Jesus was born, but also raises some questions. The Law specified that the baby should be circumcised on the eighth day after birth. After that a further 33 days of purification had to pass before the mother brought two doves to the temple as a burnt offering and a sin offering (Lev 12:1-8). Luke tells us that the couple completed these purification rites and after this returned to Nazareth. The clear implication is that the couple stayed in Jerusalem for at least forty days after Jesus was born. This raises the question of when did the visit of the Magi occur, and the subsequent flight to Egypt?

There are two possibilities for the residence of Joseph and Mary immediately prior to the visit of the Magi. The first is that they remained in Bethlehem until just after the Magi had left. This period of time may have been as short as the forty days of Mary’s purification, or it may have been longer. That they might have remained for some time is entirely understandable, on the assumption that they were staying with close relatives. Nevertheless it is doubtful that their stay lasted for more than a few weeks, for it is unlikely that Joseph could have afforded to abandon his carpentry business in Nazareth for a great length of time. Of course as things turned out they were indeed absent from Nazareth for many weeks or months, but the gifts from the Magi would have helped to cover some or all of their living costs during this time.

It is curious that Luke seems to imply an immediate return to Nazareth after Mary’s purification. Perhaps he was unaware of the family’s last-minute flight to Egypt, although this is unlikely since he said he carefully investigated everything (Luke 1:3). The other possibility, assuming this first scenario is correct, is that he deliberately chose to omit it from his account. For his intended readers the next important event was the family’s residence in Nazareth, so he expressed this as succinctly as possible.

The second possibility is that the couple returned to Nazareth immediately after the forty days of purification were over, and then some time later went back to Bethlehem, possibly intending to live there instead. Maybe they experienced hostility from some of the residents in Nazareth and decided to move to Bethlehem to be closer to some of their relatives. Perhaps the significance of the prophecies they had received persuaded them that Bethlehem would be a more appropriate place for Jesus to be raised. There is no direct evidence in the Gospels that they moved, only a faint possibility suggested by Matthew’s

³ e.g. see <http://www.biblehistory.net/newsletter/quirinius.htm>

account. Matthew wrote that on their return from Egypt Joseph's intention was to return to Judea, but on being warned by God he changed his mind and went to Galilee instead (Matt 2:21-23). If he intended to return to Judea perhaps this was where their family home now was. But there are alternative, and perhaps more likely, explanations. One is that since Judea was on their route from Egypt to Galilee they planned to visit relatives there as part of their return journey. Another is that their journey took place about the time of the Passover occurring after Herod's death, and they intended to stop off temporarily in Jerusalem in order to celebrate the festival.

If the possibility raised later in this document is correct, that Jesus was born at the start of the Jewish New Year in October 2 BC, then the first of the above two possibilities must be the correct one. The Magi visited in the last few weeks of 2 BC, or just into 1 BC, when the baby was approximately two months old. Joseph and Mary fled from the slaughter about to be unleashed by Herod immediately after this, and remained in Egypt for three or four months. On the other hand if Jesus was born in 3 BC then the possibility that Joseph and Mary moved to Bethlehem and lived there for up to a year before the Magi's visit is quite tenable. Either that or the family resided for well over a year in Egypt.

The Census and the Trip to Bethlehem

The gospel record is clear that it was a census that required Joseph and Mary to travel to Bethlehem, and at such an inopportune time in the later stages of Mary's pregnancy. Luke tells us that this census was conducted across the entire Roman Empire.

"In those days Caesar Augustus issued a decree that a census should be taken of the entire Roman world. (This was the first census that took place while Quirinius was governor of Syria.) And everyone went to his own town to register." (Luke 2: 1-3)

Scholars have struggled to identify the census that Luke wrote about, and some have questioned his reliability. This is partly because of the lack of strong support from other contemporary historical records, but mostly because, although Quirinius is known to have been governor of Syria, this was apparently many years later.

One interesting historical record that has a bearing on this matter is that of Paulus Orosius, who lived in the 5th century AD. He records that Jesus was born towards the end of the forty-second year of the reign of Augustus, in the seven hundred and fifty-second year of the City of Rome. He says that this was a time of unprecedented peace within the empire, and that at this time all nations within the empire swore an oath of allegiance to Caesar Augustus by means of a great census⁴. Augustus (born Gaius Octavius) was the first Roman emperor. He succeeded Julius Caesar as ruler of Rome on Caesar's death on 15 March 44 BC. He did not become emperor with the title Augustus until 27 BC. The legendary founding date of Rome was 753 BC⁵, which would make 2 BC its seven hundred and fifty-second year. This would also be the forty-second year of the reign of Gaius Octavius, assuming 44 BC is counted as the final year of the reign of Julius and 43 BC the first year of the reign of Octavius. If instead Orosius counted 44 BC as the first year of Octavius' reign then 3 BC would have been his forty-second year.

Orosius' claim that a census was used as a means of recording oaths of allegiance to Augustus across the entire Roman Empire is extremely credible. The historian Josephus refers to just such a requirement of the Jewish nation, taking place perhaps a year or so before Herod's death, commenting that over 6000 Pharisees refused to comply and that each suffered a fine as a consequence⁶. In February 2 BC the Roman Senate bestowed on Caesar Augustus the title "Pater Patriae" (literally, Father of the Fatherland). It seems clear that this unprecedented and highly significant honour was accompanied by requirements for oaths of allegiance to Augustus across the Roman world. The text of just such an oath required of the Paphlagonians is engraved on a slab of sandstone from the Orthodox Church in Vezirköprü, Turkey⁷

⁴ Paulus Orosius, *Historiae Adversus Paganos*, VII.2.13-16 (see <http://attalus.org/translate/orosius7A.html>)

⁵ see https://www.worldhistory.org/timeline/Roman_Republic/

⁶ Josephus, *Antiquities of the Jews*, Book XVII, 2:4

⁷ see <http://philipharland.com/greco-roman-associations/oath-of-loyalty-to-augustus-by-paphlagonians-and-roman-businessmen-3-bce/>

It states that the citizens completed the oath in “the third year from the twelfth consulship, on the day before the Nones of March.” This was 6th March 3 BC.

A likely scenario is that all Roman provinces were instructed to complete the census by a specified date, in support of the honour bestowed on Augustus by the Senate, but that the detailed arrangements and timings were left up to the governor of each region. This would suggest that the census for any given province, and in particular that pertaining to the Jewish people, took place some time in 3 or 2 BC, in full agreement with the date of the 42nd year of Augustus for Jesus’ birth specified by Orosius. Professor Jack Finegan, in his book “Handbook of Biblical Chronology,” tabulates the year of Christ’s birth as stated by thirteen early Christian sources other than Orosius. Nine of these agree it was in 3 or 2 BC⁸.

In actual fact Luke’s statement about the census lends credibility to the Nativity story. It is difficult to imagine that anything other than a governmental diktat would have compelled the couple to make such a journey so soon before Mary was due to give birth. Nevertheless the apparent unavailability of accommodation in or near Bethlehem is a curious feature of the account. It is usually explained by the likely influx of many others for the census registration process, and the resulting pressure on accommodation. This would certainly explain why the inn was full; but it doesn’t explain why Joseph and Mary were seeking accommodation at an inn in the first place. Trips to Jerusalem would have been a regular feature of their lives up to this point for the three pilgrim festivals. Joseph in particular was expected to attend these (Deut 16:16). In each case Jerusalem would have been crowded with an influx of visitors, so both of them would have established routines for their accommodation requirements whilst at Jerusalem, involving relatives or friends. Why then did they not make use of one of these established arrangements, particularly since Mary was in the advanced stages of pregnancy? Bethlehem was little more than four miles from Jerusalem, so accommodation in or near the city would have been close enough to rise early and get to Bethlehem in order to complete the registration. Certainly Ein Karem would have been close enough, assuming that was the village where Mary’s relatives Elizabeth and Zechariah lived.

The answer is that almost certainly the couple did indeed find accommodation in a home of relatives or friends, and did not have to resort to an inn in the sense that we usually understand the word. The Greek word used in Luke 2: 7 that has traditionally been translated “inn” is the word *kataluma*, which means “guest-chamber.” It is the same word that is used in Mark 14: 14 and Luke 22: 11, referring to the room where two of the disciples would prepare the Last Supper. In contrast, when Jesus spoke of an inn used to accommodate travellers in the parable of the Good Samaritan (Luke 10: 34) He used the Greek word *pandocheion*.

The typical private house for ordinary people in Israel in the first century would have consisted of a ground-floor living area that accommodated the entire family⁹. An enclosed area with a lower level of flooring would typically be used to house animals overnight. If the family were sufficiently affluent a guest room might be erected on the flat roof of the house. One such guest room was provided by a well-to-do couple in Shunem for use by Elisha (2 Kings 4: 10). It was most likely such a guest room that was already occupied when Mary and Joseph arrived at their planned destination in Bethlehem, and as a consequence they had to bed down in the main family area. When Mary gave birth a nearby animal feeding trough provided a convenient makeshift crib for the new-born baby.

A final question is why would the census have caused such pressure on available guest accommodation? Almost certainly the registration process would have been extended over a lengthy period of time, possibly some weeks or months. However, if Joseph and Mary planned their trip to coincide with one of the pilgrim festivals in Jerusalem then this would indeed explain why suitable accommodation was in short supply. After all, if the government insisted that the journey had to be made then why not arrange it to fit as closely as possible with their normal schedule of activities?

⁸ Finnegan, J, Handbook of Biblical Chronology, Princeton University Press, 1964, p 229.

⁹ see <https://bible-history.com/sketches/first-century-israelite-houses> and <https://biblearchaeology.org/research/chronological-categories/life-and-ministry-of-jesus-and-apostles/4866-away-in-a-manger-but-not-in-a-barn-an-archaeological-look-at-the-nativity>

The Death of Herod the Great

Luke tells us that the census and the subsequent trip to Bethlehem took place whilst Herod the Great was still living. As mentioned before the historian Josephus concurs that the census of the Jewish nation took place before Herod's death. If this census was indeed in 3 or 2 BC it implies that Herod died in 1 BC or later. Many scholars reject such a late date for Herod's death, insisting that he must have died in 4 BC. One of the strongest arguments supporting this date is the belief that his sons commenced their reigns in 4 BC. It is usually argued that the historian Josephus supports this date too, since he said that Herod reigned for 37 years since he was declared to be King of Judea by the Romans¹⁰. The Roman Senate elected Herod as king in 40 BC, and if this is taken to be his first year then his 37th year would indeed be 4 BC.

