

STAR OF BETHLEHEM

Some questions for consideration and study:

1. Was the star at Bethlehem that appeared during the time of Jesus' birth a natural phenomenon that can be explained by science or a miraculous creation of God?
2. Was the star at Bethlehem the same star mentioned in the Book of Mormon?

Various artist concepts regarding the star of Bethlehem:



A 'supernatural' and very obvious 'star' unlike natural stars; much lower in the sky
(A 'star' like this would surely get the attention of not only the wise men, but others as well.)



A star very similar to other natural stars, but much brighter



A star similar to natural stars, but much brighter and with an additional beam of light

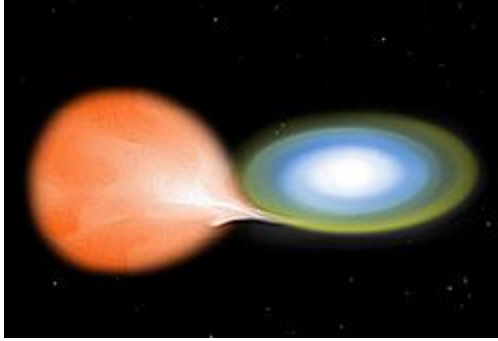
Some Natural Phenomenon Definitions / Descriptions

Nova

Per Wikipedia:

A nova (plural novae or novas) or classical nova (CN or plural CNe) is a transient astronomical event that causes the sudden appearance of a bright, apparently "new" star, that slowly fades over several weeks or many months. Novae involve an interaction between two stars that cause the flareup that is perceived as a new entity that is much brighter than the stars involved.

Causes of the dramatic appearance of a nova vary, depending on the circumstances of the two progenitor stars. All novae involve closely located binary stars (the progenitors), either a pair of red dwarfs in the process of merging, or a white dwarf and another star.



Artist's conception of a white dwarf, right, accreting hydrogen from a larger companion

Supernova

Per Wikipedia:

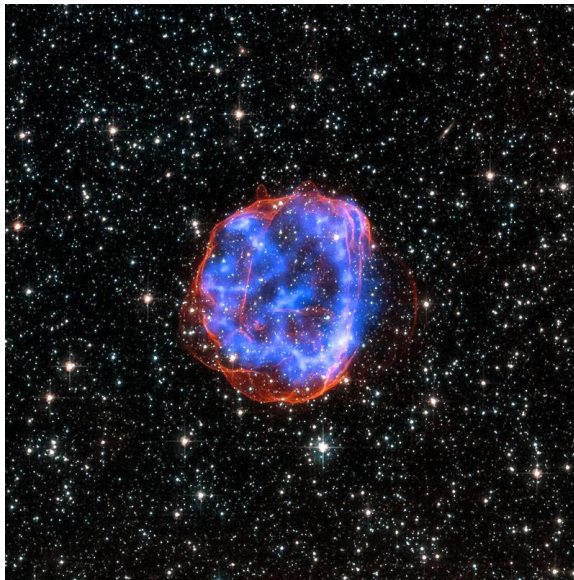
A supernova is a transient astronomical event that occurs during the last stellar evolutionary stages of a massive star's life, whose dramatic and catastrophic destruction is marked by one final titanic explosion. This causes the sudden appearance of a “new” bright star, before slowly fading from sight over several weeks or months.

Supernovae are more energetic than novae. In Latin, nova means "new", referring astronomically to what appears to be a temporary new bright star. Adding the prefix "super-" distinguishes supernovae from ordinary novae, which are far less luminous.

Only three Milky Way naked-eye supernova events have been observed during the last thousand years, though many have been seen in other galaxies using telescopes. The most recent directly observed supernova in the Milky Way was Kepler's Supernova in 1604, but two more recent supernova remnants have also been found. Statistical observations of supernovae in other galaxies suggest they occur on average about three times every century in the Milky Way, and that any galactic supernova would almost certainly be observable with modern astronomical telescopes.



**SN 1994D (bright spot on the lower left),
a Type Ia supernova outshining its home galaxy, NGC 4526**



A supernova remnant

The earliest recorded supernova, SN 185, was viewed by Chinese astronomers in 185 AD. The brightest recorded supernova was SN 1006, which occurred in 1006 AD and was described in detail by Chinese and Islamic astronomers.

Conjunction

Per Wikipedia:

In astronomy, a conjunction occurs when two astronomical objects or spacecraft have either the same right ascension or the same ecliptic longitude, usually as observed from Earth.

