The Star of Bethlehem

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There is a curious parallel to this last idea of Kepler, in the writings of St. John Chrysostom, who died in the year 407 A.D. Chrysostom has this to say (In Homil. in Matt., II. 9): "God in His great condescension calls the Magi by means of their customary pursuits, and shows them a great and extraordinary star, so as to astonish them by the size and beauty of the appearance and the way that the star traveled. . . . Think it not then unworthy of God to have called the Magi by a star. . . . He did so to raise them to better things. When then He has brought them, and guided them by the hand, and set them before the manger, He no longer addresses them by a star, but through an angel."

According to Kepler's calculations, Jupiter appeared to pass Saturn three times in the year B.C. 7. That this could happen is best proved by the fact that the same unusual occurrence was observed in late 1940 and early 1941. Each year, as the Earth passes Jupiter, that slow planet appears to move westward among the stars, whereas while we are not passing it, it appears to move eastward. The same thing is true as we pass Saturn. Such a triple conjunction as that of B.C. 7 occurs when Jupiter passes Saturn, then both planets are passed by the Earth, very shortly thereafter. Then both move backwards, and Jupiter, moving the faster, appears to pass Saturn a second time, as both move westward. As we go on our way, both planets appear to move eastward again, and Jupiter passes Saturn for a third time. This is usually called a triple conjunction, or a Great Conjunction.

Kepler's first two dates for the conjunctions in B.C. 7 were in error, as was determined by the British astronomer C. Pritchard, in 1856. The true dates were May 29, September 29 and December 4. Kepler correctly calculated that, in February of the following year, Mars passed Saturn, and in March the red planet passed Jupiter. He also pointed out that the Sun was close on the heels of Mars, and when Mars stood so as to form a neat triangle with the two other planets, late in February of the year 6 B.C., Saturn and Mars were not bright enough to be seen in the evening twilight. Hence the statement widely circulated in modern times that the triangle Mars-Jupiter-Saturn was seen by the Wise Men and was taken as the Star of Bethlehem is misleading, inasmuch as the triangle could not have been seen.

This statement is often rendered even more ridiculous by assertions that the three planets were so close together that they merged their light into one bright star, and the Magi thought that it was a new and strange star. The planets were at all times separated by at least two Moon-diameters, and only an abysmally weak pair of eyes could ever have merged them. As Burke-Gaffney points out, "Had the Magi weak eyes? Would Wise Men ever mistake two planets for a single star? And it may be remarked that those who lived in unilluminated towns or villages watched the wandering of the planets and saw them advance and retrograde, approach and separate: that those who crossed the desert were not unfamiliar with the stars, the only 'life' there was for them to watch at night."

In brief, Kepler was enough of a mystic, and was sufficiently impressed with the appearance of the nova of 1604, to suggest that the second apparition of the Star of Bethlehem, as given in the account by Saint Matthew, was a nova which came soon after the triple conjunction of Jupiter and Saturn.

But the triple conjunction alone, occurring as it does at intervals never shorter than about 125 years, and usually at least double this period, would seem to have been sufficient as a sign to Zoroastrian astrologers. This occurred in the constellation Pisces, the fishes, an area of the sky of astrological significance to the Jewish people. Even some of the Jews, in the middle ages, believed in astrology. Isaac Abravanel (or Abrabanel) was a Portuguese Jew, born in 1437; he was a scholar and a statesman, and later served Ferdinand of Aragon. In the expulsion of the Jews from Spain in 1492, Abravanel ... exile, dying in Venice in 1508. He apparently believed in astrology, becau his commentary on the book of Daniel (Mayyene Ha-Yeshu'ah—The So of Salvation), Source 12, Porta 2, Section 2, he describes the various plan configurations on which the world events depend, coming to the concl that the most important is the conjunction of Jupiter and Saturn in F which, according to him, occurs only each 2360 years. Actually, it is far frequent than this.