However this fails to take into account the additional information that Josephus supplied. He also said that Herod had reigned for 34 years since the death of Antigonus, who was ruler in Jerusalem at the time Herod was elected to be king. Herod had to use force to seize Jerusalem from Antigonus. And Josephus is very clear that the city was taken in 36 BC, 27 years to the very day after Pompey had taken Jerusalem in 63 BC¹¹. This was in the third month on the day of the fast. The Jewish third month is Sivan, and the most important fast day in this month is Shevuot (Pentecost) which took place on 24th May 63 BC. Antigonus did not die in the battle, but was captured and taken from Jerusalem to Antioch to be held prisoner by Mark Antony. Herod then paid a great deal of money to Mark Antony to persuade him to execute Antigonus. We do not know precisely when this happened, but it was clearly some time, possibly many months, after Herod captured Jerusalem. Antigonus could very well have been executed in early 35 BC; 34 years later brings us to early 1 BC.

Josephus mentions one other significant event during the final illness of Herod the Great, shortly before his death, namely an eclipse of the moon¹². He then describes a number of events that took place during the final stages of Herod's illness, followed by his death, funeral and the takeover of government in Judea by his son Archelaus. During the following Passover Festival there was a revolt by some of the people against Archelaus; he sent in the army to restore order, and as a result three thousand citizens were killed as they were bringing Passover lambs to the temple for sacrifice¹³.

The NASA Eclipse Website lists five total or partial eclipses happening in the five years from 5 BC to 1 BC that would have been visible from Judea, cloud cover permitting (excluding three penumbral eclipses in 3 BC)¹⁴. These occurred on 23rd March 5 BC (total), 15th September 5 BC (total), 13th March 4 BC (partial), 10th January 1 BC (total), 29th December 1 BC (partial). Many scholars have considered the partial eclipse on 13th March as supporting a 4 BC date for the death of Herod. However there were only four weeks between this eclipse and Passover that year, which occurred on 11th April, and it is considered extremely unlikely that all of the events described by Josephus could have occurred in such a short period of time. The eclipse on 15th September 5 BC is thought to be too early, being six months before Passover; also why would Josephus mention this eclipse but not the following eclipse in March as well? On the other hand the total lunar eclipse that took place on 10th January 1 BC occurred about three months before the Passover on 7th April that year. It is entirely feasible that the events described by Josephus surrounding Herod's death could fit into this period. The partial eclipse on 29th December 1 BC is also a possibility, which would place Herod's death in AD 1.

A date of early 1 BC or later for the death of Herod is now favoured by an increasing number of scholars¹⁵. As mentioned before the main objection to such a late date for Herod's death is the belief that his sons commenced their rule in 4 BC. Josephus states that Herod's son Philip, tetrarch of Trachonitis and Gaulanitis, died after ruling for thirty seven years¹⁶. This is independently confirmed by

¹⁰ Josephus, *Antiquities of the Jews*, Book XVII, 8:1

¹¹ Josephus, *Antiquities of the Jews*, Book XIV, 16:4

¹² Josephus, *Antiquities of the Jews*, Book XVII, 6:4

¹³ Josephus, *Antiquities of the Jews*, Book XVII, 9:3

¹⁴ see <https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html>

¹⁵ see https://en.wikipedia.org/wiki/Herod_the_Great

¹⁶ Josephus, *Antiquities of the Jews*, Book XVIII, 4:6

a coin inscribed with this date. Moreover Josephus also says Philip's death happened in the twentieth year of Tiberius Caesar, i.e. AD 33 or 34. It is concluded that Philip must have commenced his rule after Herod's death, sometime in 3 or 4 BC. However a more careful reading of what Josephus has to say significantly challenges this conclusion¹⁷. Josephus tells us that Philip died when Vitellius was governor of Syria, during which time Vitellius had removed Pontius Pilate from office. Vitellius appointed Marcellus in place of Pontius Pilate, and sent Pilate to Rome to answer charges of murder before Caesar. This took place in AD 36¹⁸. Then, after recording Philip's death, Josephus proceeds to recount the war between Herod Antipas and Aretas, King of the Nabataeans, which again took place in AD 36. But AD 36 was the twenty-second year of Tiberias, not the twentieth. This discrepancy of dates in Josephus' account can be explained by the fact that it is only the Greek language manuscripts of Josephus that place Philip's death in the twentieth year of Tiberius. All of the known Latin manuscripts specify his death in the twenty second year of Tiberius. At some point when an early manuscript was being copied an incorrect date was written. In the light of the other events that Josephus recounts the most likely scenario is that the error was made when copying a Greek manuscript, and that the correct year of Philip's death is indeed AD 36. If so it confirms that he commenced his rule in 1 BC.

It is noteworthy that this approximate date for the death of Herod the Great is supported by a significant number of early Church fathers, who maintained that the birth of Christ was in 2 or 3 BC. For many years the popular view has been that his birth occurred at least three years earlier, although this has always been seriously challenged by Luke's account in his gospel. Luke claims that Jesus commenced his public ministry at about the age of thirty, this being in or soon after the fifteenth year of Tiberius (Luke 3). Depending on whether he was using a Roman or Jewish calendar, and whether or not an accession year numbering system was used, the fifteenth year of Tiberius was a twelve-month period lying predominantly either in AD 28 or AD 29. If Jesus had been born in 5 BC then he would have been at least 32 years old when baptised by John. If however Jesus was born in 2 BC, and more specifically in the autumn of 2 BC, then this is in complete accord with the commencement of his public ministry in or just after his thirtieth year between autumn AD 28 and autumn AD 29, and his crucifixion at Passover AD 33.

Further Insights From the Birth of John the Baptist

The commencement of Jesus' ministry was closely linked with that of John the Baptist. It is noteworthy that Luke commences his account of the Nativity story with the conception and birth of John the Baptist (Luke 1). Mary was related to John's mother Elizabeth, wife of the priest Zechariah. This couple lived in the hill country of Judah (traditionally Ein Karem, a couple of miles west of Jerusalem). Mary's relationship with Elizabeth does not seem to have been extremely close, because Mary was apparently unaware that Elizabeth was six months pregnant until the angel Gabriel revealed this to her (Luke 1: 36). There may be an implication here that Elizabeth and Zechariah did not publicise the pregnancy widely. It seems there was a significant age difference between Mary and Elizabeth, so their relationship would have been much more that of niece to aunt than close cousins. Nevertheless their relationship was sufficiently close for Mary to abandon her normal activities after she heard Gabriel's message, travel to Elizabeth's home (a 90 to 120 mile journey, depending on the route) and stay with her for three months, quite possibly until the baby had been born. We note in passing that Mary made the journey from Nazareth to Judaea or vice-versa at least three times in a period of nine months – once to visit Elizabeth when Elizabeth was between five and six months pregnant, once to return home from Elizabeth's house three months later, and then on her journey to Bethlehem with Joseph, about six months after this.

The association of Mary's pregnancy with that of Elizabeth's might possibly shed light on the time of year of each of their births, and indeed of the commencement of the public ministries of John and Jesus about thirty years later. King David separated the priestly families into twenty four divisions for the purpose of ministering in the temple¹⁹. The first-century Jewish historian Josephus tells us that each

¹⁷ e.g. see <https://www.torahtimes.org/writings/date-of-herod-death/article.html>

¹⁸ see [https://en.wikipedia.org/wiki/Lucius_Vitellius_\(consul_34\)](https://en.wikipedia.org/wiki/Lucius_Vitellius_(consul_34))

¹⁹ 1 Chron 24: 3-10

division served for an entire week, from one Sabbath to the next²⁰. Moreover the precise sequence in which the divisions were to serve was also set up by David, and Josephus stated that this sequence was still being followed in his day, although there had been interruptions. Zechariah belonged to the division of Abijah (Luke 1:5) and this division was the eighth in sequence. The first division was that of Jehoiarib.

Each of the priestly divisions, also known as sacerdotal courses, would have had sole temple responsibility twice per year, and the entire schedule would have covered 48 weeks in total. In addition the Jewish Mishnah tells us that all of the divisions served together during the three annual pilgrim festivals: Passover, the Festival of Weeks and the Festival of Tabernacles. These all involved the presentation of sacrifices or offerings at the temple, and all Jewish men were expected to attend (Deut 16:1-17). The first and last of these were week-long festivals; the second was for one day, but involved everyone bringing an offering of first-fruits to the Lord (Lev 23). These festivals might possibly have interrupted the normal sequence of service of the priestly divisions. However the Jewish Mishnah seems to indicate that the scheduled priestly division continued to operate as usual during the festivals, carrying out the normal daily sacrifices and offerings. Presumably the other divisions brought in for each festival dealt only with sacrifices and offerings that specifically related to that festival²¹. The Wikipedia entry about the priestly divisions similarly describes a schedule without any breaks for the festivals²².

Whether or not the three pilgrim festivals interrupted the normal schedule for the priestly divisions, it is quite clear that the number of divisions could not divide exactly into the number of weeks in a year. In Judaism the normal length of a year was fifty weeks and four days; a leap-year, in which an extra month was added, was of length fifty-four weeks and six days. The question then is, did the schedule of priestly divisions always restart with the first division – Jehoiarib – at the beginning of each year, or did the schedule just continue week by week without any adjustment to fit in with the annual calendar? Some scholars assume the former²³. However in practice the latter makes more sense, for in this case no special arrangements would have to be made at the year end, and also as time went by different divisions would be scheduled for regular duty during the festivals, which would be more equitable. The Talmud seems to confirm that this was indeed the way the courses were scheduled. Tractate Taanit 29a²⁴ tells us that the sacerdotal course of Jehoiarib was on duty when the Temple of Solomon was destroyed by the Babylonians. This calamity occurred on 9th/10th Av, and is commemorated annually on the Jewish fast of Tisha B'Av. 9th Av is exactly eighteen weeks after 1st Nisan, the commencement of the Jewish sacred year. If Jehoiarib were indeed the first course to serve each year then it would not have been possible for them to be serving in the first half of Av; their next scheduled duty would have been five or six weeks later.

Taanit 29a not only records that the day of the destruction of the First Temple was 9th Av during the priestly course of Jehoiarib. It also says it was the conclusion of the Sabbath; it was the year after (or at the end of²⁵) a Sabbatical Year; and the Levites were interrupted whilst singing Psalm 94. Then it adds “likewise the same happened when the Second Temple was destroyed.” The most likely meaning of the text is that all of the things mentioned occurred a second time. If so it means that the temple was destroyed on 9th Av (4th August AD 70) and the course of Jehoiarib was again on duty at the time.

