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Astronomical and Historical Evidence for Dating the Nativity in 2 BC

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It is commonly accepted that Jesus Christ was born either before 4 BC (working from references in Matthew, Flavius Josephus) or after AD 6 (working from information in Luke). However, Flavius Josephus's dates are unreliable and sometimes argue against themselves. Astronomically, the eclipse of March 13, 4 BC, is highly unlikely to have been the eclipse which Josephus states heralded the death of King Herod, who, therefore, did not die in 4 BC; neither did Herod die in 3 BC or 2 BC, since there were no lunar eclipses visible in Judea in those years. However, 1 BC had two eclipses; either of these, more likely the latter, was the eclipse which just preceded Herod's death. Herod, therefore, died either in 1 BC or AD 1, and Jesus, therefore, was born either from 3 BC to 1 BC, or from 2 BC to AD 1. The Quirinius census of Luke's gospel was not the Quirinius census of AD 6, but rather the Pater Patriae *census in 2 BC. Jesus was probably born then in 2 BC. This date is consistent with the records of Matthew, Luke, Irenaeus, Clement of Alexandria, and Eusebius.*

When I attended Catholic parochial schools, the nuns taught us that Jesus was born "in the Year 0."[1] Today, it is generally taught that Jesus was born during or before 4 BC. But there is no actual record of this date. This supposition rests *solely* on Flavius Josephus's passing remark that a lunar eclipse occurred shortly before King Herod died, and we know there was an eclipse visible in Jerusalem on March 13, 4 BC. Since we know from the Gospel of Matthew that Jesus was up to two years old or younger when Herod died, this means Jesus could have been born as early as 6 BC. This date, however, seems to clash with the Nativity account in Luke, which says that the Nativity occurred during a census conducted by the Roman Governor of Syria Quirinius, who we know conducted a census of Judea in AD 6. This article proposes that the likeliest date of the Nativity was not 4 BC, but instead about 1 BC. This is also the year when Herod actually died, and it reconciles the *apparent* discrepancy of dates in the Nativity accounts of Matthew and Luke.

There are actually many estimates for the year of the birth of Jesus. Some of the earliest include the placement of the birth of Jesus in the 44th year of the reign of Emperor Augustus, about 3–2 BC by Irenaeus in AD 180.[2] In AD 194, Clement of Alexandria estimated that Jesus was born 194 years before the death of the emperor Commodus who died on the last day of AD 192; therefore Jesus was born around 2 BC.[3] Early in the fourth century, Eusebius wrote that Jesus was born in the 42nd year of the reign of Augustus, and in the 28th year after the death of Cleopatra.[4] Leaving aside the issue of inclusive or exclusive counting, that places the birth of Jesus at around 2 BC. The Gospel of Luke states that

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there was a "universal census" of the entire Roman world shortly before Jesus was born, when P. Sulpicius Quirinius was governor of Syria. Quirinius was governor twice, in 3 BC and in AD 6.[5] However, we generally and popularly suppose that Luke was referring to the latter term, because that was the year in which a local census for taxation purposes occurred; this would mean that Luke exaggerated when he spoke about a census of the whole (Roman) world.

According to Josephus, Augustus sent Quirinius to be governor of Syria at the same time that he sent Coponius to be the first procurator of Judea,[6] stating also that this census occurred in the 37th year "after Caesar's victory over Antony at Actium" (31 BC)[7] which, counting inclusively, brings us to AD 6. However, we will see that Josephus was wrong on many of his dates. Therefore, as a working hypothesis, I regard it as possible that Josephus got his fact wrong about Coponius, confusing Quirinius's first term as governor with his second term. If so, most of the discrepancy between the dates of the Nativity which exists between Luke and Matthew vanishes, thereby placing Luke's census and subsequent Nativity, not in AD 6, but in 2 BC, and as we will see, the other apparent discrepancies between Luke and Matthew vanish as well.

John P. Pratt summarizes the dominant argument very well and succinctly for Jesus's birth from 6 BC to 4 BC, and I will begin by simply quoting from him.

