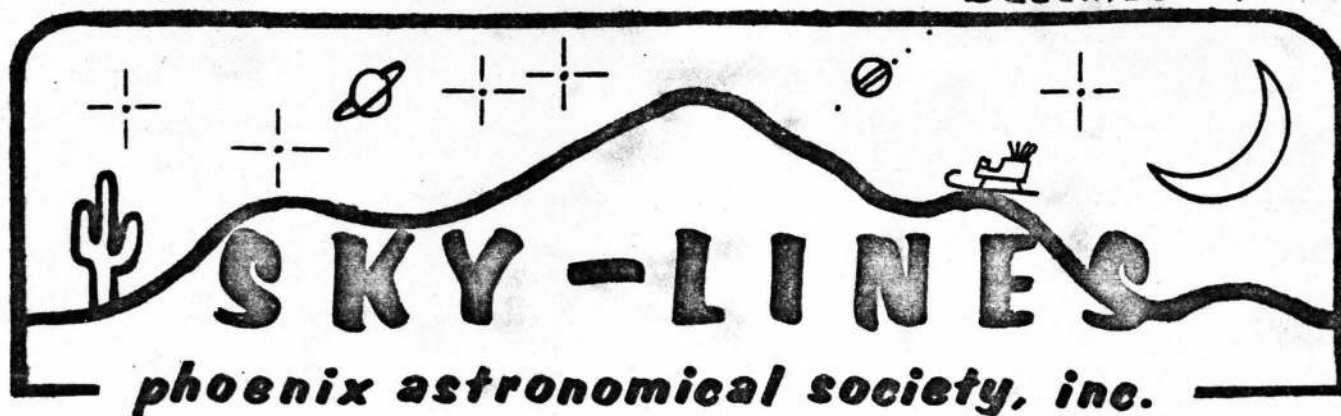




"Astrophotography" How the Pro does it!

*** The December meeting will be Dec. 16 ***

8:00 PM - Room C102 - Phoenix College Campus - Southeast part of the campus.

It seems almost a fact that a serious amateur soon after getting the first 'scope undergoes a marvelous change. The symptoms are very characteristic and common. There is a quickening of the pulsebeat about the time of new moon, a restlessness and pacing of the floor, anxiousness about the weather, an increasing detachment from the worldly cares, and a loving fondling of the 'scope and accessories. Unknowing relatives might get distressed at the change in the person afflicted, but those in the know simply realize that it is near the time of the month when the astrobuff eagerly plans a night at the 'scope. The results of the treatment are a sense of peace and contentment.

But there is a danger on the horizon for the inflicted, for soon he wishes to take pictures expecting to get results like the 48" Schmidt the first time. Frustration soon sets in when the first pictures reveal all kinds of streaks, splotches, and wierd things. So, as an aid to this person, this month we are having Mr. Charles Capen of Flagstaff give a number of tips and pointers in a talk entitled "A Potpourri of Astrophotography". Experience has shown that the area of astrophotography is one of the most popular topics in the field of astronomy, so this talk ought to be of widespread interest.

See you on the 16th.

Bill Anderson

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THE CHRISTMAS STAR , A collection of several ideas....c.v.

The astronomer's question, often asked, "What was the Star of Bethlehem?" answered is, "We don't know," but let us explore this fascinating idea.

One point must be made clear at once: The star is mentioned in the Gospel of Matthew(2:1-10) only! There is no reference in any other source, religious or secular. We know that King Herod was alive when Jesus was born and died between March 13 and April 5 of the year we now call 4 B.C. Another passage in Matthew(2:12-16) indicates that Herod may have lived as long as two or more years after the Wise Men arrived in Jerusalem. this would push the date back to at least 6 B.C.

We have known for several centuries that the reckoning of the Christian Era from the birth of Jesus is incorrect. We are now quite sure that what we now call January 1, 1978, is really at least 1981 years after the birth of Jesus and perhaps as much as 1986 years or more.

The priests and scribes of Herod had seen nothing that attracted their attention in the sky, yet it was the duty of the priests to keep track of the moon's phases, to establish the proper dates for observance of holy days and the lunar months of their calendar. They recalled the prophesy that a Messiah would be born(Mica 5:2)- a prophesy known throughout the Near East - and sent the Wise Men to Bethlehem.

The Jews at that time did not believe in astrology, which they considered to be a sacrilegious pagan religion of the Babylonians. So something significant to the astrologers of Persia would pass unnoticed by them.

