# Jupiter Moves Backward in October

By James Stokley

The coming of October brings back to the evening sky the largest member of our family of planets, Jupiter. Saturn, the ringed planet, which was in the evening sky for the last few months, has now descended low in the west. It sets about three hours after the sun, and so is in a poor position.

Jupiter, however, has lately only been visible in the morning sky before sunrise, but now it appears in the east about eight o'clock in the evening. It is of the minus second magnitude, brighter than any stars in the neighborhood. From now on it will rise earlier and earlier every evening and will soon be a prominent feature of the winter evening sky.

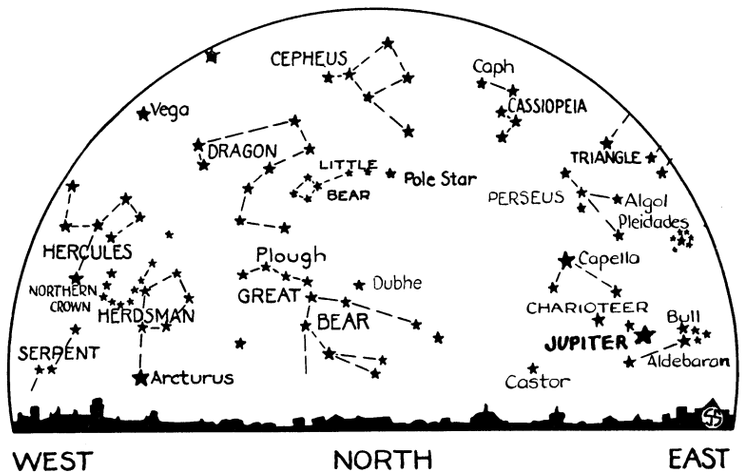
During this month a curious thing can be noticed about the motion of Jupiter. All of the planets revolve around the sun in an eastward direction. If you had watched Jupiter during the last month or two, plotting its place among the stars every night, you would have found that it was moving from west to east, as might be expected. But if you continue this plotting into October, you would find that its motion would become less and less. Then, about Oct. 5, it would seem to be stationary in the sky. After that time, it would seem to go backward and by the end of October it would appear to be moving from east to west.

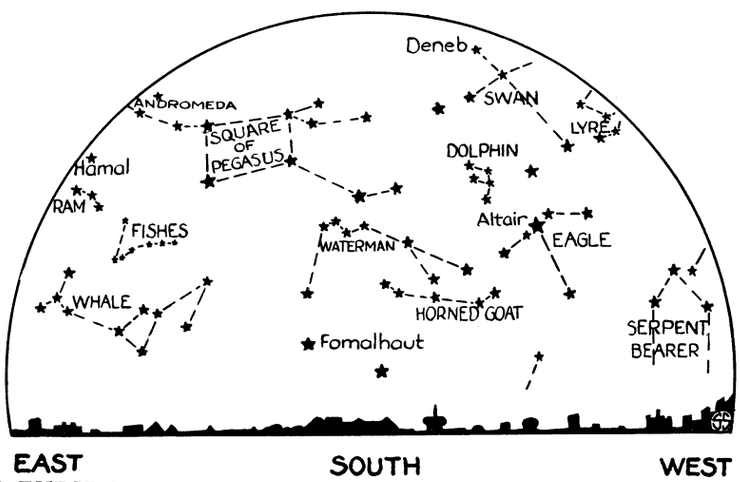
This strange behavior of Jupiter, which sometimes is shown by the other outer planets, Saturn, Uranus and Neptune as well, is called "retrograde motion". The effect is precisely similar to one that is often observed by travelers on a railroad train that passes another moving more slowly. If both trains are moving along a straight and smooth piece of track, and one cannot see any distant object, the more slowly moving train may appear to be actually running backwards to a passenger on the faster train.

The earth revolves in its orbit once in 365 days, while it takes nearly twelve years for Jupiter to travel once around the sun. The result is that when both Jupiter and the earth are on the same side of the sun, the earth travels past Jupiter and seems to leave it behind, thus causing it to retrograde among the stars.

This month, if you look to the south, you will see one of the most familiar of the celestial guide posts. This is the great square of Pegasus, seen this evening high in the southern sky. Four stars, of nearly equal brilliancy, mark the corners of the square. From the southeast corner extend a row of stars that form the head of the winged horse, while westward from the northwest corner extend other stars that form his forelegs. Strangely enough, the ancients who invented these constellation names placed Pegasus in the sky in an inverted position,—surely an undignified position for so impressive a creature! The northeastern star in the square does not really belong to the constellation of Pegasus, but to the neighboring one of Andromeda, the Chained Lady. She was represented in the old star maps as chained to a rock, where she had been placed by Jupiter to be devoured by a sea monster. Low in the southeast is the constellation of Cetus, the whale.

Among the other conspicuous constellations is Cygnus, the swan, with the bright star Deneb above. This constellation is also known as the northern cross, and is in an upright position in the western sky. To the northwest of Cygnus is Lyra, with the brilliant Vega, while to the southwest is Aquila, the eagle, containing Altair. Over in the northeast is another brilliant star, Capella, in the constellation of Auriga, the charioteer. Low in the east is the red Aldebaran in Taurus, the bull. These five stars and one other; Fomalhaut, in Piscis Austrinus, the southern fish, which is seen low in the south constitute the first magnitude stars visible this month.




*HOLD THESE MAPS in front of you and face North or South. The upper or lower one will then show the stars of the October evening sky*

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