> Josephus says that Varus was Governor of Syria at Herod's death and Varus is indeed indicated as such in 4 BC by coins.[8] The problem, pointed out by Martin,[9] is that the coins also show Varus was Governor in 6 and 5 BC, whereas Josephus indicates that Saturninus was Governor for the two years preceding Herod's death.[10] Martin's solution is that an inscription found near Varus' villa, which describes a man who was twice Governor of Syria, probably refers to Varus. If so, his second term could well have been about 1 BC, when there is no record of anyone else as Governor.
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> The principal source for the life of Herod is the works of (Flavius) Josephus, a Jewish historian who wrote near the end of the first century. *His methods are not always clear and he is sometimes inconsistent so care must be exercised to cross-check his chronology with other sources.* Events that are also dated in Roman history are usually the strongest evidence to correlate his history with our calendar. Josephus states that Herod captured Jerusalem and began to reign in what we would call 37 BC, and lived for 34 years thereafter, implying his death was in 4–3 BC. Other evidence both from Josephus and coins indicates that his successors began to reign in 4–3 BC. Moreover, Josephus also mentions a lunar eclipse shortly before Herod's death.[11] For centuries the evidence from astronomy has appeared decisive; a lunar eclipse occurred on March 13, 4 BC, whereas there was no such eclipse visible in Palestine in 3 BC. Thus, the eclipse has played a crucial role in the traditional conclusion that Herod died in the spring of 4 BC.[12] (Emphasis added)

In short, the primary, and perhaps sole basis for the belief that Jesus was born from 6 BC to 4 BC depends on Josephus's account of the death of Herod and the eclipse he reported.

Some scholars have noted that the 4 BC eclipse is unsuitable, because it happened only one month before that year's Passover. Therefore, during that month, the following had to occur: (a) Herod became sick and died of a horrible wasting disease, but not before (b) being taken to warm baths and treated; (c) executing his son Herod Antipater after also having made him co-regent (causing a bemused Caesar Augustus to observe that it was better to be Herod's pig than his son, since Jews do not kill or eat pigs); (d) dying and being buried after a magnificent funeral which needed days to prepare; (e) this was followed by a seven-day mourning period and (f) followed by yet another mourning period for those whom Herod had executed before the eclipse. These scholars believe that one month is not nearly enough time to account for all these events, so they have browsed around for other eclipses which give a more generous and realistic span of time for these events to unfold.

For this reason, Timothy D. Barnes preferred the eclipse of September 15, 5 BC;[13] six months is enough time for all the above events to occur. However, Ernest L. Martin disagreed, arguing that this would mean that Herod Archelaus would have waited six months, until after the following Passover, before going to Rome and asking Caesar Augustus to confirm him as the next king.[14] And furthermore, if

Herod died some time in 5 BC, then that could mean that Jesus conceivably was born in 7 BC, which is simply too early; Quirinius was not yet governor of Syria.

Josephus dated the length of Herod's kingship in two different ways. (1) Josephus says Herod received his kingship from two of the three triumvirs, Marcus Antonius (Antony) and Gaius Octavius (the future Caesar Augustus) in the year Gnaeus Domitius Calvinus (for the second time) and Gaius Asinius Pollio were consuls, which was 40 BC;[15] from this date he counts 37 years to Herod's death. (2) Josephus says Herod captured Jerusalem and killed his chief rival in the year when Marcus Agrippa and Caninius Gallus were consuls (37 BC), and thereafter ruled for 34 years. However, in this case, and since Jewish regnal years commenced on 1 Nisan,[16] that would mean that Herod's first year began around the time of the vernal equinox in the spring of 36 BC, and if Herod died in the 34th year of his reign thereafter, he would have died in 3 BC or even 2 BC. And in fact, if Herod died shortly before Passover, then according to Josephus's 34-year countdown from the time of the taking of Jerusalem, Herod *had* to have died early in 2 BC. Even if we count from 1 Nisan in the year 37 BC as the first year of Herod's rule, then Herod *had* to have died early in the year 3 BC. So already, we have good reason to discount using the eclipse of 4 BC as the herald of Herod's death.