"After searching the effects of all the great conjunctions from t immemorial, we found that there was none that produced among the na such a potent effect, both physically and spiritually, as was produced by great conjunction of Saturn and Jupiter in Pisces which occurred in the 2365 after the creation of the world (about 1625 B.C., according to Je chronology), when Israel had been slaves in Egypt, three years before birth of Moses, through whom they were redeemed through signs and w ders. . . . Hence this conjunction is the most propitious for the Israel having the effect of raising them from the lowest to the highest stage, u the stars of heaven, causing the Divine Light to shine upon them and to rele them from bondage and make them rulers."

Certainly, then, Abravanel believed a conjunction of Jupiter and Sat in Pisces to be a potent sign as far as the Jews were concerned, and so sources have stated that Pisces was a constellation which, in the schemes the ancient astrologers, was especially important to the Jews. If this is when the Magi saw the triple conjunction of Jupiter and Saturn in 7 B.C., the constellation of Pisces, they would realize that they should go over to land of the Jews, to the capital city of Jerusalem.

Despite careful search and study, nothing else is known to astronome that might have been taken by the Magi as a sign. That the Jews did not th believe in astrology is well known, so they would not have paid any attenti to the conjunction of Jupiter and Saturn in 7 B.C. Many people neither kno nor care that the same thing happened in 1940-41. But the astrologers mac much of it recently, as the Magi must have done more than 19½ centuries ag

If there was a real event in the sky that could have been interpreted b the Wise Men as a sign, it was probably the interesting triple conjunction Jupiter and Saturn in 7 B.C. It would have served to send them on their wa to discover the meaning of it.

Of course, there will always be those who will prefer to believe that th Star of Bethlehem was a miracle, given only to the eyes of the Wise Men to see

But is it after all important to know what the Star of Bethlehem was? Th important facts are that Jesus was born, that he dwelt on Earth for a time with men, and that his teachings have altered the history of the world.

The decision was a compromise. As an easy definition of Easter (which is subject to certain exceptions), we may say that it is the Sunday next after the Full Moon that falls on or after March 21, the beginning of spring. Easter, then, is linked to the phases of the Moon, yet it falls always on Sunday. It can occur as early as March 22 and as late as April 25.

The Julian Calendar, designed by the Greek astronomer Sosigenes and put into operation on January 1, 45 B.C., by Julius Caesar, inserted an extra day each fourth year, on the assumption that the length of the year is exactly 365¼ days. Actually, the year is a little shorter than this, and the insertion of a full extra day each fourth year brings out one whole day's error each 128 years. The calendar we use today takes this into account by omitting three leap-days each 400 years, resulting in an error of a whole day only after the passage of about 3000 years.

By the Julian Calendar, the Sunday dates repeat themselves each 28 years. For example, December 25, 1949, is a Sunday; in 1977 (28 years later), December 25 will again be on a Sunday. Only when we cross an exact end-of-century year (as 1900) that is not exactly divisible by 400 is this rule violated in the Gregorian Calendar in use today. In the Julian Calendar, the rule had no violations.

The phases of the Moon repeat themselves on the same calendar date after 19 years. To use this rule, one must be careful to take into account the number of leap-years in the interval. In 19 Julian years, there are 6939.75 days, while 235 complete cycles of the Moon's phases add up to 6939.69 days, or only about 85 minutes shorter.

Victorius discovered that, if we multiply the 28-year period of the Sundays by the 19-year cycle of the Moon's phases discovered by the Greek engineer Meton, about 433 B.C., we get 532 years as the period after which the Easter dates will repeat themselves. Again, this requires careful use, to make sure that the leap-years will not interfere, but it is a good figure and, in the sixth century, when Victorius lived, it was even better. According to this Victorian Cycle, if we know and tabulate all the dates of Easter in their proper order for 532 years, we can write them all down in the same order for the next 532 years.

Before we leave the subject of Easter, it may be noted here that the dates of the Last Supper, the Crucifixion and the Resurrection have been established with considerable certainty, because the day of the Last Supper was Thursday evening, the eve of the Passover. It is only in the year 30 A.D., of all possible years, that the Passover opened at sundown on Thursday; this has been known for about two centuries, at least. The date of the Last Supper was April 6; the Crucifixion occurred on April 7, the Resurrection on April 9, in the year 30 A.D. As will be evident in what follows, it is by no means as easy as this to date the birth of Jesus.

