WEEKLY STARGAZERS' NEWSLETTER

by Dr. Bob

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These are the notes that I use for the weekly radio broadcast on Rome Radio Station WLAQ AM 1410 and FM 96.9. The program airs at 7:50 a.m. each Tuesday morning. The radio station also has a live FaceBook broadcast at the same time: WLAQ-Rome. Send questions to: ryoung@highlands.edu

OBSERVATION PERIOD:
08/13/24 – 08/19/24

FUN FACT OF THE WEEK
Space is absolute silent!
Sound waves need a medium to travel through, so space is completely silent because there's no atmosphere in the vacuum. I love watching sci fi movies and listen to explosions during battles or other events. The thing is, we would not hear anything, which is a bit anticlimactic for the average movie goer.

MOON FOR THE WEEK:
The Moon will be Full on Monday, August 19th. The Moon will waxing during the week as it goes from First Quarter toward Full Quarter. Notice when and where you see the Moon during the week.


Full Moon

The name of the Full Moon in August is the Full Sturgeon Moon. This is because the fishing tribes along the Great Lakes and other major bodies of water, most readily caught the Sturgeon during this month. A few tribes knew it as the Full Red Moon because, as the Moon rises, it appears reddish through any sultry evening haze. It was also called the Green Corn Moon or Grain Moon.

This week the Moon is at a distance of 394,429 kms from Earth as it obits the Earth in its monthly journey.

The Sun --

The Sun rises at 07:00 hrs (7:00 a.m.) this week and sets at 20:31 hrs (8:38 p.m.)

This means that the Sun is above the horizon for Sun is “up” for 13 hrs. and 31 minutes this week, or 9 minutes less sunlight than last week.

The Sun climbs to an altitude of 70.4 degrees this week which is 1.8 degrees lower that last week. The Sun is in the constellation Leo, the Lion.
The Earth is currently 1.013 AUs from the Sun, this is 0.001 AUs closer than last week.

PLANETS

Mercury: This week Mercury rises in the East around 8:04 a.m. and sets at 20:37 (8:37 p.m.) Since the planet rises and sets close to the Sun we will not get a chance to see it this week. In any case, Mercury is in the constellation Leo, the Lion.

Venus rises in the East at 8:32 a.m. and sets in the west at 8:25 p.m. this week. Like Mercury, it rises and sets too close to the Sun to get a good view of it. Venus is also in the constellation, Leo.

Mars rises in the East at 2:06 a.m. which is more than 3.0 hours before the Sun, making Mars is wonderful object in the predawn sky. Look for its amber hue in the early predawn sky. Mars is in the constellation Taurus.

Jupiter rises in the East at 2:11 a.m. which is also about three hour before the Sun. Look low on the eastern horizon before sunrise to see this planet. It should be very bright in the sky. If you have a pair of binoculars, you should be able to see the four Galilean Moon. Jupiter is in the constellation ,Taurus.

Saturn rises in the East around 9:14 p.m. This means that you can see Saturn practically all night long until sunrise. Saturn is an easy target in the late night sky until the early morning, although not quite as bright as Jupiter. Saturn is in the constellation Aquarius.

MARS ROVER PERSEVERANCE

To get regular and current updates on the progress of NASA's Perseverance 5rover on Mars, go to the websitehis :
https://www.space.com/news/live/mars-perseverance-rover-update

SATELLITES FOR THE WEEK (ISS PASSES

18 Aug	-3.5	06:15:39	12°	SW	06:18:39	68°	SE	06:21:59	10°	NE	visible
19 Aug	-2.5	05:29:17	29°	SSE	05:30:04	33°	SE	05:33:07	10°	ENE	visible

STAR PATTERN IN THE NIGHT SKY
Aquila the Eagle:
Aquila lies astride the celestial equator. The alpha star, Altair, is a vertex of the Summer Triangle asterism.

For your SciFi Buffs, Forbidden Planet is a 1956 American science fiction film. By many critics, it is considered one of the great science fiction films of the 1950s. The characters and isolated setting have been compared to those in William Shakespeare's The Tempest, and the plot contains certain analogues to the play.

Forbidden Planet pioneered several aspects of science fiction cinema. It was the first science fiction film to depict humans traveling in a faster-than-light starship of their own creation. It was also the first to be set entirely on another planet in interstellar space, far away from Earth. The Robby the Robot character is one of the first film robots that was more than just a mechanical "tin can" on legs.

The constellation, Aquila, is best seen in the summer as it is located along the Milky Way. Because of this location along the line of our galaxy, many clusters and nebulae are found within its borders, but they are dim and there are few galaxies.

On a side note, on the evening of Dec 2, 1999, I took a picture of Aquila with my camera from my back yard. During those days, the pictures were not digital… you had to get the film developed.When I compared the stars in the picture with a star map, I saw an extra star! I assumed it was a problem with my picture. In February 2000, Sky and Telescope magazine had virtually a duplicate picture of the one I took. Only this was taken by a nova hunter. I took a picture of a nova that was visible for only a few days before it disappeared – only I did not know what I had captured!

SPACE HISTORY OF THE WEEK

August 17, 2006, Voyager 1 was 100 AUs from Earth and going away quickly.

Today:
Pioneer 10 (3/3/72) is 137 AUs away in Taurus
Pioneer 11 (4/6/73) is 113.6 AUs away in Scutum
Voyager 2 (8/20/77) is 136.6 AUs away in Pavo
Voyager 1 (9/5/77) is 164.4 AUs away in Ophiuchus
New Horizons (1/9/06) is 58.7 AUs in Sagittarius

August 19, 1868 John Flamsteed was born
was an English astronomer and the first Astronomer Royal. He catalogued over 3000 stars.

Flamsteed accurately calculated the solar eclipses of 1666 and 1668. He was responsible for several of the earliest recorded sightings of the planet Uranus, which he mistook for a star and catalogued as '34 Tauri'. The first of these was in December 1690, which remains the earliest known sighting of Uranus by an astronomer.

QUESTION OF THE WEEK

Dr. Bob, I heard that scientists know the temperature of stars. How can they possibly know that, since they are so far away? Chase W.

Great question, Chase! Stars are much too distant to have any way to determine their temperature until we simply look at the characteristics of the star. The brightness of the star and its color tell us a lot about the star.

Think about a rainbow, all the colors that you can see: ROYGBV. Each of those colors has a different wavelength and therefore different amount of energy. Astronomers use that to determine the temperature. The hottest stars will have a peak of color in the ultraviolet region of the spectrum (20,000 degrees). A yellow-white star is about 7,000 degrees. A yellow star is about 6,000 degrees (the sun). At 4,000 and 3,000 degrees the stars are yellow and red.

Bluer the star, hotter the star, more red the star, cooler it is.