Furthermore, Josephus says that Herod captured Jerusalem on *Yom Kippur,* the Day of Atonement, also the anniversary of the Roman Proconsul Gnaeus Pompeius Magnus's (Pompey) capture of Jerusalem *27 years earlier.*[17] Since Pompey did that in 63 BC, it would mean that Herod actually captured Jerusalem, not in October 37 BC, but in October 36 BC. And if this is the case, we can move the *earliest* possible date for the death of Herod to 1 BC, or maybe 2 BC. There was no eclipse of the moon visible in Judea either in 3 BC or in 2 BC, so it therefore seems that Herod could *not* have died in these years either.

With regard to the coins issued by Herod's sons indicating that they began their reigns in 4 BC, Pratt argues thusly. Before Herod executed his son Herod Antipater, he allowed Antipater to become co-regent with him. This happened around 4 BC. After Herod himself died, his surviving three sons, who became tetrarchs, all antedated their own reigns back to the time when Antipater was co-regent, in order to keep an unbroken chain between themselves and the deceased Antipater, thereby giving their own reigns more legitimacy.[18]

Since we are already highly skeptical as to whether Herod really died in 4 BC, let us look more closely at that eclipse of 4 BC, which for centuries has been regarded as the herald of Herod's death. Can we find evidence which will further strengthen or weaken the supposition that Herod died in 4 BC? The eclipse commenced at 12:07 a.m. Jerusalem Local Time in Jerusalem on the night of March 12–13, 4 BC.[19] In any lunar eclipse, a "penumbral" period commences and concludes the eclipse, and this portion of an eclipse is either invisible or barely visible. The umbral portion of this eclipse commenced almost exactly ninety minutes later, at 1:38 a.m. on the morning of March 13. The eclipse reached its maximum totality about an hour later, at 2:42 a.m., *but was only 36% total at the time of maximum totality.* The eclipse then receded for another two and a half hours or so, concluding at around 5 a.m.

This is a puny eclipse. Having seen several dozen in my life, I know from experience that at this level of totality, the moon is still bright; it simply has a smudge in its corner. There is no reddening of the moon, characteristic of deep eclipses, at this minor level of totality. It is a fact that in all of his writings, the eclipse which preceded Herod's death is the only eclipse Josephus ever mentioned. But what a meek little eclipse it was—if, indeed, this is the correct eclipse. Furthermore, as Pratt notes in his paper, few, if any, souls in the ancient Jerusalem of 4 BC would even have been awake to behold this eclipse. Given that this eclipse was insignificant, and moreover seen by next-to-nobody, it is highly unlikely that any memory of this eclipse would have survived for over 75 years by word-of-mouth, to be eventually noted by Josephus as shortly preceding the death of Herod.

Given all of the problems associated with the March 13, 4 BC, eclipse, W. E. Filmer proposed the eclipse of January 10, 1 BC, as the eclipse associated by Josephus with the death of Herod.[20] Since this eclipse occurred a full three months before Passover, it solves all the chronological difficulties presented by

the eclipse of March 13, 4 BC, giving ample time for all the events that occurred between the time of the eclipse and Herod's death, and its aftermath. Furthermore, unlike the barely noticeable eclipse of March 13, 4 BC, this eclipse was more visible, and would have been worth remembering and reporting decades later to Josephus—if, however, anybody had actually seen the eclipse. This eclipse, too, suffers from the same problem that plagued the eclipse of March 13, 4 BC: it happened when almost everyone would be asleep.

Here is the *ephemeris* for the January 10, 1 BC eclipse:

First penumbral contact:	10:31 p.m. (January 9, 1 BC)
First umbral contact:	11:28 p.m.
Total eclipse:	12:25 a.m. (January 10)
Maximum totality:	1:15 a.m.
End of totality:	2:05 a.m.
Last umbral contact:	3:03 a.m.
Last penumbral contact; eclipse over:	4:00 a.m.

