

Watch for huge harvest moon on the rise

By Vernon Whetstone

Amateur Astronomer

Now that we are past the autumnal equinox, the next thing we have to look forward to is the full moon. Traditionally, the full moon nearest the equinox is called the Harvest Moon.

Back in the days before mechanized farming and the bazillion candlepower lights on harvesters, farmers depended on moonlight to give them more time to bring in their crop.

There are two notable things about a Harvest Moon.

The first is the closeness of times for moonrise.

Normally the time between moonrise on successive days is about 50 minutes. However, during the Harvest Moon period the time difference of moonrise on the days leading up to and following the full moon is only about 30 minutes.

This provides more light for the farmers.

The reason for the closeness of rising times is the ecliptic, the imaginary line marking the orbital path the Sun, moon, and the planets seem to follow as seen from Earth.

At this time of year, the ecliptic is at a very shallow compared to the horizon, so the moon rises very close to the same time each evening for three or four days.

The second thing notable about the Harvest Moon is the size of it. I think we all have seen just how large a full moon can appear. But, for some reason the Harvest Moon seems to be the biggest of them all.

It is not any nearer than normal, in fact, on Sept. 29, the day of the full moon, it will be about 243,000 miles away. Almost as far away as it can get.

What makes the moon look so much larger is not really understood. It is basically an optical illusion, it only looks like it is bigger. Why? No one has an answer.

There are several possibilities that have been suggested. Perhaps Earth's atmosphere magnifies it. When looking at a full moon we are looking through a lot of air, but there is no consensus that there is any magnification properties associated with it.

Another theory says that it looks bigger because it is juxtaposed with houses and other objects on the ground, and when our eyes see it our brain thinks it is bigger. Well, nope on that one too. Basically it is just an optical illusion. Here are a couple of ways to examine that idea.

First, as the moon is rising hold a dime at arms length between your index finger and thumb up next to the moon. They will appear to be the same size. Later, when the moon is almost overhead do the same thing. You will see that the moon is still only as big as the dime.

Another way takes a little more agility. Turn your back to the moon, bend over at the waist and look at the moon between your legs. Yep, it now looks small, like a normal moon.

I have never used that last method, I am afraid I would hurt myself.

SKY WATCH: Full moon, Saturday, Sept. 29. Wednesday, Oct. 3, The planet Venus and the star Regulus, the brightest star in Leo, the Lion will have a very close conjunction in the early

morning before sunrise.

Do you have your material for the World Wide Star Count from Oct. 5–19? You still have time.
www.windows2universe.org/citizen_science/starcount.

NEXT WEEK: More astronomical blathering.