[CJM – The ecliptic is the circular path on the celestial sphere that the Sun appears to follow over the course of a year.]

When two objects always appear close to the ecliptic – such as two planets, the Moon and a planet, or the Sun and a planet – this fact implies an apparent close approach between the objects as seen on the sky.

Conjunctions involve either two objects in the Solar System or one object in the Solar System and a more distant object, such as a star. A conjunction is an apparent phenomenon caused by the observer's perspective: the two objects involved are not actually close to one another in space. Conjunctions between two bright objects close to the ecliptic, such as two bright planets, can be seen with the naked eye.



In the night sky over ESO's Very Large Telescope (VLT) observatory at Paranal, the Moon shines along with two bright companions: Venus and Jupiter.
(Note that the planets and the moon appear brighter here because of the exposure duration.)

Meteor

Per Wikipedia:

A meteor, known colloquially as a "shooting star" or "falling star", is the visible passage of a glowing meteoroid, micrometeoroid, comet or asteroid through Earth's atmosphere, after being heated to incandescence by collisions with air molecules in the upper atmosphere, creating a streak of light via its rapid motion and sometimes also by shedding glowing material in its wake.

Comet

Per Wikipedia:

A comet is an icy small Solar System body that, when passing close to the Sun, warms and begins to release gases, a process called outgassing. This produces a visible atmosphere or coma, and sometimes also a tail. These phenomena are due to the effects of solar radiation and the solar wind acting upon the nucleus of the comet. If sufficiently bright, a comet may be seen from the Earth without the aid of a telescope and may subtend an arc of 30° (60 Moons) across the sky. Comets have been observed and recorded since ancient times by many cultures.



Comet Hyakutake was a naked-eye comet that made its closest approach to Earth in March 1996 after being discovered just two months earlier.

UFO

Per Wikipedia:

An unidentified flying object or UFO, is defined as a perceived object in the sky, not identifiable by standard criteria. Most UFOs are later identified as conventional objects or phenomena. The term is widely used for claimed observations of extraterrestrial craft.



One of many supposed UFO photos

The Bible Story

Matthew 2:1-11 – “1 Now when Jesus was born in Bethlehem of Judaea in the days of Herod the king, behold, there came wise men from the east to Jerusalem, 2 Saying, Where is he that is born King of the Jews? **for we have seen his star in the east**, and are come to worship him. 3 When Herod the king had heard these things, he was troubled, and all Jerusalem with him. 4 And when he had gathered all the chief priests and scribes of the people together, he demanded of them where Christ should be born. 5 And they said unto him, In Bethlehem of Judaea: for thus it is written by the prophet, 6 And thou Bethlehem, in the land of Juda, art not the least among the princes of Juda: for out of thee shall come a Governor, that shall rule my people Israel. 7 Then Herod, when he had privily called the wise men, inquired of them diligently **what time the star appeared**. 8 And he sent them to Bethlehem, and said, Go and search diligently for the young child; and when ye have found him, bring me word again, that I may come and worship him also. 9 When they had heard the king, they departed; **and, lo, the star, which they saw in the east, went before them, till it came and stood over where the young child was.** 10 **When they saw the star, they rejoiced with exceeding great joy.** 11 And when they were come into the house, they saw the young child with Mary his mother, and fell down, and worshipped him: and when they had opened their treasures, they presented unto him gifts; gold, and frankincense, and myrrh.”

Matthew 2:2, “for we have seen his star in the east”

The wise men themselves were “from the east” so it seems that the wise men saw “his star” when they were in the east and traveled westward. In other words, this could possibly be translated as “We, being in the East, have seen his star.”

The phrase “his star” conveys that it was specifically to be associated with the coming of the Savior. It was a sign of His arrival and existed for that reason.

How did the wise men know the star was associated with the coming of the Savior? One theory assumes that the “Star” mentioned is Numbers 24:17 is this star that is mentioned in Matthew’s account.

Numbers 24:15-17 – “15 And he took up his parable, and said, Balaam the son of Beor hath said, and the man whose eyes are open hath said: 16 He hath said, which heard the words of God, and knew the knowledge of the most High, which saw the vision of the Almighty, falling into a trance, but having his eyes open: 17 I shall see him, but not now: I shall behold him, but not nigh: **there shall come a Star out of Jacob**, and a Sceptre shall rise out of Israel, and shall smite the corners of Moab, and destroy all the children of Sheth.”

A “Star out of Jacob” seems to be unrelated to the star of Bethlehem because ‘stars’ do not come out of Jacob (descendants of Jacob). The ‘Star’ in this verse seems to be simply a symbol for Jesus Christ.