This eclipse would have begun to be visible between 11:00–11:30 p.m. That is two to three hours better than the 1:38 a.m. or so of the eclipse of March 13, 4 BC. But that benefit is likely cancelled by the fact that the January 10 eclipse occurred at a time of the year when the sun went down (5:05 p.m.) a full fifty minutes earlier than it did on March 13, 4 BC (5:54 p.m.). This eclipse of January 10, 1 BC, became palpably visible about 6.5 hours after sundown, whereas the March 13, 4 BC, eclipse became palpably visible about 7.5 hours after sundown. In a time and place where people generally retired at darkness, there is little real difference between the timing of these eclipses; both would have been seen by few people. This is particularly true in January, when the nights even in Judea are markedly colder than they are in March.

There was another eclipse on September 15, 5 BC, which Barnes, at least, believed was the eclipse which Josephus said preceded the death of Herod:[21]

First penumbral contact:	7:46 p.m. (September 15, 5 BC)
First umbral contact:	8:44 p.m.
Total eclipse:	9:44 p.m.
Maximum totality:	10:34 p.m.
End of totality:	11:23 p.m.
Last umbral contact:	12:22 a.m. (September 16)
Last penumbral contact; eclipse over:	1:22 a.m.

This eclipse began to become palpably visible a couple of hours or so after sundown. But few people other than Barnes have ever believed that this was the eclipse Josephus spoke about. It would date the death of Herod too early for other accounts.

Finally, we arrive at the eclipse of December 29, 1 BC, which Pratt argues was the eclipse which preceded the death of Herod.

Here is the *ephemeris* of that eclipse:

First penumbral contact:	2:20 p.m. (December 29, 1 BC; during the day, before moonrise, when the moon was still below the horizon, and invisible.)
First umbral contact:	3:28 p.m. (moon still invisible)
Maximum % of totality:	4:44 p.m. (moon still invisible; moon is under a 57% partial eclipse)
Time of complete moonrise:	5:02 p.m. (moon is visible and 53% eclipsed)
Last umbral contact:	5:59 p.m.
Last penumbral contact; eclipse over:	7:07 p.m.

While it was not a total eclipse, it is actually a highly eye-catching event to see an expectant full moon rise misshapen and eclipsed. Pratt reasons that the dramatic nature of seeing a full moon rise under eclipse is dramatic and startling; it seldom happens, and people therefore tend to remember it. Due to the striking nature of this eclipse, and due to the fact that it occurred at a time when many people must have witnessed it, it would be a memorable occasion, and from then on, used to date other events. Pratt very reasonably believes the partial eclipse of December 29, 1 BC, was the eclipse that Josephus says preceded and heralded the death of Herod. As does the eclipse of January of that year, this eclipse, too, occurs three months before Passover, allowing enough time for the various events to happen which had to occur between the Josephus eclipse and the

following Passover. If so, then Herod died early in AD 1, and Jesus therefore was born in 1 BC or 2 BC.[22]

There are some problems left to resolve: Who was governor of Syria at the time of the census of the Nativity? And how well does this harmonize with Matthew's account of the infant Jesus being born before Herod died? And what about Josephus statements that the sons of Herod (other than the executed Antipater) came into their tetrarchies in 4–3 BC, implying, as this does, that Herod died in 4 BC after all?

See Tables 146 and 147 below, found in Jack Finegan's *Handbook of Biblical Chronology*, both of which give listings of the governors of Syria from 9 BC–AD 7.[23] Gaius Caesar died in Syria in AD 4, so even if Table 147 does not mention his replacement, it is reasonable to suppose that L. Volusius Saturninus replaced him until AD 6.

Josephus said that Varus was governor of Syria when Herod died. Looking at the tables, we see general agreement that Varus began being governor in 6 BC and this continued into 4 BC. But then, in Table 147, there is a notation that Varus was *also* governor in 1 BC. Since this does not appear in Table 146, what does its appearance in Table 147 mean? Why is it in Table 146 but not in the other table, and can we trust it? The usually accepted list of governors is from the Schürer-derived Table 146.[24] Thus we are left with Varus as governor (who Josephus said was governor when Herod died and therefore after Jesus was born) if Jesus was born in 4 BC, or with Quirinius as governor if Jesus was born in 3 BC or 2 BC.