Kenneth Doig²⁶ calculated back from this date to find possible dates when the course of Abijah was on duty at the time of the angelic announcement to Zechariah. His focus was particularly on 5 or 6 BC, assuming the death of Herod the Great to have been in 4 BC. He calculated that Zechariah was serving in the temple during the week of 3rd to 10th October, 6 BC, the first few days of which overlapped with the Feast of Tabernacles. The annunciation to Mary occurred about twenty-four weeks (between five and

²⁰ Josephus, *Antiquities of the Jews*, Book VII, 14:7

²¹ see Mishna, Tractate Sukkah 56a, <https://www.sefaria.org/Sukkah.56a?lang=bi>

²² see https://en.wikipedia.org/wiki/Priestly_divisions

²³ e.g. Nolen Jones, “The Chronology of the Old Testament,” Master Books, 2007, page 211.

²⁴ <https://www.sefaria.org/Taanit.29a.12?lang=bi>

²⁵ Roger C Young, “Seder Olam and the Sabbaticals,” *Jewish Bible Quarterly*, 2006. See https://www.academia.edu/2162967/Seder_Olam_and_the_Sabbaticals_Associated_with_the_Two_Destructions_of_Jerusalem_Part_1

²⁶ Kenneth F Doig, “New Testament Chronology,” Lewiston, NY: Edwin Mellen Press, 1990. See <https://www.nowoezone.com/NTC07.htm>

six months) later and the birth of Jesus about forty weeks after this. Doig concluded that this early October 6 BC date for Zechariah's temple duty strongly supports the traditional dates of 25th March and 25th December for the Annunciation to Mary and the birth of Christ, both occurring in 5 BC.

However, if instead the early Church fathers were correct that Jesus was born later than 4 BC, possibly in 2 or 3 BC, then the announcement to Zechariah of the conception of John the Baptist did not take place until 3 or 4 BC. Extending Doig's calculations gives the following relevant dates when the course of Abijah would have been on duty: 18-25 February 4 BC; 5-12 August 4 BC; 20-27 January 3 BC; 7-14 July 3 BC. Assuming Elizabeth conceived John in the week immediately following Zechariah's Temple duty, and assuming Mary conceived Jesus between twenty-three and twenty-five weeks later suggests the following possible dates for the births of both babies.

Course of Abijah	Birth of John	Birth of Jesus
18-25 Feb 4 BC	2-8 Dec 4 BC	12 May – 1 Jun 3 BC
5-12 Aug 4 BC	19-25 May 3 BC	27 Oct – 16 Nov 3 BC
20-27 Jan 3 BC	3-9 Nov 3 BC	13 Apr – 3 May 2 BC
7-14 Jul 3 BC	20-26 Apr 2 BC	28 Sep – 18 Oct 2 BC

It is important to recognise that these dates are rough estimates based on a number of assumptions. Even so all of these dates are consistent with Luke's statement, already noted, that John the Baptist commenced his baptism ministry in the fifteenth year of Tiberius Caesar, and that Jesus commenced his ministry soon after, being about thirty years old.

Following strict regnal year counting the fifteenth year of Tiberius was 19th August AD 28 to 18th August AD 29. The final line in the above table would make John's thirtieth birthday between 20th and 26th April AD 29, which is not only in the 15th year of Tiberius by this regnal year reckoning, but is also so under any of the accession year reckonings Luke might have assumed, whether using a Roman, Judean agricultural or Judean sacred calendar-year system. This would then strongly support the view that Jesus' was baptised at about the age of thirty in October AD 29, so commencing a ministry lasting three and a half years before his crucifixion at Passover AD 33. What makes this final table entry particularly appealing is that it sets John's birth precisely within the Festival of Unleavened Bread (Passover) and Jesus' birth at the commencement of the Jewish New Year, in a period incorporating the Festival of Trumpets, the Day of Atonement and the Festival of Tabernacles.

Christians have long celebrated the association of significant events with the Jewish pilgrim festivals of Passover and Weeks (Pentecost), namely the crucifixion and resurrection of Christ and the sending of the Holy Spirit. Strangely the third of these Jewish pilgrim festivals has not traditionally been celebrated or remembered by Christians for any particular reason. But if God purposed that two of these festivals should foreshadow and signify important aspects of His plan of salvation then why not the third? If Jesus was indeed born during or just before the Festival of Tabernacles, perhaps even on Rosh Hashanah or the Day of Atonement, it would shed significant light on the purpose and meaning of these holy days. It would also give fresh understanding of John's meaning when he wrote the words, "And the Word became flesh, and did tabernacle among us" (John 1: 14, Young's Literal Translation).

Implications From the Visit of the Wise Men

It is somewhat ironic that Bible scholars today, with all the investigative skills that have been honed over centuries, are quite divided as to the precise year of Christ's birth, let alone the season within the year. But at the time of the Nativity there was a group of scholars who apparently had no doubts at all as to the time of his birth, and were prepared to make a long journey over many weeks to confirm their belief.

If there has been one aspect of the Nativity story that most Christians of our day have not really been able to relate to or comprehend it is the account of the visit of the Wise Men, or Magi. Of course they are favourite characters in nativity plays, and we love to ponder on the gifts they presented, but truly

understanding who they were and what lessons we should draw from the account of them in Scripture, is another matter altogether.

Translators of the New Testament and narrators of the Christmas story have typically described them as “wise men”, or even “kings.” However the Greek word used by Matthew is “magos” (Matt 2: 1, 7, 16) and where this word or its derivatives are used elsewhere in the New Testament it indicates the practice of sorcery or occult crafts (see Acts: 8:9; 13: 6,8). In the Septuagint translation of the Old Testament the same word is used, along with others implying the use of magical arts, to describe the caste of wise men, called Chaldeans, that advised King Nebuchadnezzar and interpreted his dreams (Dan 2: 2). Daniel was appointed to be head of this group when he correctly described the king’s dream and interpreted it for him (Dan 2: 48). In prophesying the fall of Babylon Isaiah spoke specifically against the propensity of that nation to try to manipulate events by means of magic spells and sorcery, and to predict the future by star-gazing and astrology, asserting that none of these would enable them to escape God’s impending judgement for their sins (Isaiah 47).

It is generally accepted by Bible scholars that the Magi of the Nativity story were successors of those Chaldeans who advised Nebuchadnezzar in Daniel’s day. As such they would have had the benefit of Daniel’s wisdom and instruction from the time that he led the group, and almost certainly would have had access to Daniel’s writings for inspiration and guidance, particularly in matters relating to the Jewish nation. The historian Herodotus²⁷ (5th century BC) described the Magi as one of six main tribes of the Medes, with particular skill and wisdom in the interpretation of dreams. Philo of Alexandria²⁸ (1st century BC) praised them as honourable men, scholars with extensive understanding of natural phenomena.

So, were the Magi of the nativity story engaging in good or suspect activities? Were they truly wise men, skilled in understanding truth, or were they misguided pursuing ungodly methods for direction and understanding? Matthew’s account puts them in a very positive light, portraying them as some of the very few people of that time who had an understanding of the importance of Christ’s birth, welcomed it, and were open to receive and respond to God’s guidance and direction. Nevertheless it is their apparent involvement in astrology that raises serious questions for many, in view of the clear teaching of Scripture to avoid such practices (Lev 20: 6; Deut 18: 10-11; Isa 37: 13-15). Although Daniel was appointed by Nebuchadnezzar to lead the Magi of his day, he had made quite clear to Nebuchadnezzar the deficiencies of their occult activities (Dan 2: 27-28).

Astrology is the study of the positions and movements of celestial bodies in the belief that they bestow understanding of, and enable one to predict, earthly events, and in particular human activity and behaviour. One view is that the celestial bodies are causative, i.e. that they pre-determine what will take place. This is a position often adopted by those who consult horoscopes for personal guidance. It is not hard to see how such ideas originated. It is well known that the sun dictates the seasons on earth, controls day and night, and has a significant effect on climate and weather systems. The moon, too, controls the tides within bodies of water. At its most benign astrology is the search for understanding of other types of cause and effect that relate the position and movement of celestial bodies with what happens on earth.

A different view adopted by some astrologers is that the heavenly bodies are merely declarative, i.e. that they are used to announce what will happen or has happened on earth. Again, there is an element of truth in this position, for as the psalmist David said,

“The heavens declare the glory of God; the skies proclaim the work of his hands. Day after day they pour forth speech; night after night they reveal knowledge.” (Psalm 19: 1-2)

God uses the celestial bodies prophetically, said David. The question then is not whether the stars can speak to us but whether we have recognised who it is who communicates through them and correctly understood what He says.

From the creation account we learn that the stars and planets were not just created to provide light, but also to “serve as signs and for seasons, and for days and years” (Gen 1: 14). When speaking of the end

²⁷ see <https://penelope.uchicago.edu/Thayer/E/Roman/Texts/Herodotus/home.html>

²⁸ Philo, “Every Good Man is Free” 74 – see <http://www.earlychristianwritings.com/yonge/book33.html>

times Jesus himself said there would be signs in the sun, moon and stars (Luke 21: 25). One such sign was predicted by the prophet Joel – a passage later quoted by the apostle Peter – when he declared that “The sun will be turned to darkness and the moon to blood before the coming of the great and dreadful day of the Lord” (Joel 2: 31). He said that the approach of perhaps the most significant event in the history of the world would be signified by unusual visual effects involving the sun and the moon. He added that there would be signs on earth – blood and fire and billows of smoke, and God’s Spirit poured out on His servants. It is significant that when Peter declared on the Day of Pentecost that this prophecy had been fulfilled before the eyes of the people of Jerusalem this did not cause bewilderment or incomprehension – on the contrary the record says the people were cut to the heart, and about three thousand repented on the spot (Acts 2: 14-41). It seems that they recognised immediately that the passage from Joel that Peter quoted from did indeed describe what they had actually observed in recent days.

The Synoptic Gospels record that the sun was darkened from 12 noon until 3 pm on the day of the crucifixion (Matt 27: 45; Mark 15: 33; Luke 23: 44-45). The cause is unknown, but we know it was not a normal solar eclipse since these can only occur during a new moon. The date that is now considered most likely for the crucifixion is Friday 3rd April AD 33. The NASA Eclipse Website shows that there was a partial lunar eclipse visible from Jerusalem that evening (weather permitting); the full moon rose in partial eclipse as the sun set²⁹, just after the completion of the Passover sacrifices. The only other full or partial lunar eclipse visible from Jerusalem between Passover and Pentecost in the years AD 25 to 37 was soon after midnight on 26th April AD 31. However it is not considered possible for the crucifixion to have occurred in AD 31, since Passover would have been too early in the week (either Tuesday or Wednesday depending on whether a leap month had been inserted that spring).