Revelation 22:16 – “I Jesus have sent mine angel to testify unto you these things in the churches. I am the root and the offspring of David, and the bright and morning star.”

Ellicott’s Commentary for English Readers:

Here again we enter on questions which we cannot answer. Was the star (as Kepler conjectured) natural—the conjuncture of the planets Jupiter and Saturn appearing as a single star of special brightness—or supernatural; visible to all beholders, or to the Magi only? Astronomy is against the first view, by showing that the planets at their nearest were divided by the apparent diameter of the moon. The last hypothesis introduces a fresh miracle without a shadow of authority from Scripture. We must be content to remain in ignorance.

Barnes’ Notes:

We are not to suppose that it was what we commonly mean by a star. The stars are vast bodies fixed in the heavens, and it is absurd to suppose that one of them was sent to guide the wise men. It is most probable that it was a luminous appearance, or meteor, such as we now see sometimes shoot from the sky, which the wise men saw, and which directed them to Jerusalem.

Jamieson-Fausset-Brown Bible Commentary:

Much has been written on the subject of this star; but from all that is here said it is perhaps safest to regard it as simply a luminous meteor, which appeared under special laws and for a special purpose.

Gill’s Exposition of the Bible:

By the star they saw, some understand an angel, which is not likely. The learned Lightfoot (i) is of opinion that it was the light or glory of the Lord, which shone about the shepherds, when the angel brought them the news of Christ’s birth, and which at so great a distance appeared as a star to these wise men; others, that it was a comet, such as has been thought to portend the birth or death of some illustrious person: but it seems to be properly a star, a new and an unusual one, such as had never been seen, nor observed before; and is called his star, the star of the king born, because it appeared on his account, and was the sign of his birth, who is “the root and offspring of David, and the bright and morning star”, Revelation 22:16. This they saw “in the east”; not in the eastern part of the heavens, but they saw it when they were in the east, that is, in their own country; and according to the best observations they were able to make, it was in

that part of the heavens right over the land of Judea; from whence they concluded that the king of the Jews was born; but the question is how they should hereby know and be assured that such a person was born? To this it maybe replied, that there is a prophecy of Balaam's which is thus expressed, "there shall come a star out of Jacob, and a sceptre shall rise out of Israel", Numbers 24:17 which is owned by some Jewish writers (k) to be a prophecy of the Messiah; though the star there mentioned is considered by them as one of the Messiah's titles; hence one who set up himself, and for a while was by some received as the Messiah, was called by them "the son of a star"; but when he was discovered to be an impostor, they called him "the son of a lie": but I rather take it to be a sign of the Messiah's coming, and the meaning is, when a star shall "walk" or steer its course from Jacob, or above, or over the land of Israel, then a sceptre, or sceptre bearer, that is, a king, shall rise out of Israel. Now this prophecy of Balaam, who lived in the east, might be traditionally handed down to this time, and be well known by these men; and who, observing such a star appear over the land of Judea, might conclude that now the sceptre bearer or king was born (l). Besides, Zerdusht or Zoroastres, the author of the sect of the Magi or wise men, and who appears to be a Jew by birth, and to be acquainted with the writings of the Old Testament, and with this prophecy, spoke of the birth of Christ to his followers; and told them when he should be born, a star would appear, and shine in the day, and ordered them to go where that directed, and offer gifts, and worship him. An Eastern writer, who affirms (m) what I have now mentioned, relates (n) the following speech as spoke by the wise men to Herod, when in conversation with him, about this matter:

"A certain person, say they, of great note with us, in a book which he composed, warned us in it, mentioning these things; a child that shall descend from heaven, will be born in Palestine, whom the greatest part of the world shall serve, and the sign of his appearance shall be this; ye shall see a strange star, which shall direct you where he is; when ye shall see this, take gold, myrrh and frankincense, and go and offer them to him, and worship him, and then return, lest a great calamity befall you. Now the star has appeared unto us, and we are come to perform what was commanded us."

If this be true, we are not at a loss how they come by their knowledge, nor for a reason of their conduct. That the Jews have expected that a star should appear at the time of the Messiah's coming, is certain, from some passages in a book of theirs of great value and esteem among them, in which are the following things: in one place it is said (o).

"The king Messiah shall be revealed in the land of Galilee, and lo a star in the east shall swallow up seven stars in the north, and a flame of red fire shall be in the firmament six days;"

and in another place, (p).

