Venus Now Visible in Daylight

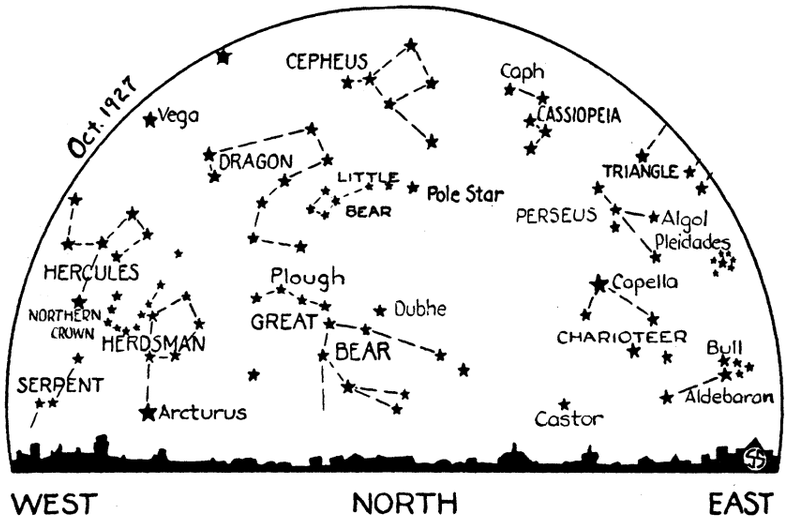
By James Stokley

Look for Venus in the daytime! Ordinarily, the only astronomical body that we are privileged to observe during daylight is the nearest of all the stars, the sun. Sometimes, when the moon is near first or last quarter we see it, in the former case in the afternoon, in the latter in the morning.

But to these two this month is added the planet Venus. Brightest of all the planets when at its climax, the brilliancy of Venus next month is inferior only to the sun and moon. On October 17, it attains its greatest magnitude, and for perhaps a week or more either side of that date it will be easily visible in the morning sky, if you know where to look for it.

One way of finding it in the daytime would be to get up before sunrise. Then it will be blazing in the east, and there will be no doubt of its identity. By watching it carefully until the sun rises, you can easily see it in daylight. But a simpler method, and one not requiring such early rising, is to use the celestial guide, the moon, on October 21.

On that date the moon and Venus are in conjunction. That means that they will be as close together as they will get on this particular circuit of the moon around its orbit. At 8:00 a. m., eastern standard time, Venus will be about seven and a half degrees south of the moon. The moon itself is about half a degree in diameter, so if you find the moon in the south on the morning of the twenty-first, and then look about fifteen times its diameter to the south, there you will see Venus. On the 15th of the month, Venus will be directly south at 9:17 a. m., local time, so that will also help you to find it.



Jupiter Also Visible

Jupiter, largest of the planets, is also visible this month, but in the evening sky, as it has been for many weeks. It is directly south about ten o'clock. If one were to watch it night by night, as it moves among the stars, and note its position carefully, a peculiar feature of its motion would be apparent. Jupiter, like all the planets, moves around the sun from west to east. But this month it seems to move from east to west. It is in the constellation of Pisces, the fishes, and at the end of the month it will be about three and a half degrees to the west of its position at the beginning of the month. Yet a few months ago, it could have been seen moving from west to east, and in November it will seem to turn around and start moving east again.

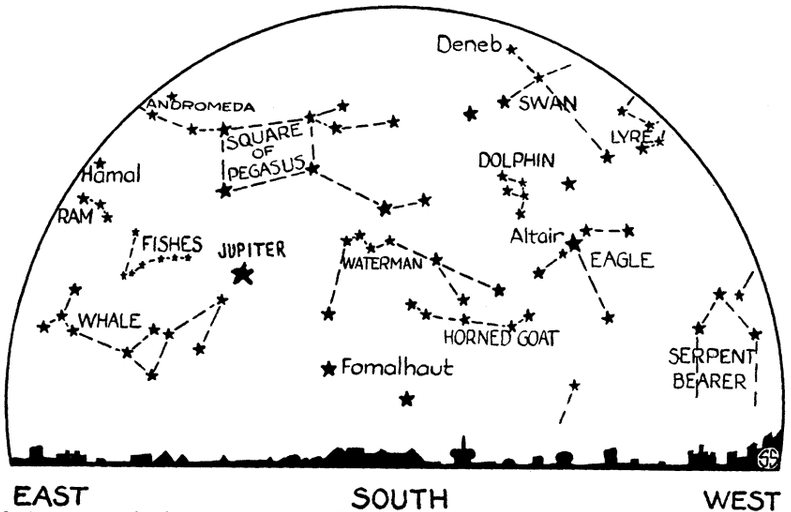
How is this? Four centuries ago, as for two thousand years previously, it was interpreted as an actual change in the motion of the planet. According to the Ptolemaic theory, which was then universally accepted, Jupiter moved in a small circle. This was called the epicycle, and its center moved in a large circle around the earth. Though the motion of the center of the epicycle was always from west to east, the motion of the planet itself was sometimes in the opposite direction.

Explained By Copernicus

In 1543, with the publication of the theory of Copernicus that the sun was at the center of the solar system, and that the earth, like the other planets, revolved around it, a new explanation was offered. This is the one which we now know to be true.

Copernicus showed that we do not observe Jupiter from a stationary object. The earth moves, and we move with it. The combination of the motion of the earth and the motion of Jupiter is to be blamed for the backsliding of that orb. Anyone who has been on a train in a station when another came in on the adjoining track can appreciate the situation.

The case with Jupiter is the same. This month Jupiter, as always, is moving from west to east. So is the earth. But we are moving faster than Jupiter, and so we leave it behind. We are not aware of the motion of the earth and so the effect is that Jupiter moves backwards.



Hold these maps in front of you and face north or south. They will then show stars as they appear to you in the sky.

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