In the light of this it is quite consistent with the teaching of Scripture that God would use an unusual occurrence in the night sky to mark the coming to earth of the promised Messiah. That this happened seems evident from the story of the Magi. When describing their visit at the time of Christ’s birth Matthew wrote:

After Jesus was born in Bethlehem in Judea, during the time of King Herod, Magi from the east came to Jerusalem and asked, ‘Where is the one who has been born king of the Jews? We saw his star when it rose and have come to worship him.’ (Matt 2: 1-2)

The Magi undertook their long journey not because they were astronomers, although undoubtedly they were, but on the strength of their conviction that the positions and movements of the celestial bodies convey information about events on earth. They were convinced they had read a message in the night sky; the significant question for us is, how did they work out so accurately that the phenomenon they had observed signified the birth of a new king of the Jews? Moreover, if they worked it out is it possible that we too can work it out, particularly given the additional resources that are now at our disposal?

Note that they did not speak of any direct message from God other than the appearance of the star itself. Apparently there was no voice from heaven, angelic visitation or dream explaining the meaning of the star. This makes the popular view that the star was a supernatural phenomenon extremely unlikely. Even an unexpected natural event such as a supernova or comet cannot be seriously considered. The reason is that an inexplicable event is by definition impossible to explain, but the Magi quite clearly **were** able to explain the celestial phenomenon they observed. In the light of their understanding and wisdom they believed the star was indisputably a sign of the arrival of a new ruler of the Jewish nation. Moreover it seems that they were able to convince King Herod of the strength of this interpretation, in view of his paranoid actions once they had departed the scene (Matt 2: 16).

There is now increasingly strong support for the suggestion that the star observed by the Magi was in fact the planet Jupiter in conjunction with Venus, and that their excitement was aroused by the unusual motion of these planets relative to the other stars and planets³⁰. In December 2003 Indiana University published a feature article about the conjunction of Jupiter and Venus on 17th June 2 BC³¹. In this article

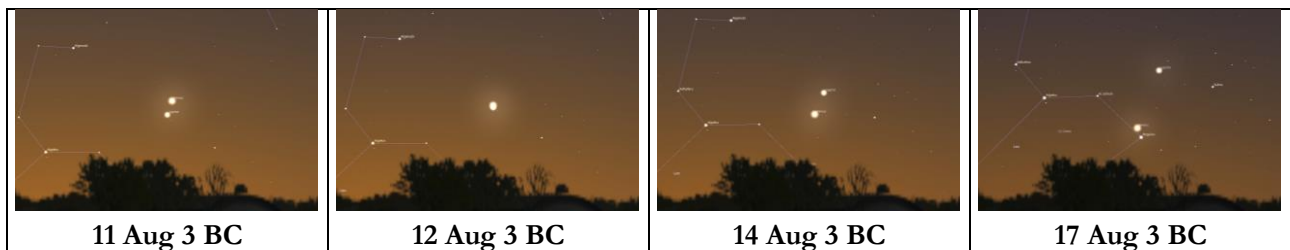
²⁹ <https://eclipse.gsfc.nasa.gov/LEcat5/LE0001-0100.html>

³⁰ e.g. see <https://bethlehemstar.com/>

³¹ <https://newsinfo.iu.edu/news/page/normal/1203.html>

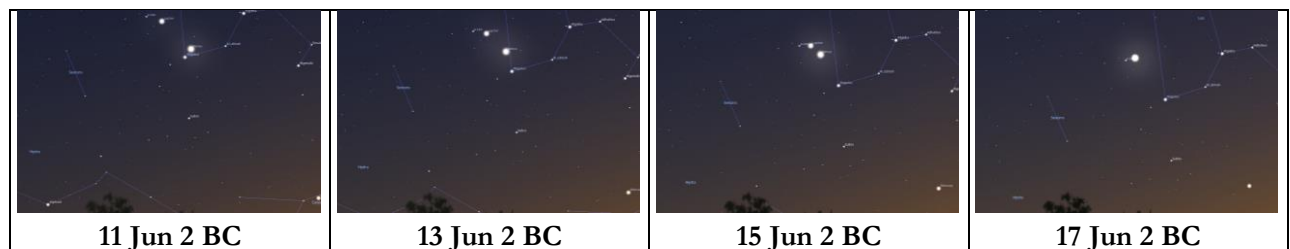
they claimed, “There has not been a brighter, closer conjunction of Venus and Jupiter in Leo so near to Regulus in the 2,000 years since.” Of course conjunctions of Venus and Jupiter, of varying degrees of closeness, occur roughly once per year. But the point made by this article was that the configuration of stars and planets at the time made this event almost unique, and that it would have conveyed a powerful message to astrologers observing the night sky. Dr Ernest Martin in his book “The Star that Astonished the World” proposed that their interpretation would have been that a royal birth would be taking place in Judea³².

Martin pointed out that the close association of Jupiter with Venus started almost a year earlier. On 12th August 3 BC Jupiter and Venus rose in conjunction in the east just before sunrise, as a spectacular “morning star.” If the atmosphere was very clear those with excellent vision would have just been able to see a separation between the two planets. Over the next few days observers would have seen Jupiter separating from Venus, rising higher in the pre-dawn sky, whilst Regulus, the king star and brightest in the constellation of Leo, came into view and rose upwards to join Venus. The following images show the night sky as it would have been seen from the vicinity of Babylon, from 11th to 17th August 3 BC, looking to the east just before dawn at 4.40 am. The stellar images depicted here and elsewhere in this document were generated using the free open source planetarium software Stellarium³³. For larger images see [Appendix 1](#).



As the days progressed Regulus continued to rise higher in the pre-dawn sky, until eventually on 15th September it caught up with Jupiter in another bright conjunction. Meanwhile Venus appeared to descend and disappear beneath the western horizon until it joined the sun in a close conjunction on 2nd November.

Seven months later Jupiter and Saturn were again in conjunction on 17th June 2 BC. This time they were setting in the west as a spectacular “evening star,” and the conjunction was even closer – they were virtually inseparable with the naked eye. Over successive evenings observers would have seen Regulus leave close proximity to Venus, diving towards the setting sun, whilst Jupiter descended to join her. The following images show the night sky just after sunset as it would have been seen from the vicinity of Babylon, from 11th to 17th June 2 BC, looking west at 19.50. For larger images see [Appendix 2](#).



Undoubtedly the two conjunctions of Jupiter and Venus in 3 and 2 BC would have aroused the interest of the Magi. Matthew tells us that the Magi were alerted to the birth of Christ by the rising of a star. The phrase Matthew uses is “in the east,” literally meaning “in the rising.” A setting star in the west would not on its own suit this description. But the combination of a conjunction rising in the east and then setting in the west ten months later fits particularly well, and to date no other celestial phenomena in the first decade BC serves as well as these conjunctions as a possible explanation. In the first century planets

³² Ernest L Martin, “The Star that Astonished the World,” 2nd ed., 1996, ASK, see <https://www.askelm.com/star/index.asp>

³³ Zotti, G., Hoffmann, S. M., Wolf, A., Chéreau, F., & Chéreau, G. (2021). The Simulated Sky: Stellarium for Cultural Astronomy Research. *Journal of Skyscape Archaeology*, 6(2), 221–258. <https://doi.org/10.1558/jsa.17822> and <https://stellarium.org/>

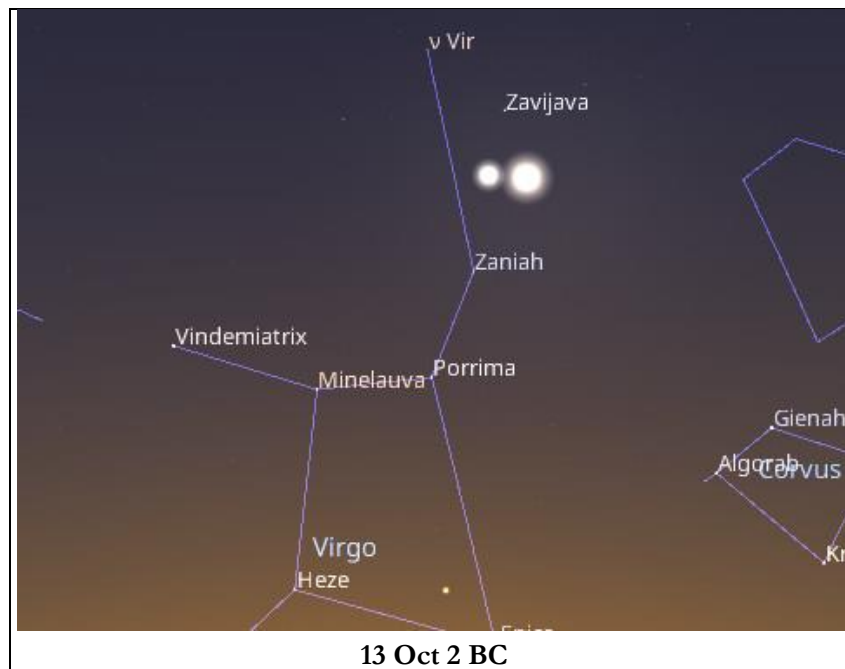
were referred to as stars; they were actually described as “wandering stars,” and indeed “wanderer” is the root meaning of our word “planet.” It is noteworthy that Herod asked the Magi about the time of the star’s appearing. If the conjunction of 12th August 3 BC was indeed the first sign that alerted the Magi then it explains extremely well why Herod ordered the killing of all boys aged two years and under after the Magi left. Assuming Herod died in the spring of 1 BC this order was very likely issued in late 2 BC or early 1 BC, roughly eighteen months after the sign appeared.

We need to be careful when weighing up the significance of these events. As mentioned before conjunctions of Jupiter and Venus occur very frequently. For instance in 1 BC a conjunction occurred that was closer than either of the two previously described. In fact Venus hid Jupiter from sight as they both seemed to collide on 20th to 21st August, this time in the constellation of Virgo. But this conjunction wasn’t spectacular. Indeed hardly anyone would have noticed, because the sun was in Virgo at the time and its light would have obscured the stars and planets in its proximity. Just a few sharp-eyed observers would have noticed the conjunction in the west just after sunset on 20th August alongside the faint crescent of the waxing new moon.

Assuming that the Magi did indeed find special significance in the conjunctions of 3 and 2 BC, we can still only surmise how they might have interpreted them in order to come to the conclusion that they did. Martin suggests that the Magi would have associated Jupiter with kingship, and Venus with fertility and motherhood, and consequently that they may have understood their close conjunctions, along with close conjunctions with Regulus, to be a sign of the imminent birth of a new king. The fact that these occurred in the constellation of Leo may have led them to conclude that the new king was destined for the throne of the Jewish nation, since from ancient times the symbol of the lion was associated with Judah (see Gen 49: 9-10). As will be considered in more detail later, if they had a good understanding of the writings of Daniel and other Hebrew prophets then almost certainly they were expecting the coming of the promised Jewish messiah, and this may well have influenced their conclusion. If this is all so then very likely the celestial body that they would have associated most directly with the new king was Jupiter, and it was this planet that they were referring to when they said, “We saw his star when it rose.” It is noteworthy that the book of Revelation records Christ describing himself as the “bright morning star” (Rev 22: 16).