"When the Messiah shall be revealed, there shall rise up in the east a certain Star, flaming with all sorts of colours--and all men shall see it:"

once more it is affirmed as a tradition (q) that

"The holy blessed God hath determined to build Jerusalem, and to make a certain (fixed) star appear sparkling with seven blazing tails shining from it in the midst of the firmament--and then shall the king Messiah be revealed in all the world."

Now this expectation of the appearing of such a star at the coming of the Messiah takes its rise from and is founded upon the above mentioned prophecy. It is said (r) that Seth the son of Adam gave out a prophecy, that a star should appear at the birth of the Messiah; and that a star did appear at the birth of Christ is certain from the testimony of the Evangelist, and seems to have some confirmation from the writings of the Heathens themselves. Some have thought that the star which Virgil speaks of, and calls (s) "Caesaris Astrum", "Caesar's star", is this very star, which he in complaisance to that monarch ascribes to him. Pliny (t) makes mention

"of a bright comet with a silver beard, which was so refulgent that it could scarce be looked upon, showing in itself the effigies of God in human form."

If the testimony of Chalcidius, a Platonic philosopher, taken notice of by many learned men, is genuine, and he not a Christian, (u) it is much to the purpose, and is as follows:

"There is also a more venerable and sacred history, which speaks of the rising of a certain unusual star; not foretelling diseases and deaths, but the descent of a venerable God, born for the sake of human conversation, and the affairs of mortals; which star truly, when the wise men of the Chaldeans saw in their journey by night, and being very expert in the consideration of celestial things, are said to inquire after the birth of the new Deity, and having found the infant majesty, to worship him, and pay their vows worthy of such a God."

The end proposed by them in taking such a journey is expressed,

and are come to worship him; that is, either to pay adoration to him as God, of which they might be convinced by the extraordinary appearance of the star, or be assured of by divine revelation or rather to give him civil homage and respect, as an illustrious person, as being king of the Jews.

(i) Harmony, p. 205, 437, 438, Vol. I. Hor. Heb. p. 109. Vol. II. (k) Targum Onk. Jon. & Aben Ezra in loc. Zohar. in Exod. fol. 4. 1. Abarbinel Mashmia Jeshua, fol. 4. 3. Tzeror Hamor, fol. 126. 3. (l) See my book of the "Prophecies of the Messiah", c. 7. p. 119, &c. (m) Abulpharag. Hist. Dynast. p. 54. (n) Ib. p. 70. (o) Zohar. in Gen. fol. 74. 3. (p) Zohar. in Exod. fol. 3. 3, 4. (q) Ib. in Numb. fol. 85. 4. and 86. 1. (r) Vid. Wolf. Bibl. Heb. p. 1156. (s) Eclog. 9. v. 47. (t) Nat. Hist. l. 2. c. 25. (u) Vid. Fabricii Bibliothec. Latin. p. 142-146.

Could another lost tribe of Israel been given a prophecy regarding a new star as did those in the Book of Mormon story? If so, did this prophecy then make its way to the wise men?

Meyer's NT Commentary:

The Jew Abarbanel in his Commentary on Daniel (1547) inferred, from a similar conjunction in the year 1463, that the birth of the Messiah was at hand, and indicates the sign of the fishes as that which is of importance for the Jews. If Matthew 2:9, however, points only to a miraculous star, to one that went and stood in a miraculous manner, then it is evident that neither a comet (Origen, Michaelis, Rosenmüller), nor a fixed star, nor a planet, nor even a meteor, is what is meant, which ἀστὴρ by itself might signify (Schaefer, ad Apoll. Rh. II. p. 206). The Fathers of the church (in Suicer, sub ἀστὴρ) thought even of an angel.

Expositor's Greek Testament:

The visit of the Magi in quest of the new-born king is not incredible.—εἶδομεν ... ἐν τῇ ἀνατολῇ, we saw His star in its rising, not in the east, as in A. V[4], the plural being used for that in Matthew 2:1. Always on the outlook, no heavenly phenomenon escaped them; it was visible as soon as it appeared above the horizon.—ἀστέρα, what was this celestial portent? Was it phenomenal only? an appearance in the heavens miraculously produced to guide the wise men to Judaea and Bethlehem; or a real astronomical object, a rare conjunction of planets, or a new star appearing, and invested by men addicted to astrology with a certain significance; or mythical, neither a miraculous nor a natural phenomenon, but a creation of the religious imagination working on slender data, such as the Star of Jacob in Balaam's prophecies? All these views have been held. Some of the fathers, especially Chrysostom, advocated the first, viz., that it were a star, not φύσει, but ὄψει μόνον. Harons were such as these: it moved from north to south; it appeared in the daytime while the sun shone; it appeared and disappeared; it descended down to the house where the child lay, and so indicated the spot, which could not be done by a star in the sky (Hom. vi.). Some modern commentators have laid under contribution the investigations of astronomers, and supposed the ἀστήρ to have been one of several rare conjunctions of planets occurring about the beginning of our era or a comet observed in China. Vide the elaborate note in Alford's Greek Testament. The third view is in favour with students of comparative religion and of criticism, who lay stress on the fact that in ancient times the appearance of a star was expected at the birth of all great men (De Wette), and who expect mythological elements in the N. T. as well as in the Old. (vide Fritzsche, Strauss, L. J., and Holtzmann in H. C.) These diverse theories will probably always find their abettors; the first among the devout to whom the miraculous is no stumbling-block, the second among those who while accepting the miraculous desire to reduce it to a minimum, or at least to avoid its unnecessary extension, the third among men of naturalistic proclivities. I do not profess to be able to settle the question.

Pulpit Commentary:

What this star really was has been the subject of much consideration without any very satisfactory result. The principal theories are:

(1) It was the conjunction of Saturn and Jupiter, which took place in May to July and again in September, B.C. 7. [CJM – note that Jesus was actually born in April]

(2) It was the rising of Sirius on the same day in the fifth, fourth, third, and second years B.C.

(3) It was some strange evanescent star such as Kepler saw in 1603-4.

(4) Astronomy can suggest nothing which satisfies all the conditions, and the appearance must have been strictly miraculous. Since Professor Pritchard's article in the 'Dictionary of the Bible,' this last has been generally accepted in England. A further question is - How came they to identify the star as "his"? i.e. What made the Magi connect the coming of the King of the Jews with a star? and what made them consider that this particular appearance was the one they expected? The latter part of the question can hardly be answered, except on the supposition that the star that they saw was in itself so extraordinary as to convince them that no greater star could be looked for. To the former part various answers have been given.

(1) Balaam's prophecy (Numbers 24:17) was understood literally, and the knowledge of it, with its misinterpretation, had spread to the Magi. For this literal interpretation, cf. the 'Pesikta Zutarta' ('Lekah Tob') on Numbers 24:17 (p. 58, Venice edit.), where it says that in the fifth year of the heptad before Messiah "the star" shall shine forth from the east, and this is the star of the Messiah (cf. also Edersheim, 'Life,' etc., 1:212). Similarly we find the false Messiah of the second century applying the term to himself - "Barcochab."

(2) They had learned, by intercourse with Jews (cf. the influence of the Jewish Sibylline oracles on the fourth eclogue), that these latter expected a great King, and they had applied to his coming, as to all events, the science that they themselves practised. They believed fully in astrology, and the Divine ordering that a star should appear to them was a condescension to the then state of human knowledge. In the East (ἐν τῇ ἀνατολῇ).

Matthew 2:7, "inquired of them diligently what time the star appeared"

Herod asked this question in order to know when Jesus was born and how old he was. Herod later used this information as the basis for killing boys that were two years old and under. The word "diligently" implies preciseness, accurately, or exactly.

Matthew 2:12-18 – "12 And being warned of God in a dream that they should not return to Herod, they departed into their own country another way. 13 And when they were departed, behold, the angel of the Lord appeareth to Joseph in a dream, saying, Arise, and take the young child and his mother, and flee into Egypt, and be thou there until I bring thee word: for Herod will seek the young child to destroy him. 14 When he arose, he took the young child and his mother by night, and departed into Egypt: 15 And was there until the death of Herod: that it might be fulfilled which was spoken of the Lord by the prophet, saying, Out of Egypt have I called my son. 16 Then Herod, when he saw that he was mocked of the wise men, was exceeding wroth, and sent forth, and slew all the children that were in Bethlehem, and in all the coasts thereof, from two years old and under, according to the time which he had diligently inquired of the wise men. 17 Then was fulfilled that which was spoken by Jeremy the prophet, saying, 18 In Rama was there a voice heard, lamentation, and weeping, and great mourning, Rachel weeping for her children, and would not be comforted, because they are not."

Matthew 2:9 – "and, lo, the star, which they saw in the east, went before them, till it came and stood over where the young child was"

Based on this description, it does not seem possible that a natural phenomenon could be the 'star' that is mentioned. In other words, a nova, supernova, conjunction, meteor, or comet cannot behave this way.