But what about Varus? A stone with an inscription was found near his old manor in 1784, referring to a certain unnamed man who was twice governor of Syria.[25] Knowing that Varus was governor of Syria at least once, whom else could this refer to but Varus? But if so, when? If Quirinius was governor when Augustus called for the census and when Herod was still alive—but if Varus was governor

Year	Name of Governor, Table 146	Name of Governor, Table 147
9 BC	M. Titius	M. Titius
8 BC	C. Sentius Saturninus	Titius
7 BC	C. Sentius Saturninus	Titius, then P. Q. Varus
6 BC	Saturninus, then P. Q. Varus	P. Quinctilius Varus
5 BC	Varus	Varus
4 BC	Varus	Varus, then C. S. Saturninus
3 BC	P. Sulpicius Quirinius	C. Sentius Saturninus
2 BC	Quirinius	C. Sentius Saturninus, then Varus
1 BC	Gaius Caesar	Varus
AD 1	Gaius Caesar	Varus, then Gaius Caesar
AD 2	Gaius Caesar	Gaius Caesar
AD 3	Gaius Caesar	Gaius Caesar
AD 4	G. Caesar, then L. V. Saturninus	Gaius Caesar
AD 5	L. Volusius Saturninus	
AD 6	Quirinius	
AD 7	Quirinius	

Tables 146 and 147 of Jack Finegan's *Handbook of Biblical Chronology* listing the governors of Syria from 9 BC to AD 7.

when Herod died—that means Varus could *not* have followed Quirinius as governor after Quirinius stepped down after AD 7, because Herod was long dead even before AD 6. And furthermore, after AD 7, Varus was involved with the legions in Germany, where he and three legions were destroyed in AD 9.

Luke and Josephus could agree if both Quirinius and Varus were each governor for two periods. That scenario fits with the evidence of the *Lapis Tiburtinus*. According to Schürer, Varus was governor in 4 BC and was succeeded the following year by Quirinius (see Table 146), who therefore was governor of Syria for *both* of the *censi* which Augustus called for the Holy Land, one in 2 BC to affirm him as *Pater Patriae*, and the other in AD 6 after Rome deposed Herod Archelaus and annexed and governed Judea directly.

This means that the order of Roman governors was Varus (4 BC) / Quirinius (3 BC and 2 BC) / Varus again—but wait a minute here; we also know that Gaius Caesar became governor in 1 BC, so how could Varus *possibly* have been governor a second time—the *Lapis Tiburtinus* notwithstanding? The answer may lie with considering who Gaius Caesar was. Gaius Caesar was Emperor Augustus's beloved and oldest living grandson. He was currently the heir apparent, expected to become emperor after Augustus died. He was *royalty*. Josephus says that Gaius Caesar was in Rome after Herod died; this would seem to make perfect sense, since Caesar was one of the two consuls for the year AD 1, although certain Roman sources say Caesar was made governor of Syria in 1 BC.[26] This objection is really no objection at all, because there is no reason why he could not have been both.

Robert Graves notes that while Caesar was on his way to his station in Syria, he stopped on Chios, met his step-uncle Tiberius, and agreed to take a letter back to Rome for Tiberius[27]—this would mean that he returned to Rome immediately and did not actually arrive at his duty-station. Dio Cassius notes that the Parthians came to terms with the Romans in AD 1,[28] thus making the governorship of Syria an easy, peaceful one, thereby allowing Caesar to slip back home to Rome for a visit, and to resume his other duties as consul. Absentee governors were tolerated if they were important enough. A few decades previously, Pompey had been an absentee governor of Spain for several years, and he was allowed to rule his province from Rome, sending out viceroys to govern in his absence.

Knowing that Gaius Caesar was a consul of Rome as well as governor of Syria in AD 1 (which meant he had official duties in Rome also) and knowing that he did return to Rome at least once, it is easy to place him in Rome after Herod died. So this then begs the question: when Gaius Caesar was not minding the shop in Syria, who was? At this point, Publius Quinctilius Varus comes into the picture *twice* as governor of Syria: the first of those times was after 4 BC, according to the *Lapis Tiburtinus,* and the second time was as acting governor of Syria when Herod died, to believe Josephus. He must have substituted for the sometimes absent Gaius Caesar (who, in addition, was hardly twenty years old; Augustus would not have objected to having an *experienced* governor while his stripling grandson gallivanted back and forth). It all fits together.

