

October: harvest moon month



skywatch
Raymond E. Bullock

ure out what that full moon is called.

BECAUSE THE moon is in orbit around the Earth, it appears in different parts of the sky from night to night.

Generally, the moon will rise about one hour later each night. But in autumn, the full moon is at the part of its orbit that has the least tilt with respect to Earth's horizon line. The moon seems to skim along the horizon, rising at about the same time each evening, in about the same part of the sky.

PEOPLE OCCASIONALLY wonder if the phase of the moon has any effect on humans. It really shouldn't be expected to have any effect at all.

We see different phases of the moon depending on what part is being illuminated by the sun. The moon is always somewhere near the Earth, so any effect it should have should be a constant one, not dependent on how much is being illuminated.

WATCH THE MOON as it moves through the constellation of Taurus the mornings of Oct. 7 and 8. Look high in the southwest, about 45 minutes before sunrise Oct. 7, and you'll see the Pleiades (PLEE a dees) star cluster above and to the left of the moon.

The Pleiades cluster looks like a tiny "dipper." Moonlight will make it difficult to see the fainter members of the Pleiades, so it will be best to observe the cluster with binoculars.

The Pleiades marks the "shoulder" of Taurus the Bull. To the left of the Pleiades, you will see two reddish-colored stars. One of these is Aldebaran (al DEB a ran), the "eye" of Taurus. The other is the red planet, Mars.

Which is which? They look alike, but there is a big difference between the two.

A STAR produces its own light. A

star like Aldebaran is not very hot (as far as stars go), so its color, like the color of the cooler part of a gas flame, is orange-red.

Planets, on the other hand, do not produce light. Planets "shine" by reflecting the light of a star.

When we look at Mars, we are looking at sunlight that has reflected off the surface of Mars. Since Mars is covered with a rusty, red surface, the reflected color is predominantly red. It just happens to look like the light produced by Aldebaran.

To the naked eye, most stars appear to shine with a consistent brightness. A planet's brightness can vary considerably, depending on whether it's at the part of orbit nearest to, or farthest from, the Earth.

In November, Mars will be at its closest point to us in 1990. Consequently, that planet will continue to get brighter during the next seven weeks. Even now, Mars easily "outshines" Aldebaran.

A nice triangle is formed by the moon, Mars and Aldebaran the morning of Oct. 8. Mars is to the left of the moon. Aldebaran is below Mars. By the next morning, the moon is above Mars and midway between the two stars that mark the "horns" of the bull.

LAST QUARTER MOON occurs at 11:31 p.m. Oct. 10. The moon, in Gemini, is beginning the last quarter of its orbit around the Earth.

The moon is near the "twin" stars that mark the heads of the Gemini twins the morning of Oct. 11. The star above the moon is Pollux; the star above Pollux is Castor. The very bright star below and to the left of Pollux is the giant planet, Jupiter.

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By Raymond Bullock
special writer

October is the month when daylight-saving time comes to an end and we return to standard time. In addition, the harvest moon and a meteor shower occur this month.

The length of the day decreases by one hour and 32 minutes in October. On Oct. 1, sunrise is at 7:29 a.m. and sunset is at 7:14 p.m. EDT, permitting a possible 11 hours and 55 minutes of sunlight. On Oct. 31, sunrise is at 7:04 a.m. and sunset is at 5:27 p.m. EST, permitting 10 hours and 23 minutes of sun.

Mars and Saturn are visible after sunset this month. Mercury, Mars and Jupiter are in the pre-dawn sky. Venus will not be seen at all, because it is behind the sun.

It will be very difficult to identify the date of the full moon by appearance, because the moon will appear to be full for five consecutive nights, beginning with the first night of the month! This is the "harvest moon."

THE HARVEST MOON is not always the September full moon; it is the full moon that occurs closest to the time of the autumn equinox, the start of autumn.

Of course, autumn always occurs in September, but that date was always 19 days following the full moon Sept. 4. October's full moon is also on the 4th, and since that's only 11 days after the autumn equinox, the October full moon becomes the "harvest moon."

The light scattered by the full moon was a help to farmers, allowing them to continue their harvesting after sunset. Hence it was called the harvest moon. The full moon that follows the harvest moon was said to be a help to hunters, so you can fig-

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