The Scripture does not tell us how many Wise Men there were; the tradition of three is quite arbitrary and in some early drawings there were as many as twelve. But there is a clue to who they were, in the word Magi used for them in the Greek manuscripts. They were probably the priests, the astrologers, the magicians of the religion Zoroaster that flourished in Persia, east of Judea. When they said they saw the Star in the East, they meant that, while in the East they saw the Star.

In 1962, Dr. Bryant Tuckerman of I.B.M. calculated accurate positions of the planets, sun and moon for the years 601 B.C. to 1 A.D. It was observed that an interesting "triple conjunction" of Jupiter and Saturn occurred the year of 7 B.C. The following is his description of a planetarium sky set to that year.

Jupiter travels faster than Saturn and appears to pass that other planet each twenty years. If this conjunction occurs when both planets are near opposition to the sun, Jupiter may pass Saturn, both planets moving eastward, then both planets will retrograde westward and Jupiter may pass Saturn again; then they resume their forward motions and Jupiter may pass Saturn a third time. This event occurs at intervals of 40 to 298 years, the average being 128, the most frequent is 40 years. It last occurred in 1940-41; it will next occur in 1981.

This article is a summation of a compilation of several articles collected in recent times. Copies of them all ~~fact~~ information is factual to the best of my knowledge

LOOKING FOR SOMETHING INTERESTING TO DO OVER THIS December? Look no further ! ! ! Phoenix's sister city to the south Tucson is an amateur astronomers dream. Tucson is often referred to as the Astronomical Capital of the World.

My own favorite trip hits Kitt Peak(6800 feet) at noon for a picnic lunch at their outdoor facilities about 1000 feet below the peak. The signs make it easy to find, on the way up, and if you pass the 36 foot N.A.R.O. radio telescope building you know you've gone to far.

Next be sure and catch the tour from the visitors center at the top. There is lots to see and if you do everything you can be finished and on your way down the hill to Tucson by 3:30. this will get you to the Flandrau Planetarium at the University by 5:30.

Try to get tickets for the earliest show you can! No matter how much time you have to wait you will not see all the interesting displays in the Planetarium perimeter. If for some reason it is still light(or you see some one heading that direction) go across the street to the optical shop. If in doubt, ask the tour guides at the Planetarium how to get there and if any-one is working that day. The sight of 60" to 90" blanks being ground and polished is inspiring to say the least.

Its a fun trip but don't expect to play in the snow at Kitt Peak as it was selected for an observatory site because it seldom gets cloudy weather(cold-yes, but cloudy-seldom).

Thought for December: THE LIGHT AT THE END OF THE TUNNEL
COULD TURN OUT TO BE THE HEADLIGHT OF AN ONCOMING TRAIN ! ! !

Star - Cont

To the Magi, the two planets Jupiter and Saturn, the slowest moving among the stars, were important gods and if they lingered so long near each other (six months), it must presage a great event on earth. During that time the astrologers associated the sign of Pisces, which coincided with the conjunction, with the affairs of the Jews.

On the night of May 27, 7 B.C., Jupiter passed one degree north of Saturn. On October 5, both planets retrograding, Jupiter again passed Saturn, and on December 1, the last conjunction occurred when Jupiter passed Saturn a third time.

On February 20, 6 B.C., Mars will pass 1.7° above Saturn, and on February 25, Jupiter, Saturn and Mars form a broad isosceles triangle with sides about 4° long. This is a far cry from the statement often made that the three planets often merged into a single bright star! On March 5 Mars passed about 0.8° above Jupiter.

Sometimes this is interpreted as the second appearance of the star after the Magi had talked to Herod.

This triple conjunction of Jupiter and Saturn is the astronomers suggestion of the Star of Bethlehem. Of course there will always be those who prefer to believe it was a miracle, only for the eyes of the Wise Men to see.



SKY-ADS

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Special Notice



Leap Second

BULLETIN # 122 NATIONAL BUREAU OF STANDARDS

At the recommendation of the Bureau International de l'Heure(BIH), Paris, notice is hereby given that a positive leap second will occur in transmissions from NBS Radio Stations WWV, WWVB, and WWVH at the end of December 1977. It will begin at 23h 59m 60s UTC on December 31 and end at 0h 0m 0s UTC on January 1, 1978.

!! THIS MEANS THAT 1977 WILL STAY WITH US ONE SECOND LONGER !!

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