Finally, we have the small matter of dealing with Josephus's *seeming* to state that the surviving sons of Herod assumed their tetrarchies in 4 BC after he died. Pratt has already discussed the reasonable possibility of antedating their regnal years.

But there is an even stronger argument against Josephus's assertion—the witness against Josephus, again, being Josephus himself, or rather the variant versions of Josephus. In *Antiquities*, Josephus states that Herod Philip died in the twentieth year of the reign of the emperor Tiberius, after having served as tetrarch for 37 years.[29] Since Tiberius came to power in AD 14; this places Philip died in AD 33 or AD 34, which places the commencement of his tetrarchy in 4 BC or 3 BC. However, Finegan writes as follows:[30]

> Already in the nineteenth century Florian Riess reported that the Franciscan monk Molkenbuhr claimed to have seen a 1517 Parisian copy of Josephus and an 1841 Venetian copy, in each of which the text read "the twenty-second year of Tiberius." The antiquity of this reading has now been abundantly confirmed. In 1995 David W. Breyer reported to the Society for Biblical Literature his personal examination in the British Museum of forty-six editions of Josephus' *Antiquities* published before 1700, among which twenty-seven texts, all but three published before 1544, read "twenty-second year of Tiberius," while not

a single edition published prior to 1544 read "twentieth year of Tiberius."[31] Likewise, in the Library of Congress, five more editions read the "twenty-second year," while none prior to 1544 records the "twentieth year." It was also found that the oldest versions of the text give various length of reign for Philip of 32 and 36 years. But if we allow for a full thirty-seven year reign, then "the twenty-second year of Tiberius" (AD 35/36) points to 1 BC … as the year of the death of Herod.[32]

Summary of the Argument

The date of Jesus's birth has long been thought to have been at sometime from 6 BC to 4 BC, based solely on Flavius Josephus, who reported that a lunar eclipse shortly preceded King Herod's death, and we do know a lunar eclipse occurred on March 13, 4 BC. However,

1. Josephus himself contradicts his own dates repeatedly, leaving us uncertain about *all* of his dates.
2. Different versions of Josephus exist which add to the uncertainty, in that they give different years for the death of one of Herod's sons, which therefore casts into question whether they began their tetrarchies in 4 BC or in 3 BC. Furthermore, there is reason to suppose that they intentionally antedated when their tetrarchies commenced, for political credibility.
3. Publius Quinctilius Varus appears to have been twice the governor of Syria, one of those times after 4 BC. Josephus says he was governor when Herod died. Since he could not have been governor in 3 BC or in 2 BC, this leaves him perhaps as a sometimes viceroy, filling in for the sometimes absent Governor Gaius Caesar starting in 1 BC, the date therefore of Herod's death.
4. There were *two* Roman *censi* in the final decade of the BC era. One was in 8 BC. This was not the census mentioned in the Gospel of Luke, because according to Luke, Quirinius was not the governor of Syria in that year, and because this census counted only Roman citizens; the Holy Family, like almost all residents of Judea, were not Roman citizens and so would not have been affected by this census. However, the census/registration which occurred in 2 BC as a consequence of the Senate and Roman people naming Caesar Augustus the *Pater Patriae*, the "Father of the Country," *would* have affected the residents of the Holy Land, since all were required to affirm Augustus in his title. In any event, since Herod did not die shortly after 8 BC, and since he did die after a census, therefore he could not have died in 4 BC, when there was no census.
5. Most of the ancient sources reported that Jesus was born between 3 BC and AD 1.
6. Josephus said that Herod captured Jerusalem and executed his rival for the Jewish throne on the Day of Atonement, the exact anniversary of the capture of Jerusalem by Pompey 27 years earlier, that is, in 63 BC; this means that even if Herod reigned for only 34 years thereafter (and not 37 years), he therefore must have died in 2 BC or 1 BC.
7. The lunar eclipse of March 13, 4 BC, may be disregarded as the herald of Herod's death because it was nothing more than a minor partial eclipse, which furthermore appeared at a very late hour when next-to-nobody would have seen it. It was not a sufficiently memorable occasion for public recollection.
8. Since there were no lunar eclipses in 3 BC or 2 BC, but there were two in 1 BC, one of these eclipses *has* to be the eclipse which Josephus says heralded the death of Herod. The first eclipse occurred on January 10, 1 BC, and was a full-blown total eclipse of the moon. While this eclipse is suitable because of its grandeur and because it gives three months between its occurrence and Passover, this eclipse is unlikely to be the eclipse of Josephus because it occurred at a later hour. It also was at a time of the year when people went to bed even earlier than at other times of the year, and moreover it was cold at night in Jerusalem, which would tend to reduce even more the number of viewers.
9. This leaves us with the partial eclipse of December 29, 1 BC, twelve lunar months later. In terms of allowing enough time for certain significant events to occur (again, three months before Passover), this eclipse is ideally suited to be Josephus's eclipse in that the full moon that rose that night was already under half-umbral eclipse

