



Book Review

The Great Christ Comet

By Colin R. Nicholl

Introduction

Although this book came out in 2015, I had not seen it until recently. After reading it, I wrote this for several reasons. The public fascination with the Star of Bethlehem is as strong today as perhaps any other point in 2000 years. This is an exceptional book, very well written with a deep well of sources. The care given to providing backup information shows that the author took his time to research deeply on the subject and weed through some of the more dubious ideas. And that is the important takeaway; with the inadequacy of proof that this well-documented, well written treatise on the age-old subject of the Star of Bethlehem again shows that we may never know its true nature, and that's okay. Miracle or mundane alignment, the Star of Bethlehem is more about who it announced than what it is. I have yet to see anyone write a 200-page book about the streetlamp over the plastic sign that said, "Washington's Birthplace 1 mile".

Before the review, full disclosure. I am a Christian, although some of my views don't align perfectly with the normal Protestant theology. However, I have approached this as a literary review of the science subject that needs to stand on its own merit based on facts. I would not pretend to be familiar enough with the Bible to dispute the accuracy or applicability of any of the passages that the author uses, nor get into the endless discussions of translations and modern viewpoints versus ancient ones.

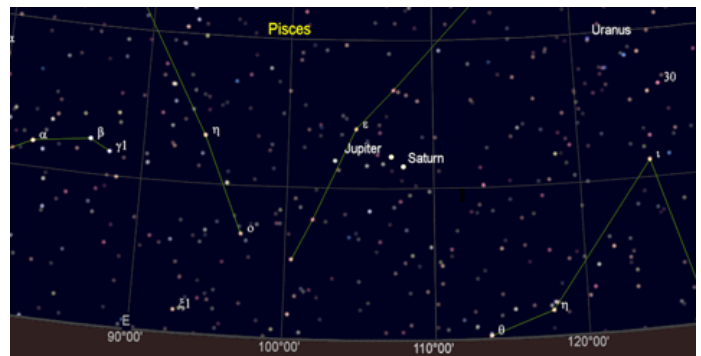
I'm also an amateur astronomer, so I have had the opportunity to see examples of some of the things described in the book as possible candidates for the star. It is an important star from both perspectives, and it stands alone in astronomy as the spotlight on the birthplace of Christ and all its spiritual meanings to millions in two millennia. It's also fascinating, astronomically, to review the beautiful and amazing objects or alignments that may have been responsible for the Star.

Review

"The Great Christ Comet" spends the first three chapters recounting the history and significance of the Star of Bethlehem. The author does a great job of this, providing Biblical accounts with their contemporary meanings and the later spread of the story throughout the 20 centuries since the event. He lists several examples of previous attempts to explain the Star and discusses its impact on Christmas and popular culture.

However, none of this portion was controversial, so my review in detail begins with Chapter 4 "What Star is This?" where Mr. Nicholl presents the previous major hypotheses on his way to stating they are all wrong, and his theory of a comet is the correct answer.

By Brad Young, Astronomy Club of Tulsa



22 Sep 7 BC Jupiter / Saturn conjunction

Hypothesis #1 is the triple conjunction of Jupiter and Saturn in Pisces in 7 BC. There is some astrological meaning to Jupiter as the king of planets and Saturn being associated with the Jewish people. However, this grouping is not considered viable as an explanation because it was not bright enough and is not particularly unusual. Jupiter and Saturn have a triple conjunction every 15 to 16 years.

Hypothesis #2 consists of a series of occultations of Jupiter by the moon in Aries in 6 BC. This is also dismissed as it is not rare and the hiding and then reappearance of the bright star doesn't fit well with the visual impact described in the Bible.

Hypothesis #3 is the sudden appearance of a nova or supernova. Here there is the problem of a lack of records by any of the other civilizations that had a robust astrological interest at the time. The Chinese particularly were well known recorders of new stars, and there is no indication that they recorded one near this time. Other problems with this scenario are that the star was seen moving to different places in the sky whereas a supernova would be fixed. Also, no supernova remnant residue in any part of the electromagnetic spectrum has been found that would match the location and timing.

Hypothesis #4 is that of a great meteor storm, and idea first presented by Sir Patrick Caldwell Moore, one of the preeminent astronomers of the 20th century. However, this idea really lacks any support. There would have to be several different meteor storms that would happen at different times to provide the moving object that was recorded. Also, meteor storms were well known if not completely understood at that time and would probably have been recognized as one and described appropriately. No such records have been found.

