

Slowly moving away from the sun toward the east, Venus by mid-September will set an hour after sunset, before the sky is completely dark. Thus, you'll have to look low in the west at twilight to see it. However, Venus is so bright that it shouldn't be difficult.

It was on June 17 that Venus passed behind the sun (at what is called "superior conjunction") and since then has been low in the west for a short time after sunset. By the end of September, it will remain in the sky for somewhat more than an hour (at 40° N), so it is much easier to see.

By the end of October this will have increased to more than an hour and a half. Around Christmas, Venus will be conspicuous, setting about two hours after twilight has faded. At that time, Venus will be about 60 percent brighter than it now is.

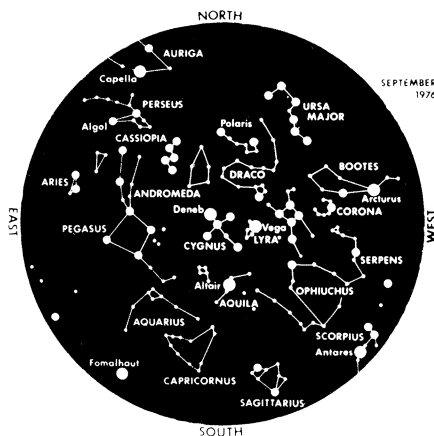
Mars also is low in the west just after sunset but so faint that you won't be able to see it with the naked eye in the bright twilight. On Sept. 10, at 6 p.m., EDT, Venus will pass closely to the north of Mars. If it's clear and you have a pair of binoculars handy, use them to view Venus. With such optical aids Mars should be visible nearby. The moon passes Venus on the afternoon of Sept. 25. That evening the planet and crescent together will make an interesting sight.

Later, on September evenings, Jupiter will appear in the east. It rises about 11 p.m. (local daylight time) on the first and 9 p.m. on the 30th. Although only a third as bright, it will be more prominent in the dark sky than Venus was at twilight.

Saturn, about a twelfth as bright as

# SEPTEMBER STARS

BY JAMES STOKLEY



Sept. 8	8:52 am, EDT	Full moon (harvest moon)
10	6:00 pm	Venus passes north of Mars
12	7:00 pm	Moon farthest, distance 251,900 miles
14	3:00 pm	Moon passes south of Jupiter
16	1:20 pm	Moon in last quarter
20	11:00 am	Moon passes south of Saturn
21	9:00 pm	Mercury behind sun
22	5:48 pm	Equinox
23	3:55 pm	New moon
24	11:00 pm	Moon nearest, distance 223,600 miles
25	2:00 pm	Moon passes south of Venus
30	7:12 am	Moon in first quarter

Jupiter, rises about three hours ahead of the sun. It will shine in the east in the constellation Cancer with the light of a first-magnitude star, until the light of dawn overpowers it. Mercury, which passes between sun and earth on the 22nd, will not be seen this month.

At 5:48 p.m., EDT, on Sept. 22, autumn commences for residents of the Northern Hemisphere, and spring for people in Southern Hemisphere countries. This occurs when the sun is halfway through the sky on the southerly journey it began in June. Then it will stand directly over a point on the equator about 700 miles east of Christmas Island.

This is the equinox, when day and night are supposedly equal in length. However, the bending of the sun's light by our atmosphere makes it appear a little higher than it really is and, because of this, we can still see the sun after it has descended below the horizon. Sunset comes a few minutes later, and sunrise a few minutes earlier, than if there were no atmosphere.

At 40° N on Sept. 22, 12 hours and about 12 minutes will elapse between sunrise and sunset. Four days later, however, it will be just 12 hours; day and night will then be equal.

The full moon nearest the equinox, which comes this year on Sept. 8, is the "harvest moon," when there is the shortest delay in moonrise from one night to the next. This gives farmers illumination at night to work on their harvest. Moonrise on the 8th is only 30 minutes later than it was the previous night (at 40° N). When the moon was full last March 15, it rose 1 hour 14 minutes later than it did on the 14th. □

• **Sept. 10 (CBS)**—"Everybody Rides the Carousel" is a project in which a group of Yale students visualized the concepts of the renowned psychoanalyst Erik H. Erikson, the non-dogmatic, emancipated Freudian who introduced the term "identity crisis" into the English language. The program's goal is to communicate to new parents, in a light and entertaining way, the needs and feelings of small children. Animated characters portray Erikson's concept of "psychosocial crisis," which takes place as we pass through what he calls the eight stages of human development. Ninety minutes of Erikson's ideas.

• **Sept. 22 (PBS) NOVA (R)**—"The Race for the Double Helix" recalls the dramatic human story behind the race to discover DNA's structure—the material of our genes. Nobel Prize winners James Watson and Francis Crick are reunited and tell their story.

• **Sept. 27-Oct. 1 (NPR)**—"The Mind's Window" a series of half-hour programs presented by National Public Radio, will explore the brain's still uncharted territory. Various scientists/guests will join

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NPR reporter Ira Flatow and delve into understanding the existing theories on learning, memory, sleep and the role of the brain's two hemispheres. The programs will be aired as follows: Sept. 27—"The Master Organ" examines how the brain's 100 billion cells communicate; Sept. 28—"Learning and Memory" is the story of the learning process and why certain things are worth remembering; Sept. 29—"The Dual Hemispheres of the Brain" offers insights into mind-brain interactions; Sept. 30—"Sleep" is a report on the brain as a giant gland; Oct. 1—"Vision" looks at the brain as a lens.

• **Sept. 29 (PBS) NOVA (R)**—"Hunters of the Seal" has anthropologist Asen Balikci

revisiting the Netsilik Eskimos after 10 years, at which time he filmed their traditional life-style. Since then, the Eskimos have been settled by the Canadian government in a permanent encampment. On his return he recorded the nostalgia that the Netsilik have for their old ways and he focuses on their concerns today—such as the worry of the older Eskimos that the young people are losing the ancient art of survival. □

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