Not long after the spectacular conjunction of Jupiter and Venus on 17th June 2 BC Jupiter disappeared from the night sky for a while. On or about 20th July 2 BC Jupiter was seen briefly on the western horizon just after sunset, and it did not reappear until it rose briefly on the eastern horizon just before sunrise on 20th September 2 BC. On successive nights thereafter Jupiter rose in the east and followed a westward trajectory that extended further and further west each night. Whether the Magi interpreted this as a sign that they themselves should travel west we do not know. It is important to remember that almost all celestial bodies seem to move through the night sky, and in doing so travel from east to west, an effect brought about by the rotation of the earth. The Magi would have seen Jupiter follow a similar path many, many times before. So it is quite likely that they did not give the direction of Jupiter’s trajectory a second thought, even though to us it seems to fit so well with the words “westward leading still proceeding” from the familiar Christmas carol. But two things in particular stand out about Jupiter’s trajectory in the latter part of the year 2 BC. The first is that Jupiter had another close encounter with Venus. The second is that Jupiter’s normal progression relative to the fixed stars stopped, and then went into reverse.


On 13th October 2 BC Jupiter once again rose in the eastern sky in close proximity to Venus, the third close encounter within a period of fourteen months. This time their separation was greater, so they would have been clearly seen as a double star. Nevertheless their combined brightness on the eastern horizon would have been unusual, and observers such as the Magi would have noted it with interest. The following image shows the two planets within the constellation of Virgo as they could have been seen from the vicinity of Babylon looking towards the east just before sunrise, at 5.30 am. Jupiter is the smaller of the two planets.



It was the first day of the Jewish Festival of Tabernacles. If the Magi interpreted the conjunction two months earlier as a sign of pregnancy then would they have associated this separation into a double star as a sign of birth?

As previously mentioned this meeting of Jupiter and Venus took place in the constellation of Virgo. Like all planets, known as wandering stars, Jupiter and Venus appear to move along their own unique trajectories through the fixed stars on successive nights, this apparent wandering motion being caused by their orbits, and the earth's orbit, around the sun. Before this meeting Jupiter was located in the constellation of Leo, and had been gradually moving towards Virgo since early August. Venus, on the other hand, was in the constellation of Crater in early August, was close to Leo in mid-September and had then joined Jupiter in Virgo by mid-October. After their meeting Venus moved rapidly away from Virgo, travelling through Libra, Scorpius, and then to Sagittarius by mid-January. Jupiter however remained roughly where it was, moving very slowly in the upper part of the body of Virgo. The idea of movement described here is movement relative to the fixed stars. The fixed stars, as well as moving through the sky from east to west each night, also start further to the west at sunset on successive nights. The net effect to someone observing was that from October to March Venus remained roughly in the same place, rising on the eastern horizon just before dawn and disappearing as the sun rose. Jupiter on the other hand moved swiftly westwards, rising in the east earlier each night and extending further and further west by dawn.

The following images show how Jupiter would have appeared just before sunrise at 6 am looking in a southerly direction from Jerusalem, on three successive months commencing on 25th November 2 BC. Jupiter's trajectory in the constellation of Virgo takes it slowly away from the star Zaniah towards Porrima. But on 25th December Jupiter stops completely, and then begins to slowly retrace its path back towards Zaniah again. (The clockwise rotation of successive images occurs because of the apparent movement of the entire stellar map over the two months and the consequential change of direction of view.) For larger images see [Appendix 3](#).

		
25 Nov 2 BC looking SSE	25 Dec 2 BC looking SW	25 Jan 1 BC looking WSW

This stopping of a planet in its path and then moving backwards is a common phenomenon, known as retrogression. On its own it would not appear to have much significance. But in the context of the visit of the Magi to Jerusalem it takes on much greater relevance. Matthew records that after the Magi had visited Herod, and were setting off for Bethlehem, the star “went ahead of them until it stopped over the place where the child was” (Matt 2: 9). Martin raises the fascinating possibility that this description of the star being ahead of them and stopping was actually a reference to the retrogression of Jupiter described above. If this is correct then 25th December is significant, not as the anniversary of the birth of Christ but as the anniversary of the visit of the Magi and their presentation of gifts.

Matthew’s account of a star stopping in its tracks has caused much puzzlement and conjecture over the years. Most commentators have been unable to explain it. For some it has confirmed their view that the star was actually a supernatural light in the sky, at a sufficiently low altitude to serve both to lead the Magi and to identify the house where the baby was accommodated. But if this were the case Matthew’s use of the word “star” was quite misleading; a star clearly implies a celestial object, not a low-level UFO. Bethlehem was located to the south of Jerusalem, the precise direction in which Jupiter would have been seen, high in the sky, in late 2 BC to early 1 BC. The planet’s retrogression might not have been noticed by casual onlookers, since its motion through the fixed stars was so slow, but skilled observers would have been fully aware of it. It is the best – perhaps only – astronomical explanation to date of the cessation of motion described by Matthew.

Even if we conclude that the unusual planetary conjunctions of Jupiter with Venus were indeed used by God to convey a message to the Magi about the birth of Christ, they do not indicate precisely when the birth would take place. We must remember that various prophetic words were given about the birth of Christ many years before he actually came. Similarly God’s announcements to Abraham about the birth of Isaac took place years before he was born. Consequently there is no reason to assume that one appearance of the Magi’s star or another signified the actual date of Christ’s conception or birth. Nevertheless these signs evidently persuaded the Magi to undertake their journey to Judea in the belief that on their arrival they would see the new king.

At the very least it seems possible that the Magi would have viewed the conjunction of 17th Jun 2 BC as a sign that conception had by then occurred, and the double star of 13th October 2 BC as a sign that the birth had happened. It is rather intriguing that this latter date was the first day of the Festival of Tabernacles in Jerusalem. The possibility that this period in the Jewish calendar was the time of Christ’s birth has already been raised. If indeed the Magi did indeed set off from their residence near Babylon on or soon after 13th October then it was quite possible for them to travel to Judea in time to observe the retrogression of Jupiter to the south of Jerusalem on 25th December.

Now of course 25th December is the traditional date for the birth of Christ. Nevertheless this is seriously challenged by Luke’s account of the shepherds in the nativity story, which actually implies a birth in October or earlier. Luke tells us that the shepherds who visited the new-born Christ were living in the fields locally as they guarded their flocks through the night.

And there were in the same country shepherds abiding in the field, keeping watch over their flock by night.
(Luke 2: 8).

Luke used two different words to describe their location. The first was “chora,” meaning area or region, when he said they were in the same country. The second was “agraulountes” meaning “living in the

fields,” as he described their precise residence. This second word is based on the Greek word “agros” which means a cultivated field, similar to the Latin word “ager.”

The cultivated fields in ancient Israel were used primarily to grow grain or fruit. We know that grain fields existed around Bethlehem, because its name in Hebrew – Bet Lehem – means “House of Bread.”³⁴ In September 2019 the Jerusalem Post published an interesting article entitled “The Circle of a Year” describing the annual agricultural cycle in Israel³⁵. The season for growing grain started with sowing seed in the month of Kislev (November/December) and finished with harvesting the last of the wheat crop in the month of Sivan (May/June). During the summer months, from July until the autumn rains, the barley and wheat fields were empty of crops, and were available for grazing by sheep.

This gives us a more informed understanding of where the shepherds were residing at the time of the nativity, and also the time of year in which this took place. The C S Lewis Institute points out that this small detail in Luke’s account effectively rules out the birth of Christ occurring in winter or spring³⁶. The shepherds and their sheep could well have remained in the cultivated fields around Bethlehem until October, but no later.

An autumn birth may possibly be implied by the first part of Revelation 12, which contains a description of two signs appearing in heaven.

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. She was pregnant and cried out in pain as she was about to give birth. Then another sign appeared in heaven: an enormous red dragon with seven heads and ten horns and seven crowns on its heads. 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. She gave birth to a son, a male child, who ‘will rule all the nations with an iron sceptre.’ And her child was snatched up to God and to his throne. 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: 1-6 (NIV-UK)

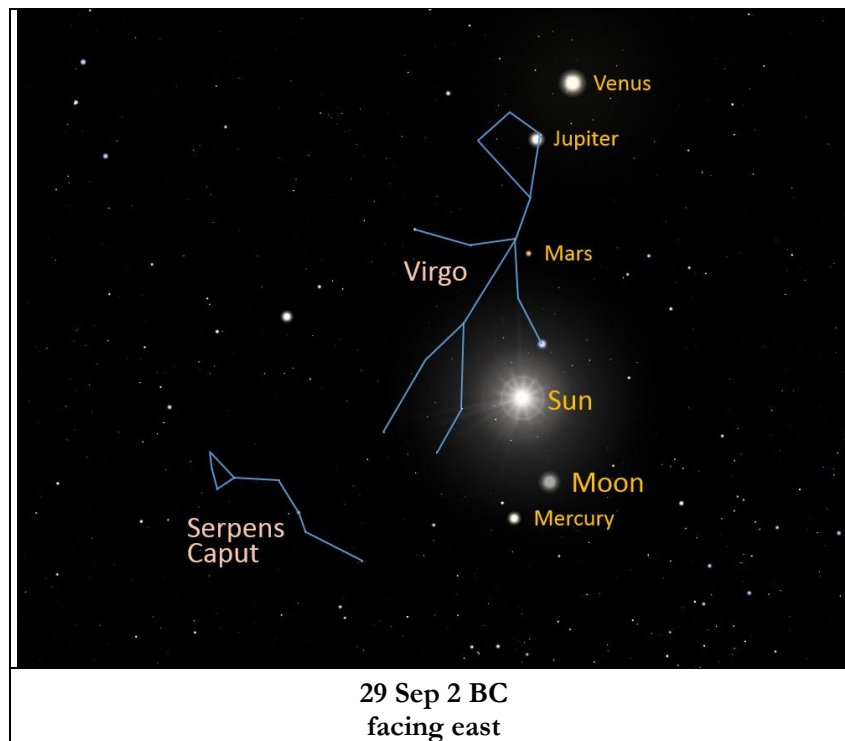
The first sign is that of a woman clothed with the sun with the moon under her feet. The second sign is that of a dragon, with a tail, standing in front of the woman. The dragon is also described as a serpent (Rev 12: 9). This passage is complicated by the fact that the symbols are interwoven with descriptions of actual events, such as the woman giving birth to a son, and this makes distinguishing between what is symbolic and what is real particularly difficult. In the past most commentators have focussed on trying to understand what the signs mean, and have not concerned themselves overmuch with the manner in which they were revealed to the apostle John.