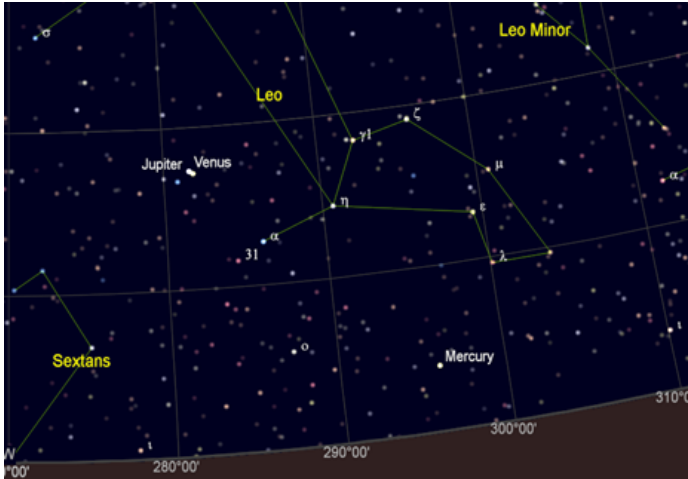
Hypothesis #5 is relevant mainly in an astrological sense. There is an argument that proposes the star seen to brighten so significantly was Alpha Aquarii, named Sadalmelik by the Arabs, a fixed star in the sky that would have been located suitably at dusk to match some of the descriptions. The main reason for its importance to astrology is that it is the brightest star in the constellation that



will become the apparent place of the Sun at the vernal equinox. You probably remember the song "Age of Aquarius" - that was what the hippies were all yelling about in the lyrics. Unfortunately, that idea didn't take shape until the Medieval period about a thousand years later and won't happen until many years from the present day. It also suffers the same issue of being a fixed star.

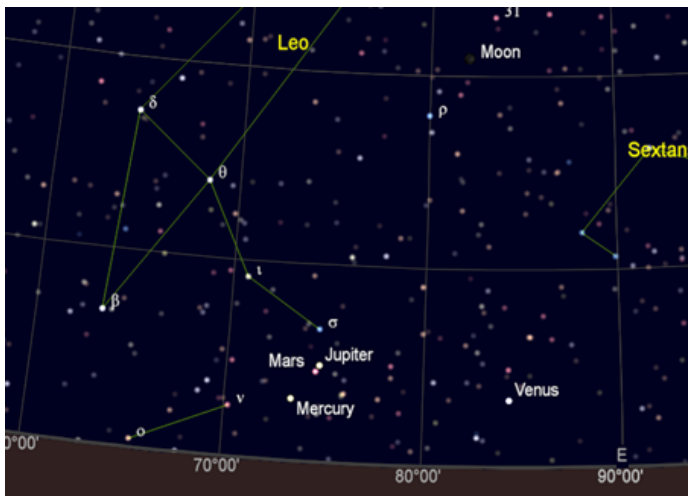
Hypothesis #6 is a hodgepodge, a mix and match of any of the above combined together to provide an explanation. This is easily dismissed since none of the first five ideas have held water and adding them doesn't fix the issues that negate proof.

Hypothesis #7 uses a great year for Jupiter apparitions as its model. In 2 BC, Jupiter had a triple conjunction with Regulus, the brightest star in Leo, and a close conjunction with Venus on June 17th where it might have appeared to be fused into one very bright star.



17 Jun 2 BC Dusk looking WNW

Then on August 27th, 2 BC, a grand grouping of Mercury, Venus, Mars, and Jupiter occurred low in the sunset with Mars and Jupiter particularly close in conjunction.



27 Aug 2 BC Dawn in ENE

There are some historical problems with this one, as Christ is believed to have been born in 5 or 6 BC, not 2 BC, as discussed below.

Herstory in the Stars

In Chapter 5 the author avers that the answer to the Christ-

mas Star of Bethlehem is that it was a Comet, which he calls the Christ Comet. He looks at records of comets of that time, including Halley's Comet, which, appearing in 12 BC, would seem to be too early. So, it must have been another comet, one not known previously or recorded contemporaneously.

Nicholl then spends many pages describing the constellation Virgo, the Virgin. Greco-Roman mythology held this to be Persephone, daughter of Demeter. Perhaps because of the virginity of both women, the constellation was sometimes later re-imagined as Mary.

In his theory, Nicholl sees the Christ Comet brightening tremendously while in retrograde motion, seeming to stall around the stars that make up the belly of the figure of Virgo the Virgin, as depicted on the artistic star charts of pre-modern times. This comet enters her belly from below and then grows larger and brighter, and after attaining maximum size, leaves her belly between her legs. Nicholl explains that this is a celestial representation of the conception and birth of Jesus with the Virgin Mary, his mother, represented by Virgo in the sky. This scenario appears in several areas in the book, and in an alternate discussion around the events in 2 BC it is another wondrous thing that happened to Jupiter, with Jupiter being identified as the Christ Comet, doing the same show in Virgo, with the same meaning.

But there is a critical flaw in proposing the Christ Comet as an event in 2 BC. Most historians agree that King Herod ordered the murder of firstborn sons after the Magi had met with him and asked to see the child, so they might worship him. This act of murderous envy led to the Flight to Egypt by Joseph, Mary, and Jesus. But historians also nearly all maintain that by 2 BC, an old and sick Herod had already abdicated to his sons, preceding his death the next year. This conclusion is based on coinage identified and dated from the time.

Remaining Hypotheses

Hypothesis #8 is that the appearance of a star over Bethlehem was a purely supernatural event that cannot be explained with facts or using the scientific method. Since we can't explain it, we just must accept it as described in the Bible, on faith alone.