Stars in the natural sky do move from east to west, but they move much faster than the common traveler moving by foot or by animal. Note that the earth spins at a rate of approximately 1000 mph at the equator. Also, the 'star' mentioned in this passage "came and stood over where the young child was". Stars, nova, supernova, comets, and conjunctions move at the natural rate of the sky based on the spin of the earth and never stop moving. A natural object in the sky could not accurately pinpoint the location Christ with very good accuracy either, though it would be possible to approximately find the spot on the earth directly under the zenith of the sky. (The zenith is the point in the sky directly above.)

Meteors or 'shooting stars' are very brief and a meteor does fit the description of the account.

Benson Commentary:

Hence it appears, that this star was not in the higher heavens, but in the lower regions of the air; for no star in the heavens could have exactly pointed out a particular house. Nothing is said here concerning a ray descending from the star to the top of the house, or concerning the descent of the body of the star. It is therefore probable it was a meteor, which to them had the appearance of a star, as meteors frequently have. This appears, further, from its moving by intervals, sometimes moving and sometimes standing still, which the stars, properly so called, never do. Dr. Whitby conjectures that what the wise men saw in the east might be that very light which shone upon the shepherds at Bethlehem, when the angel came to impart unto them the tidings of our Saviour's birth. This light certainly was exceeding great, as is clear from its being styled the glory of the Lord, and it was a light from heaven, hanging over their heads, and shining round about them. Now such a light, at a great distance, would appear as a star: or, as it ascended up from the shepherds it might be formed into the likeness of a star. A similar body of light, when they journeyed from Jerusalem to Bethlehem, was formed into the same likeness in which it had formerly appeared, and went before them in the air to the latter city, and then sunk down so low as to point out the very house where the babe lay.

Benson appears to be referencing Luke 2:9 – “And, lo, the angel of the Lord came upon them, and the glory of the Lord shone round about them: and they were sore afraid.”

Matthew Poole's Commentary:

probably the star appeared in the lower region, and though it could not point so directly that they should know the very house, yet it might point so near as by inquiry they might easily find it, especially by the influence of God upon their spirits, which doubtless they did not want. Whether these wise men were of the posterity of Balaam, who prophesied of a sceptre that should rise out of Israel, that should smite the corners of Moab, one that should have dominion, & c., Numbers 24:17,19, or this star had any relation to the star mentioned there, Numbers 24:17 is very uncertain:

Gill's Exposition of the Entire Bible:

This star had a motion, kept pace with them, and was a guide unto them, till it and they came to the place where Christ was; and then it stood directly over the house, so that they had no need to inquire of any person for him. It is certain from hence, that this star was indeed a very unusual one; its being seen in the daytime, its motion and standing still, its situation, which must be very low, and its use to point out the very house where Christ was, show it to be so; but though it was an unusual appearance, it should not be thought incredible. (a) Varro relates, that

"from the time Aeneas went from Troy, he saw the star Venus in the daytime, day after day, till he came to the field of Laurentum, where he saw it no more, by which he knew that those lands were fatal."

The appearing of this star, and then its disappearing for a time, agree, in some measure, with the account the Jews give of the star which they expect will be seen at the coming of the Messiah; for they (b) say,

"after seven days that star shall be hid, and the Messiah shall be hid for twelve months--when he shall descend, the pillar of fire shall be seen as before, in sight, and afterwards the Messiah shall be revealed, and many people shall be gathered to him."

(a) Apud Servium in Virgil Aeneid. l. 1. p. 471. Ed. Basil. 1586. (b) Zohar in Exod. fol. 3, 4. & 71. 1.

Book of Mormon Story

Helaman 5:54-60 – "54 And now it came to pass that Samuel, the Lamanite, did prophesy a great many more things which can not be written. 55 And behold, he saith unto them, Behold, I give unto you a sign: for five years more cometh, and behold, then cometh the Son of God to redeem all those who shall believe on his name. 56 And behold, this will I give unto you for a sign at the time of his coming; for behold, there shall be great lights in heaven, insomuch that in the night before he cometh, there shall be no darkness, insomuch that it shall appear unto man as if it was day; 57 Therefore there shall be one day and a night, and a day, as if it were one day, and there were no night; and this shall be unto you for a sign; for ye shall know of the rising of the sun, and also of its setting; 58 Therefore they shall know of a surety that there shall be two days and a night; nevertheless the night shall not be darkened; and it shall be the night before he is born. 59 **And behold there shall be a new star arise, such an one as ye never have beheld; and this also shall be a sign unto you.** 60 And behold this is not all; there shall be many signs and wonders in heaven."