The most obvious and direct understanding of what John describes is that the signs were depicted by stars in the sky. This was, after all, one of the purposes for which God created the stars (Gen 1: 14). For thousands of years star-gazers have recognised images or patterns of familiar objects within different clusters of stars – pictures that today we describe as constellations. This was so for the Babylonian, Greek and Roman civilisations as well as the ancient Hebrews (see Job 38: 31-32). Amongst these images are a woman – the constellation Virgo – and a serpent – the constellation Serpens, its head located in front of Virgo. Virgo is within the sun’s ecliptic – the path seemingly followed by the sun through the year against the background of the fixed stars. Once a year the sun traverses Virgo, taking about seven weeks to do so. This takes place in autumn for those living in the earth’s northern hemisphere. Once or twice during this traversal a new moon occurs, when the moon is in closest proximity to the sun; a day or two later the moon trails behind the sun, occupying a position just beneath the feet of Virgo. The following image shows the positions of the sun, moon and stars directly to the east of Jerusalem at 6.0 am on 29th September, 2 BC. This day was Rosh Hashanah, the Feast of Trumpets. Just two weeks later was the conjunction between Jupiter and Venus at the beginning of the Festival of Tabernacles described earlier.

³⁴ <https://www.britannica.com/place/Bethlehem>

³⁵ <https://www.jpost.com/israel-news/the-circle-of-a-year-603008>

³⁶ see <https://www.cslewisinstitute.org/holy-land-why-are-sheep-and-shepherds-living-in-the-fields/>



The close agreement with some of the imagery described in Revelation 12 is striking. The sun clothes Virgo, with the moon under her feet. And there before Virgo is the head of Serpens, seemingly lying in wait for what is about to take place. Nevertheless there are some difficulties with concluding that this was the picture the apostle John had in mind. The first issue is that nobody on earth could have seen this sign! The light of the sun would have obscured all the other celestial bodies. At most a faint glimmer of the planet Venus would have been seen just before sunrise, and then possibly Mercury and a thin crescent of the moon later in the day after sunset. None of the other planets or Virgo itself would have been visible. A second problem is how some of the other components of the image John saw were depicted – such as the stars on the woman’s head. Stars, of course, are present in great number, but specifically identifying twelve is not obvious. Then what of the heads and horns of the serpent, or the birth of the child? So much of what John described is not easily recognisable in the star layout. Then, finally, we must remember that a similar configuration of the sun, moon and stars occurs every autumn; there is no apparent reason to associate John’s vision with 2 BC in particular. Perhaps the best that can be said is that there is a close relationship between John’s vision and the configuration of the sun and stars during the autumn season around the Jewish New Year. If this association was intended then it gives support to the view that Christ was born at that time.

The Seventy Sevens Prophecy in Daniel 9

An interesting point raised earlier is that the Magi would have been familiar with the writings of Daniel and the other Jewish prophets, and that these may well have significantly influenced their conclusion about the birth of a new king in Judea. Daniel 9: 24-27 records a message conveyed to the prophet Daniel by the angel Gabriel as Daniel was praying for his people. In this message Daniel was given a timeline for future events involving his nation, and in particular for the coming of the Anointed One, or Messiah. The timeline is somewhat cryptic, and the translation of some of the Hebrew words uncertain. Consequently there has been considerable debate amongst scholars over the years as to the correct understanding of the prophecy. In particular attempts to use the text to precisely predict events in the life of Jesus – either his birth or his crucifixion – have almost always encountered difficulties. However there is the distinct possibility that Daniel himself was not so confused, and that the Magi who succeeded him were watching and waiting expectantly. This would explain their readiness to abandon everything else when they saw the sign in the heavens. This wasn’t just any common-or-garden king of the Jews they were anticipating. It was the Messiah, the Anointed One, who would put an end to sin and usher in everlasting righteousness!

What follows is the text of Daniel 9: 24-27 from the latest UK edition of the New International Version. The words in parentheses are alternative translations of the Hebrew text, provided to give some idea of the variations that are possible.

‘Seventy “sevens” are decreed for your people and your holy city to finish (or *restrain*) transgression, to put an end to sin, to atone for wickedness, to bring in everlasting righteousness, to seal up vision and prophecy (lit. *prophet*) and to anoint the Most Holy Place (or *One*). Know and understand this: from the time the word (or *decree*) goes out to restore and rebuild Jerusalem until the (or *an*) Anointed One, the ruler (or *prince*), comes, there will be seven “sevens”, and sixty-two “sevens”. It will be rebuilt with streets (or *plaza*) and a trench (or *moat/wall/rampart*), but in times of trouble. After the sixty-two “sevens”, the Anointed One will be put to death and will have nothing (or *but not for himself*). The people of the ruler who will come will destroy the city and the sanctuary. The (or *its/his*) end will come like a flood: war will continue until the end, and desolations have been decreed. He will confirm a covenant with many for one “seven”. In the middle of the “seven” he will put an end to sacrifice and offering. And at the temple he will set up an abomination that causes desolation, until the end that is decreed is poured out on him (or *on the wing of detestable things will come one who causes horror, even until a complete destruction, one that is decreed, is poured out on the one who causes horror or on the desolate one*).

The meaning of the final sentence is particularly obscure. Nevertheless certain parts of the angel’s message seem to be relatively clear. At some point there would be an edict or decree to instigate the rebuilding of Jerusalem, including its defensive wall. This decree would initiate a timeline of seventy time periods, described as “sevens.” The timeline would comprise consecutively: seven “sevens”, sixty-two “sevens” then one final “seven”. The Messiah (or an anointed one) would appear at the start of the final “seven.” During this time he would confirm a covenant, bringing sacrifices and offerings to a conclusion. In the middle of this final “seven” he would be put to death. A future ruler would destroy the city and temple, and desolation would continue until the end. Most revealing are Gabriel’s opening words, that during this period of seventy “sevens” a final atonement for sin would be made, and the way opened for everlasting righteousness.

The edict to instigate the rebuilding of Jerusalem, including its wall, has aroused considerable debate amongst Bible scholars. Four different events recorded in Scripture have been suggested as possible fulfilments. The first two are the edicts issued by Cyrus (Ezra 1: 1-4) and Darius (Ezra 6: 1-12). These particularly addressed the rebuilding of the Temple in Jerusalem; the apparent lack of specific mention of the rebuilding of the city itself or its walls is seen by many as a reason to exclude them from consideration. The third event is the commissioning of Ezra the priest in the seventh year of Artaxerxes I to go to Jerusalem to further develop the worship of God in that city (Ezra 7). Artaxerxes provided Ezra with a letter of authorisation, expressed in terms of decrees. Of particular interest is the king’s requirement that Ezra should re-instate God’s law, as well as the king’s law, as a binding requirement for all the people of that region. Nevertheless, as with the earlier edicts, the lack of a specific reference to the reconstruction of Jerusalem causes many to doubt whether this was the edict spoken of by Gabriel. The fourth possibility is the authorisation given to Nehemiah by Artaxerxes I when he sent Nehemiah to rebuild the city (Neh 2: 5), and specifically the gates of the citadel by the Temple and the city wall (Neh 2: 8). This seems to agree quite closely with the prediction given by Gabriel to Daniel. In particular Gabriel stated that the rebuilding would be carried out in troublesome times; Nehemiah records significant opposition to the rebuilding work, to the extent that the builders were forced to carry arms to defend themselves. Nevertheless there is a question as to whether this authorisation can truly be described as an edict or decree to rebuild the city and its walls. It reads essentially as the agreement by the king to Nehemiah’s request to go to Jerusalem to repair its broken walls: a personal favour rather than a formal decree.

Scholars are generally agreed that the “sevens” referred to by Gabriel are seven-year periods, so that the sixty-nine “sevens” leading up to the coming of the “anointed one” are in fact 483 years. The traditional dates for the two orders given by Artaxerxes I to Ezra and Nehemiah are 458/7 BC and 445/4 BC, and

483 years from each of these brings us approximately to the time of Jesus Christ's ministry. However the match is not exact: the first apparently leads to a time before Jesus' baptism, the second to a time well after his crucifixion. Various ingenious methods have been proposed over the years attempting to achieve closer agreement, such as reckoning the years as being 360 days in length (rather than full solar years) or proposing that Artaxerxes I commenced his reign about ten years earlier than traditionally thought. Without significant justification such attempts raise more questions than they answer.

Curiously most studies into the decree spoken of by Gabriel investigate from a historical perspective, asking what official decrees known from the historical record might fit appropriately. But the essential question is: how would Daniel have understood Gabriel's statement? The answer to this is actually remarkably straightforward. Daniel, being fully conversant with the prophecies of Jeremiah, recognised that the period of time for which the Jews were to be held in servitude was nearing an end (Dan 9: 2). This is what prompted his prayer of confession and supplication, in response to which the angel Gabriel had been sent with God's reply. In his prayer Daniel made specific reference both to Jeremiah's prophecy and to the warnings in the Law of Moses that foretold a length of exile in keeping with the number of sabbatical years that the nation had failed to observe (Lev 26: 35). The seventy years during which the land lay desolate were to compensate for seventy sabbatical years – seventy “sevens” – that had been neglected by the people (2 Chron 36: 21). When Gabriel spoke of another seventy “sevens” decreed for the Jewish nation Daniel would inevitably have brought to mind the seventy “sevens” for which his people had suffered exile.

Moreover when Gabriel spoke of a decree to restore and rebuild Jerusalem Daniel would immediately have recalled the words of Isaiah, who wrote down what God himself had said many years before about king Cyrus: “He will say of Jerusalem, ‘Let it be rebuilt,’ and of the temple, ‘Let its foundations be laid’” (Isa 44: 28). He continued, “I will raise up Cyrus in my righteousness; I will make all his ways straight: he will rebuild my city and set my exiles free, but not for a price or reward,” says the Lord Almighty (Isa 45: 13).

Whatever Daniel understood about the more obscure parts of Gabriel's message, it is beyond question that he would have clearly understood that his people would return to inhabit the land of Israel for a further seventy sabbatical cycles, after Cyrus the Great had issued the order to rebuild the city of Jerusalem and the Temple. It seems quite clear that the edict Gabriel referred to was indeed that of Cyrus, and that the subsequent orders issued by Darius and Artaxerxes I should be viewed as confirmations and reiterations of that original decree.

It also seems clear that the seventy sabbatical cycles did not commence immediately after Cyrus issued his decree. How could they, when the Jewish people had not yet returned to their land? But at some time during the following years, as civil and spiritual governance was restored in Jerusalem, the sabbatical cycles were reinstated. The question is, when did this happen? Thankfully we have a clear account in Scripture of the formal decision made by the Jewish people to achieve this and other requirements under the Law.