Hypothesis #9 is also an accept on faith situation. The story is passed down to us in the Gospel of Matthew and may be at least partly apocryphal. Jesus was born in Bethlehem to the Virgin Mary, and this event is central to the Christian faith. It seems fitting that some sort of magical or important event would announce his birth. Then, as the story was retold, it became more amazing as time passed.

Remaining Discussion

The middle portion of the book reviews the types of objects depicted in the hypotheses, comets, meteors, etc. and does, I must say, a good job of explaining these celestial wonders. If just for this portion, the book is worth a read.

Then, with Chapter 9, "Lo, the Star Appareth", Nicholl goes back to explaining the hypothesis that he feels is correct. Here, most astronomers I think would disagree with his findings, at least in the specifics of what he has selected as the answer, if not the whole idea of it being a comet.

While admitting that there has never been a comet in history as bright as the one proposed as the Bethlehem star here, he states that Sarabat's comet, was as bright as magnitude - 6, and the recent Hale-Bopp, at magnitude - 2.7, have been stunningly bright. There have been many sun grazers visible in the daytime sky that may have hit -8 or so. But by his own calculations, the Bethlehem comet would have had to have had an absolute magnitude of nearly -20

and an apparent magnitude of as much as -17 (the sun is magnitude -24), while sufficiently far from the sun to be seen in twilight. He even titles one of his subsections later in the book "Unprecedented Absolute Magnitude".

Here again the lack of any records from the Chinese, Aztec, or other civilizations for such a bright object that appeared, fell to the sun, and then reappeared over a period of months is telling. But the author downplays this, stating that some records are inevitably lost.

The next section is devoted to determining the orbit that would match the sightings as described in the Bible. For this, he enlisted Gary Kronk, a comet discoverer and observer, to help him with the technical details. The orbit that is derived does seem to match the comings and goings of the comet, and they do provide orbital elements and sufficient technical details that any amateur astronomer could use the information to plot the orbit and its path of the sky on their computer using readily available astronomy software. I did this and noticed that modeled motion matched well but that in perihelion passage and its closest approach to earth, the geometry of its appearance in the sky was poor, with the comet tending to hug close to the Sun at its brightest portion of the appearance. Although I don't see that problem stated in the book, this may be the reason why the comet is required to be amazingly intrinsically bright.

The next section is a curious almost day by day description of the course of the Christ Comet through the sky. This is the part where the very bright magnitudes are presented and the retrograde motion back to Virgo, with a stationary point met at her "belly" on October 6th, and birth occurring soon thereafter. If you are familiar with the precession of the equinoxes, you will know that 2,000 years ago, the location of the equinox we now see in Virgo was much further east, almost exactly where the author located this stellar depiction of the conception and birth of Jesus. He states that it reaches its highest point in the predawn sky at 23 and a half degrees west of the Sun, on October 14th, 6 BC, and the baby Jesus (the comet) is seen fully delivered from its mother on October 20th between 80 and Lambda Virginis. With precession considered, this would put this major event at no more than 15° up in the eastern sky.

Admittedly, for the northern hemisphere, the pre-dawn sky of October allows objects along the ecliptic to be seen near the Sun. This assumes that the comet is low inclination (the author chose 2° for his orbit). Most very bright comets are

one-time visitors from the Oort cloud and can approach from any direction and inclination. To require this comet to be low inclination, the brightest ever seen by man, and specifically timed to present a celestial movie of the birth of Christ starring the imaginary characters we've drawn in the sky seems, to me, to be relying on an awful lot of coincidences.

The author concludes that his comet theory is the best of all the choices. He adds an appendix discussing the Chinese comment records, and the lack of a records of this brightest comet ever seen. Then he presents a very well-documented bibliography, a useful glossary, and an index. Footnotes proliferate and appear on the appropriate page throughout the book. This listing of sources, explanation of terms, and even an additional listing of the Christmas carols that he used for part of his background material, are the reason I stated it is such a well-documented book. And again, it is stocked with great photos and graphics, and has a wonderful picture on the cover of the book, which is very well bound, typeset with a easily legible font.

But unfortunately, I'm not buying his theory. Nicholl concludes that a few people in and around Mesopotamia and Israel were the only people on Earth who saw this Star, which has now in his book become an enormous comet, perhaps the brightest ever seen (or not, if you weren't in the Holy Land). It is described as having a tail that reached the zenith, which would seem to have led the Gospels to list it has a comet, not a star. Also, the comet was perfectly placed to not only arrive at the time of Christ's birth, but also to act out in its path a shadow play of the conception and birth of the Savior is just too far a stretch for me. The data that he uses is all traceable and well sourced, but the conclusion seems as miraculous as just saying that it was a miracle. There is no compelling reason for me, after reading the book, to leave off the idea that there was an appearance of a bright object to a few people, and that we may never understand what it was.

Taken on faith, the Christmas Star makes sense. It's a symbol, showing the importance of Christ's birth, and plays a central role in the story of the Magi. Faith is not proof on a scientific basis; we may never have facts that lead to an indisputable answer. I appreciate the author of the book trying to prove the story, but I don't think he did, and that's okay.

Diagrams by author using Cartes du Ciel

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