when it was first seen at sunset, thereby assuring that many people would have noticed it, many more than the eclipse of January 10.

10. This remembered eclipse is the most likely one that Josephus had in mind as heralding the death of Herod. Granted that aside from the issue of how many people saw it, the other 1 BC eclipse might fit the descriptions too.

11. Finally, the major gap in the Gospels separating Luke's account from Matthew's account has been resolved and eliminated. We have long supposed that Luke's gospel requires Jesus to have been born after AD 6, whereas Matthew's gospel requires Jesus to have been born between 6 BC and 4 BC. However, thanks to understanding Josephus's errors and understanding more about the *Pater Patriae* registration of the entire Roman Empire in 2 BC, this allows us to bridge the 10–12-year gap between Matthew and Luke by moving Luke's timeline back eight years from the typical dating and moving forward Matthew's timeline by 4–6 years from the most common description, actually causing them to meet and indeed overlap.

Conclusions

- King Herod died, not in 4 BC as commonly believed, but either early in 1 BC before Passover, or early in AD 1, again before Passover.
- If Herod died in 1 BC, Jesus was born between 3 BC and 1 BC.
- If Herod died in AD 1, Jesus was born between 2 BC and AD 1.
- The *Pater Patriae* registration of all inhabitants of the Roman Empire initiated in 2 BC (and not the popularly believed census of Palestine taken in AD 6) is the census which Luke reported as having occurred when Quirinius was governor of Syria; he was governor in 2 BC and again in AD 6. It should also be noted that Luke did *not* say that Quirinius was governor when Herod died; only that he was governor at the time the *Pater Patriae* registration was ordered (and Herod presumably was still alive). Furthermore, when Luke reported that the census was of the entire (Roman) world, we now see that he did not exaggerate, if we regard the *Pater Patriae* census of 2 BC and not Quirinius's local census of AD 6 as the census he was talking about. The streams of evidence resolve: Jesus was probably born sometime in 2 BC. ★

Notes

[1]There is no such a thing, of course, as the "Year 0." There is 1 BC (Before Christ) which is immediately followed by AD 1 (*Anno Domini*, Latin for "the year of the Lord").

[2]Irenaeus, Against All Heresies in *The Ante-Nicene Fathers: Translations of the Writings of the Fathers down to AD 325*, 10 vols. (1885–1887; reprint, Peabody, MA: Hendrickson, 1994), 3.21.03.

[3]Clement of Alexandria, Stromata, in *The Ante-Nicene Fathers* 3, 151, note 1.

[4]Eusebius, *The History of the Church,* trans. G. A Williamson (New York: Dorset Book edition, 1965), Book 1, 5.5.

[5]Jack Finegan, *Handbook of Biblical Chronology* (Peabody, MA: Hendrickson Publishers, 1998), 302, Table 146, who cites Emil Schürer, *A History of the Jewish People in the Time of Jesus Christ,* 5 vols. (New York: Scribner's, 1896); G. Vermes and F. Millar, 3 volumes in 4, rev. ed. (Edinburgh: T&T Clark, 1973–1987), vol. 1.1, 350–7; *Realencyclopäie der classischen Altertumswissenschaft (Real Encyclopedia of Classical Ancient Knowledge)*, Zweite Reihe (2nd Row), 4.2, col. 1629.