Ezra the priest had been sent to Jerusalem by Artaxerxes with specific responsibility to ensure that the Law of God was fully complied with, as well as the king's law (Ezra 7: 25-26). Accompanied by a significant number of returning exiles Ezra set off from Babylon in the spring of the seventh year of Artaxerxes, arriving in Jerusalem on the first day of the fifth month (Ezra 7: 9), which is generally reckoned to be 22nd August 457 BC. After making appropriate arrangements for the sacred items and silver and gold they had brought with them for the Temple, the first major issue Ezra had to deal with was the delicate matter of unlawful inter-marriage that had apparently been allowed to take place without constraint since the first exiles had returned to the region. This took considerable time. A judicial group was set up to consider each case and to adjudicate appropriately. This first met on 18th December, and the final case was dealt with by 15th April 456 BC (Ezra 10: 16-17). After this, and we cannot be certain but it seems very likely that it was the following autumn, during the New Year celebrations and the Festival of Tabernacles, Ezra read the Law of God to the people. There was great consternation and grief as they realised how much they had failed to adhere to what God required of them. The outcome was a binding agreement, with the leaders, Levites and priests affixing their seals to it, to follow the Law of

God from that time on. Specifically mentioned as part of this agreement was adherence to the sabbatical year regulations (Neh 10: 31). We are told that this agreement was sealed on 24th Tishri (Neh 9:1), which if in the year 456 BC was 1st November.

The uncertainty about the year of this agreement arises because it is recorded in Nehemiah 7: 73b to Nehemiah 10: 39 rather than in the book of Ezra. However, it has long been recognised that this passage, along with some others in the book of Nehemiah, does not fit chronologically with the surrounding passages. It is known that Nehemiah and Ezra were originally one book, and the consensus is that this passage from Nehemiah, if arranged chronologically, would fit better with Ezra's accounts rather than Nehemiah's. Sir Isaac Newton and others have suggested that the time of this agreement was very likely just after the events of Ezra 3:1-6, before rebuilding of the Temple started in the days of Cyrus the Great. But this seems unlikely for the following reason. If a solemn binding agreement to fully obey God's Law was made then, why was it necessary for Ezra to go to Jerusalem many years later in order to ensure compliance with the Law, and why did he discover that so many, including many leaders and priests, had been living for years in total disregard of the laws relating to mixed marriages? In fact the most appropriate place for this passage chronologically would be after the final chapter of Ezra, where it fits most naturally with Ezra's activities in fulfilling his commission from Artaxerxes. This is precisely where the Jewish historian Josephus places it, who records Ezra's arrival in Jerusalem during the seventh year of Xerxes, the resolving of the inter-marriage issue during his first winter, and the reformations that occurred following the reading of the Law during the Feast of Tabernacles the following autumn³⁷. (Note that Josephus refers to the Medo-Persian king as Xerxes rather than Artaxerxes.)

The Scriptures seem clear that under the reforms of Ezra the Jewish people became acutely aware of their failure to implement the Law of God, including the keeping of sabbatical years, and undertook to put this right by means of a solemn corporate agreement. There is a strong indication that this agreement was sealed in the autumn of 456 BC. This being the case we should expect that they treated the year commencing autumn 456 BC as the first year of their first sabbatical cycle, with the year 450/449 BC being the first post-exile sabbatical year. This then would make the 69th sabbatical year AD 27/28. If this was indeed the intended meaning of the timescale Gabriel gave to Daniel then it implies that the ministry and death of Christ, the Messiah, took place during the 70th sabbatical cycle commencing AD 28/29 and ending AD 34/35. This would suggest that the birth of Christ, thirty years earlier, took place in 3 BC or 2 BC. And this would explain why the Magi were anticipating the birth so expectantly at that time.

That the Magi had a profound understanding of the Daniel 9 passage would also shed light on why they particularly chose gold, frankincense and myrrh as gifts for the new-born king. The Church from the very earliest times has understood these gifts as signifying the kingship and divinity of Christ, as well as his death. It may well be that this is not just an interpretation after the event but was the understanding of the Magi from the beginning.

It should be noted that the sabbatical years specified above conform to the list of post-exilic sabbatical years proposed by Ben Zion Wacholder and now widely accepted by many other scholars³⁸. Dr Floyd Nolen Jones agrees with this list, and also includes with it his understanding of when the Jubilee years occurred or would have had they been celebrated³⁹. According to Nolen Jones the sabbatical year AD 27/28 was the final year of a 49-year Jubilee cycle, and consequently it ushered in a year of Jubilee. Curiously Nolen Jones assumes that each sabbatical year commenced in the spring month of Nisan, in line with the Jewish sacred year rather than the agricultural year. He then takes it that the Jubilee year commenced in the autumn month of Tishri, overlapping the sabbatical year and the first year of the next sabbatical cycle. However if the sabbatical year commenced in the spring this presents a significant problem concerning the agricultural cycle. Leviticus 25 is very clear that during the sabbatical year there should be neither sowing nor reaping of crops. If the sabbatical year commenced in the spring then no seed could be sown that autumn, but neither could crops sown the previous autumn be harvested. Effectively this would mean foregoing a normal harvest for two years in succession, contrary to the stated

³⁷ Josephus, *Antiquities of the Jews*, Book XI, 5:2-5

³⁸ See <https://en.wikipedia.org/wiki/Shmita>

³⁹ Nolen Jones, "The Chronology of the Old Testament," Master Books, 2007, page 289.

intention of the law. This problem disappears if we assume sabbatical years commenced on Rosh Hashanah in the autumn, in line with the Jewish agricultural year. Scholars are divided on the question of precisely how the Jubilee year fitted in with the sabbatical cycles. The most straightforward interpretation of the instructions in Leviticus 25, and one that preserves the seven-year sabbatical cycle, is that the Jubilee year followed immediately after the sabbatical year, overlapping with the first year of the next sabbatical cycle. Assuming this to be the case the analysis of Nolen Jones shows AD 28/29 to be a Jubilee year. Many have independently surmised that when Jesus read from Isaiah 61 in the synagogue at Nazareth at the commencement of his ministry his claim that this passage was then being fulfilled strongly indicated that this was in fact a Jubilee year (Luke 4: 16-21).

Final Remarks

Historical records show that a registration took place across the entire Roman Empire in 3/2 BC requiring people to swear allegiance to the Emperor Augustus. It seems very likely this was the census that, according to Luke, required Joseph and his wife Mary to travel to Bethlehem in the latter stages of her pregnancy. Various other parts of the historical record all seem to support a similar point in time for the birth of Christ. Whether Luke's account of the commencement of the ministries of John the Baptist and Jesus, descriptions of the time of Herod's death, planetary movements observed by the Magi, the shepherding of sheep in the Bethlehem grain fields, and even the timeline to the Messiah's ministry recorded by Daniel hundreds of years before, when taken together these all point strongly to the first half of October 2 BC as a likely time for the Nativity. Moreover this does not undermine the tradition of celebrating Christmas on 25th December, for this then becomes a likely date for the visit of the Wise Men and their presentation of gifts.

A date of October 2 BC for the birth of Christ is consistent with the commencement of his ministry in AD 29 at about the age of thirty, quite possibly during a Jubilee year.

Appendix 1

The following images show the night sky as it would have been seen from the vicinity of Babylon, from 11th to 17th August 3 BC, looking to the east just before dawn at 4.40 am.