There was considerable interest in matters calendrical and Scriptural in the early part of the sixth century. At about the same time as Victorius was deriving this cycle of the Easter dates, an abbot of Rome, a Scythian monk called Dionysius Exiguus (Denys the Little) was trying to establish the year of the birth of Jesus. He had found a statement by Clement of Alexandria (Titus Flavius Clemens, who died in 220 A.D.) to the effect that Jesus was born in the 28th year of the reign of Caesar Augustus. Now, we know that in 726 a.u.c. this ruler of Rome was proclaimed by the Roman Senate to be Caesar Augustus, which is a title. If Clement was not in error, then, Jesus was born in 754 a.u.c. Dionysius was struck with the idea that just one Victorian Cycle of 532 years had passed since that time and, lacking other evidence, he accepted it, and adopted the year 754 a.u.c. as the year 1 A.D. (Anno Domini—in the year of our Lord). It was in this way that the Dionysian Era was established, with Denys the Little calling the year in which he worked 533 A.D. At first called

the Era of Incarnation (of the Word), it has since been called the Comm Era and the Christian Era, but we are sure that it does not date from the bir of Jesus.

Even after the establishment of the Christian Era, it did not come at on into general use. The first official record of its use in England is found in grant for a bit of land by Aethelbert, King of Kent, for a monastery in Cante bury, in 605 A.D. The practice was not common until the Council of Chels ordered it in the ninth century. Even then there were some departures fro the custom. Some preferred to date from important events in local histor Written in the Scottish statutes are notations following these examples: "A Aberdeen in Lent next after the coming in Scotland of Vivian the Legate the Apostolic See" (actually 1177 A.D.) and "At Stirling on the Monday ne before the feast of Saint Margaret the Maiden next after the first coronatio of Philip king of the French (or 1130 A.D.). Official documents of the Unite States Government are dated "In the year of the Independence of the Unite States. . . ." although, fortunately, the regular calendar year in the Dionysia Era is also included.

It should be noted here that there is an interesting oversight in the assign ment of the years of history, before and after the beginning of the Dionysia Era.

The year of the birth of Jesus should have been called the year 0, not This is evidence of the Roman influence, because the Romans always counte by the inclusive method. We find it, for example, in the Scriptural statemer (Saint Matthew 20:19) that Jesus rose from the tomb on the third day aft the Crucifixion. Actually, it was only two days, but the Greek and Roma custom was to count the first day also, so their "third day" is what we woul call "two days later."

The year 0 should have been inserted between 1 B.C. and 1 A.D., but was not. There is no zero year in history and this causes confusion when some one begins to worry about when the end of a century should be celebrate The beginning of the year 1950 marks the passage of only 1949 full years sinc the beginning of the Christian Era. The beginning of the year 101 A.D. wa the end of exactly 100 years of the Christian Era. The twentieth century wi end at midnight of December 31, in the year 2000 A.D.

But Dionysius Exiguus can hardly be blamed for not using a zero yea because no one in Europe, in his day, knew that there was such a thing as th number zero! The Hindu mathematicians introduced the symbol and the ide of zero (which they called sunya) and it was not used in Europe until severa centuries had passed, after Dionysius. The first use of the so-called Arab numerals in Europe was on a Sicilian coin in 1134 A.D., and this is about th time when the concept of zero was first being appreciated in Europe.

While the Dionysian Era pretends to have begun with the year of the birt of Jesus, we can by no means be sure that it does, because it hinges on onl one statement—that of Clement of Alexandria. And, when we really searc for it, we find that there is the very strongest evidence that the Christian Er does not begin with the birth of Jesus.

We can be sure that Jesus was born when Herod was king in Judaea an Caesar Augustus was emperor in Rome. The Scriptures make these facts quit indisputable. But these two reigns overlapped by more than 25 years and w must, if possible, try to narrow it down to a single year. We must turn, now to the Gospel according to Saint Luke, and to the story of the great taxatio

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