[6]Flavius Josephus, *Jewish Antiquities* Book 18, paragraphs 1–2 in Loeb Classical Library, No. 433, trans. L. H. Feldman, (Cambridge MA: Harvard University Press, 1963), 12.

[7]Josephus, *Antiquities* 18.4.

[8]Schürer, *The History of the Jewish People in the Age of Jesus Christ*, 1.257.

[9]Ernest L. Martin, *The Star That Astonished the World*, 2nd ed. (Portland, OR: Associates for Scriptural Knowledge, 1991), 174–9, 232–4. He writes about the Lapis Tiburtinus, the stone found near what was Publius Quinctilius Varus's estate outside Rome.

[10]Josephus, *Antiquities* 17.2.1; 17.5.2.

[11]Josephus, *Antiquities* 14.16.4 (year specified by the two consuls); 17.6.4; 17.8.1; 17.8.2; 18.2.1; 18.4.6. A pair of men always served a one-calendar-year term as consuls of Rome, and careful records were kept of who was consul in what year. Matching an event with the time of the consulships of X and Y is therefore a very solid way of dating that event.

[12]John P. Pratt, "Yet Another Eclipse for Herod," *The Planetarian* 19, no. 4 (Dec. 1990): 8–14 (emphasis added). The paper is also available from Dr. Pratt's own website www.johnpratt.com.

[13]Timothy D. Barnes, "The Date of Herod's Death," *The Journal of Theological Studies* 19 (1968): 204–9.

[14]Ernest L. Martin, *The Birth of Christ Recalculated* (Pasadena, CA: Foundation for Biblical Research Publications, 1980).

[15]Josephus, *Antiquities* 14.389; 14.487; 17.191.

[16]Babylonian Talmud Tractate *Rosh Hashanah,* 10b.

[17]Josephus, *Antiquities* 14.389; 14.487; 17.191.

[18]Pratt, "Yet Another Eclipse for Herod," 3.3 in the online version, http://www.johnpratt.com/items/docs/herod/herod.html.

[19]For astronomical information, I have used a program throughout this book called *Skylights*, written and

copyrighted in 1994 by G. Vecchi, and sold by Zephyr Services of Pittsburgh, PA. Jerusalem Local Time, when the position of the sun is at its zenith, is defined as 12 o'clock High Noon. All stated times are relative to this reference.

[20]W. E. Filmer, "The Chronology of the Reign of Herod the Great," *The Journal of Theological Studies* 17 (1966): 283–98.

[21]Barnes, "The Date of Herod's Death," *The Journal of Theological Studies*, 204–9.

[22]Pratt, "Yet Another Eclipse for Herod," 2.5.

[23]Jack Finegan, *Handbook of Biblical Chronology,* 302, 304.

[24]Schürer, *The History of the Jewish People in the Age of Jesus Christ*, 1.257.

[25]Martin, *The Star That Astonished the World*, 174–9, 232–4.

[26]Josephus, *Antiquities*17.9.5; *Dio Cassius* from E. Cary, *Dio's Roman History* (Cambridge, MA: Harvard University, 1980), 40.9–10.4; Barnes, "The Date of Herod's Death," 208.

[27]Robert Graves, *I Claudius: From the Autobiography of Tiberius Claudius, Born 10 BC, Murdered and Deified AD 54* (New York: Vintage Books, 1989), 81.

[28]*Dio Cassius* 40.10.4.

[29]Josephus, *Antiquities* 18.106.

[30]Finegan, *Handbook of Biblical Chronology*, 301.

[31]Filmer, "The Chronology of the Reign of Herod the Great," 298; Barnes, "The Date of Herod's Death," 205; Riess, *Das Geburtsjahr Christi (The Year of Jesus' Birth)* (Freiburg: Herder, 1880); David W. Beyer, "Josephus Re-examined: Unraveling the Twenty-Second Year of Tiberius," in *Chronos, Kairos, Christos II,* ed. E. Jerry Vardaman (Macon, GA: Mercer University Press, 1998).

[32]Beyer, "Josephus Re-examined," 4.

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