August 11th Jupiter approaches Venus



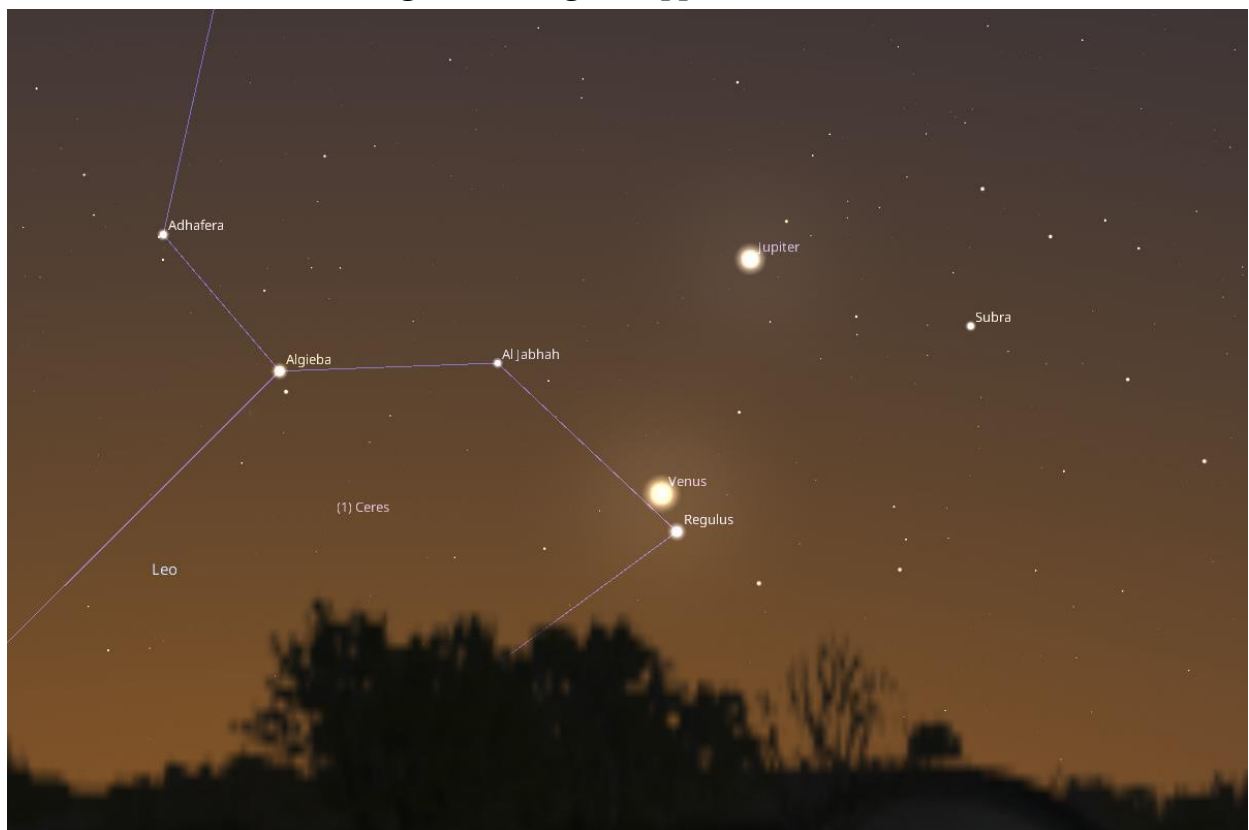
August 12th Jupiter joins Venus



August 14th Jupiter leaves Venus



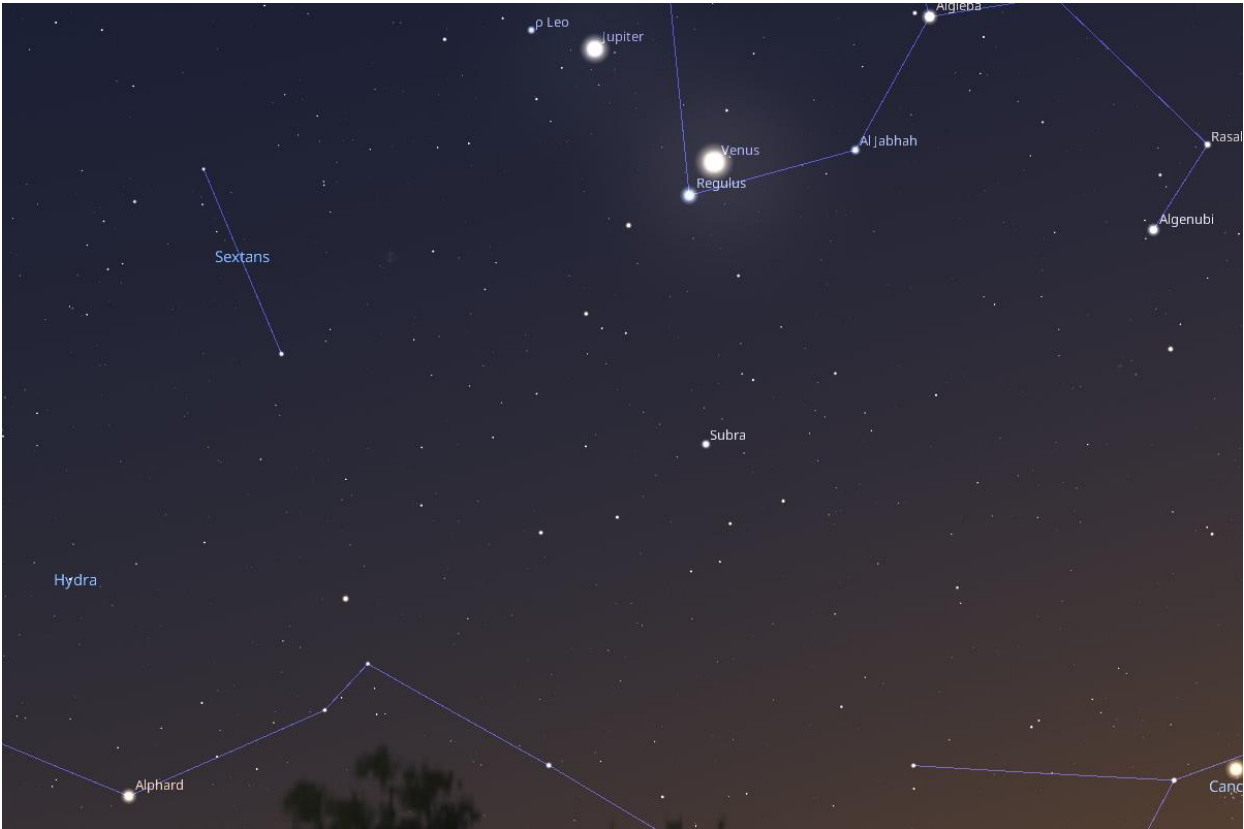
August 17th Regulus approaches Venus



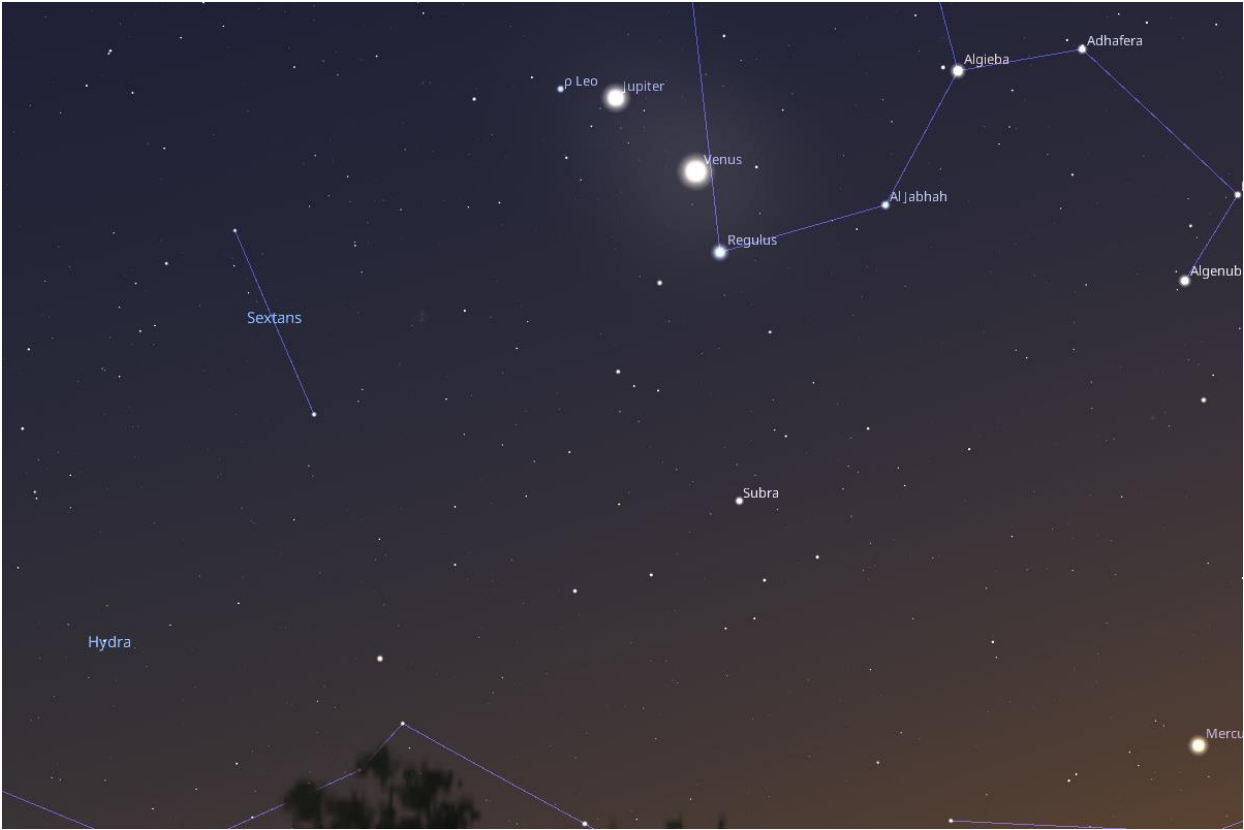
Appendix 2

The following images show the night sky just after sunset as it would have been seen from the vicinity of Babylon, from 11th to 17th June 2 BC, looking west at 19.50.

June 11th Regulus close to Venus



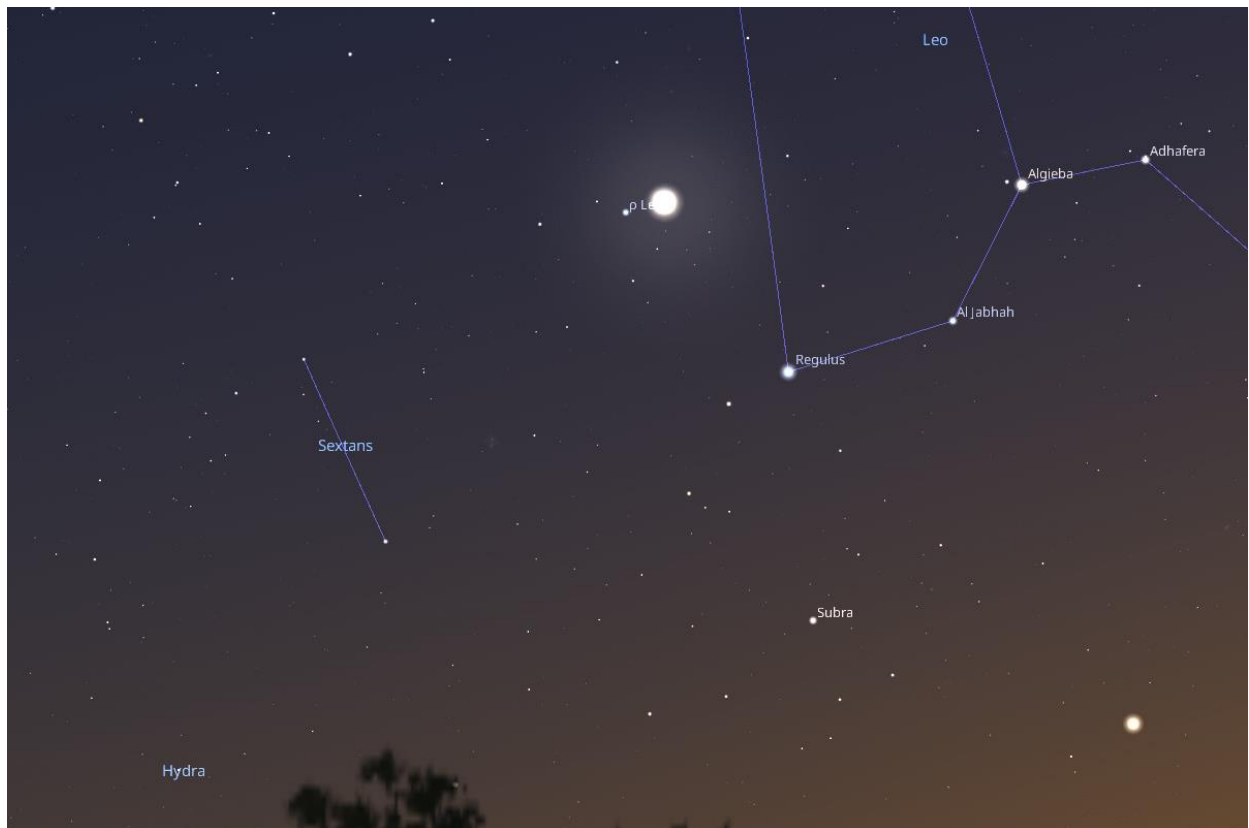
June 13th Regulus leaves Venus



June 15th Jupiter approaches Venus



June 17th Jupiter joins Venus



Appendix 3

The following images show how Jupiter would have appeared just before sunrise at 6 am looking in a southerly direction from Jerusalem, on three successive months commencing on 25th November 2 BC.

November 25th 2 BC Jupiter leaves Zaniah
Looking SSE



December 25th 2 BC Jupiter stops
Looking SW



January 25th 1 BC Jupiter approaches Zaniah again
Looking WSW