3 Nephi 1:16-24 – "16 And it came to pass that the words which came unto Nephi were fulfilled, according as they had been spoken: 17 For behold at the going down of the sun, there was no darkness; and the people began to be astonished, because there was no darkness when the night came. 18 And there were many which had not believed the words of the prophets, fell to the earth, and became as if they were dead, for they knew that the great plan of destruction which they had laid for those who believed in the words of the prophets, had been frustrated, for the sign which had been given was already at hand; and they began to know that the Son of God must shortly appear; 19 Yea, in fine, all the people upon the face of the whole earth, from the west to the east, both in the land north and in the land south, were so exceedingly astonished, that they fell to the earth; 20 For they knew that the prophets had testified of these things for many years, and that the sign which had been given, was already at hand; and they began to fear because of their iniquity and their unbelief. 21 And it came to pass that there was no darkness in all that night, but it was as light as though it was midday. 22 And it came to pass that the sun did rise in the morning again, according to its proper order; and they knew that it was the day that the Lord should be born, because of the sign which had been given. 23 And it had come to pass, yea, all things, every whit, according to the words of the prophets. 24 **And it came to pass also, that a new star did appear, according to the word.**"

The Book of Mormon specifically mentions a "new star" in both the prophecy regarding the future coming of the star as well as the actual event itself. Therefore, this 'star' could not be a planetary conjunction, though a supernova or nova could not be completely ruled out as it could be interpreted as a "new star", though this would be assuming that the 'star' in the Book of Mormon story is not the same 'star' as the one in the Bible. Again, the 'star' in the Biblical account moved until it was over the location

of Christ. If this 'star' is the same 'star' as in the Bible account, it seems that this new 'star' may have appeared to those in the Americas possibly first and eventually then made its way over to the other side of the globe to where the wise men and Christ were; slowly making its way to Bethlehem until it stopped over the very location where Christ was. This assumes the 'star' following natural laws which certainly may not have been the case.

Could a physical 'star' that followed 'natural laws' hovering over Bethlehem be seen simultaneously in the Americas? If we assume the Book of Mormon story took place in Mesoamerica, the eastern most area of the Yucatan Peninsula has a latitude and longitude of 21.2 degrees north, 86.6 degrees west (in the Cancun area). Bethlehem resides at 31.7 degrees north, 35.2 degrees east. These two locations are therefore separated in longitude by $86.6 + 35.2$ degrees = 121.8 degrees (ignoring latitude separation). This is less than 180 degrees (the amount of sky one can see at a given spot on the earth), but due to the spherical shape of the earth, a 'star' at Bethlehem would need to be at a certain height in order to see over the curvature of the earth to the other side.

An online tool "Earth Curve Calculator" was used to determine how high over Bethlehem the new 'star' would need to be to just see it from the Americas if it was exactly at the horizon level. (It would actually need to be a even higher to actually see it above the horizon and through atmospheric distortion.)

<https://dizzib.github.io/earth/curve-calc/?d0=30&h0=10&unit=imperial>

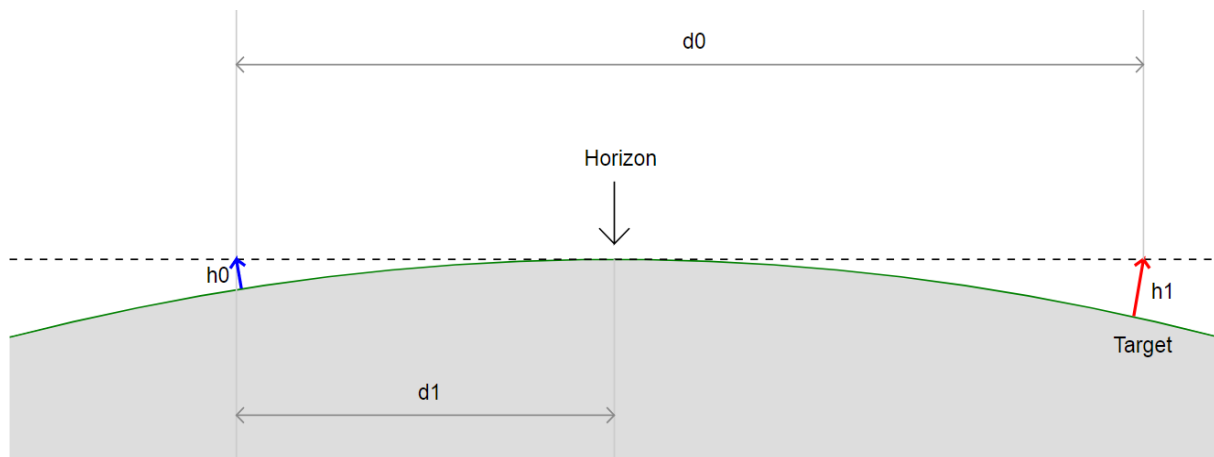
Parameters:

d_0 = distance from Cancun to Bethlehem = 11,488 km = 7,138 miles

h_0 = eye height of observer = 6 feet

d_1 = horizon distance

h_1 = target hidden height



Earth Curve Calculator

This app calculates how much a distant object is obscured by the earth's curvature, and makes the following assumptions:

- the earth is a convex sphere of radius 6371 kilometres
- light travels in straight lines

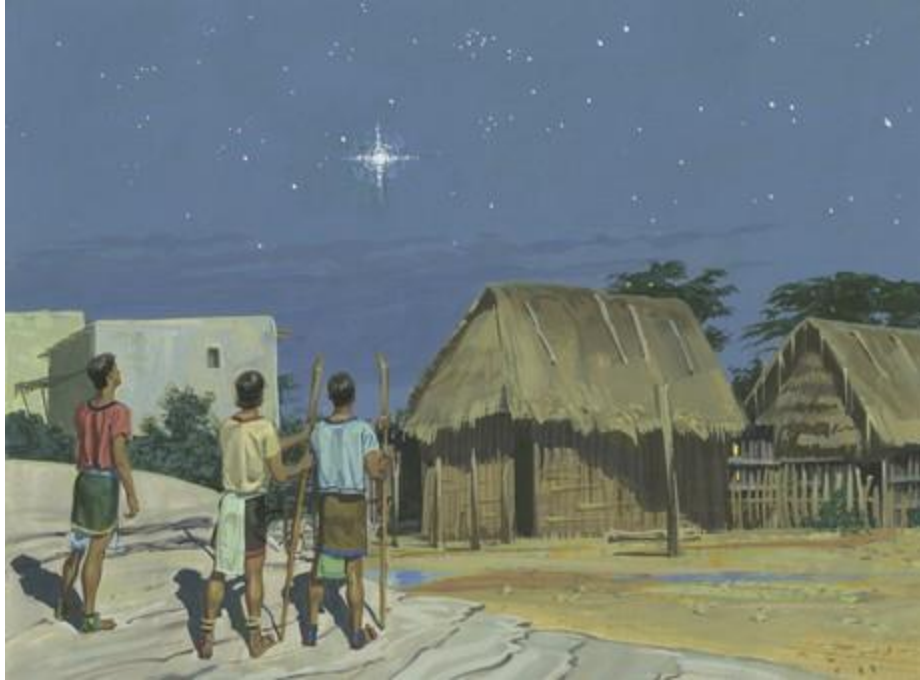
The source code and calculation method are [available on GitHub.com](#)

Units		<input type="radio"/> Metric	<input checked="" type="radio"/> Imperial
h0 = Eye height	<input type="text" value="6"/>		feet
d0 = Target distance	<input type="text" value="7138"/>		miles
<input type="button" value="Calculate"/>			
d1 = Horizon distance	2.999547		miles
h1 = Target hidden height	22180480.8648		feet

The 'Target hidden height' in miles equals 4,200 miles. In other words, for the star over Bethlehem to be level with the horizon, the star would need to have an altitude of 4,200 miles above Bethlehem. The star would need to be even higher to actually be well seen. It would be difficult for the wise men to pinpoint the location of Christ with a star that was 4,200 miles up in altitude (the radius of the earth is 3,959 miles). Therefore, if the 'manifestation' that the wise men saw was the same as the one that was seen in the Americas, then the 'star' maybe would've traveled from the Americas to Bethlehem over a period of time? If it was simply manifested to both those in the Americas and the wise men as a miracle, then the 'star' isn't necessary to be explained through any sort of scientific means.

Summary

The 'star' mentioned in the Bible cannot be explained with natural phenomena. The star in the Book of Mormon was a "new star". Whether the same 'physical creation' of God was the same 'star' seen in both the holy land as well as the Americas is hard to say for sure. New miraculous 'stars' that do not obey scientific laws can certainly be made to be seen in different parts of the world at the same time, without following of scientific laws.



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