

WEEKLY STARGAZERS' JOURNAL

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:

05/17/22 – 05/23/22

FUN FACTS:

If you wanted to make a scale model of the diameter and thickness of the rings around Saturn, you will need a piece of copy paper 1.7 miles in diameter. The circle of paper would be the rings and the thickness of the paper is proportional to the thickness of the rings! The rings are 1 to 300,000, thickness to diameter!!

MOON FOR THE WEEK:

The Moon will be at Third Quarter Sunday, May 22nd. As the Moon orbits the Earth, it moves in an elliptical path. Today, the Moon is at perigee, its closest approach to the Earth in its monthly course. At perigee the Moon will be 360,298 kms (223,879 mi) from Earth.



The Moon will be rising later each evening until it rises well after sunset. By next Sunday, the Moon will be high in the south at sunrise.

HORIZON TO HORIZON PLANET VIEW

The sun rises at 6:38 a.m. (EDT) and sets at 8:37 p.m. (EDT). The Sun is in the constellation Taurus the Bull and it is still increasing its distance from the Sun in its orbit. Currently the Earth is 1.0111 AUs compared to 1.0086 AUs last week. In miles, this is 93,987,616 miles compared to 93,755,227 miles last week. This week, the sun is 75.0 degrees above the horizon this week which is higher than the 73.5 degrees altitude it was last week.

The Planets:

Again this week, all of the naked eye planets are visible in the morning or evening sky. The morning skies hold Venus, Mars, Jupiter, and Saturn. By 6:00 a.m., Venus is brightest and lowest to the eastern horizon. The next planet up from the eastern horizon is Jupiter. Jupiter is not as bright as Venus but still very bright. The third planet up is Mars. Look for the amber (reddish) hue of this planet, its color is due to the rust in the soil. The final planet in the early morning sky is Saturn. If you use the distance between Venus and Jupiter as a yardstick, you can find Mars about 1/3 as far from Jupiter as Jupiter is from Venus. Finally, the last planet, Saturn is about the same distance from Mars as Jupiter is from Venus. So all planets are in a line rising up from the Eastern horizon from Venus to Saturn.

Not to be out done, the evening sky holds a planet too, Mercury. Although very close to the western horizon at sunset, Mercury is visible in the darkening sky. Mercury sets about 30 minutes after the Sun. To see this elusive planet, you will need a very low western horizon and sharp eyes. To say the least, this is not the best time to see Mercury but it is worth the effort, if you give it a try.

MARS ROVER PERSEVERANCE

To get regular and current updates on the progress of NASA's Perseverance rover on Mars, go to the website:

<https://www.space.com/news/live/mars-perseverance-rover-update>

SATELLITES FOR THE WEEK (ISS PASSES):

Although the satellite pass website shows several passes of the ISS, none of them are high or bright enough to bother with.

STAR PATTERNS IN THE SKY

Virgo, the Maiden

Virgo is a huge constellation, only second to Hydra, the Sea Serpent.

Virgo is the only female figure of the zodiac constellations. It is also one of the oldest constellations and one of the most important constellations since recorded history. As the Sun moves through the zodiac constellations in its annual journey around the sun, it is in the constellation from September 21 through November 1. As a result, the sun is in Virgo during the Autumnal Equinox each year.

Virgo is identified as the goddess of fertility, goddess of agriculture, goddess of earth, and goddess of justice, just to name a few. Virgo is almost always depicted as holding a spike of wheat in one hand and a staff or caduceus in the other.

Spica is the only bright star in Virgo. The name Spica is Latin for "ear of Wheat". How to find Spica. Using the handle of the Big Dipper as a pointer. Follow the arc of the handle to Arcturus and on to Spica. Both Arcturus and Spica are bright stars and easy to spot.

SPACE HISTORY OF THE WEEK

May 17, 1836: Sir Joseph Norman Lockyer, known simply as Norman Lockyer, was an English scientist and astronomer. Along with the French scientist Pierre Janssen he is credited with discovering the gas helium. Lockyer also is remembered for being the founder and first editor of the influential journal Nature.

May 18th: 1969 Apollo 10 launched

Apollo 10 was the fourth manned mission in the United States Apollo space program. Launched on May 18, 1969, it was a "dress rehearsal" for the first Moon landing, testing all of the components and procedures, just short of actually landing. The Lunar Module (LM) came to within 8.4 nautical miles (15.6 km) of the lunar surface, the point where the powered descent to the lunar surface would begin. The crew was Tom Stafford, John Young, and Eugene Cernan.

QUESTION OF THE WEEK

**Dr. Bob, I keep hearing about the Milky Way but I do not think I have never seen it. Does it take special equipment to actually see the Milky Way?
Nathan S.**

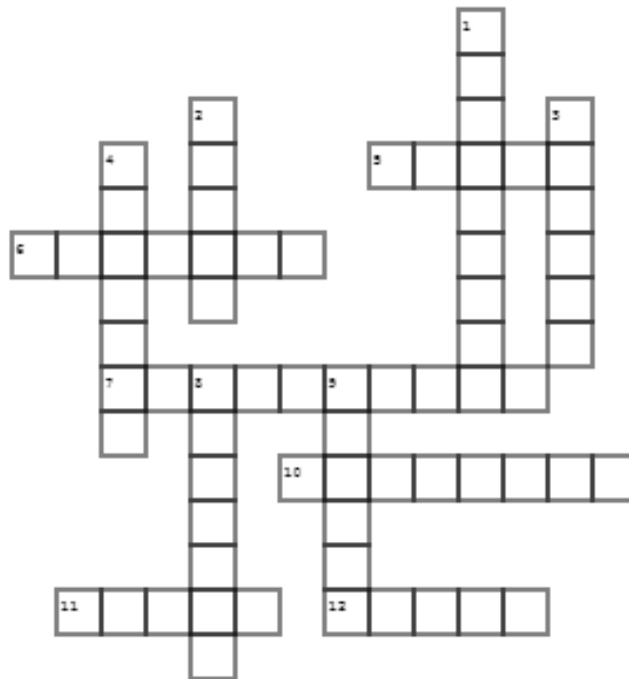
No, it does not take special equipment, it just takes clear dark skies and a season where it is prominently high in the sky from our vantage point at night. Right now, at sunset, the Milky Way is all along our horizon, so it is not visible.

If you are an early riser, say 3 – 5 a.m., the Milky Way splits our sky in half, from due South to due North forming a beautiful cloudy arc in the heavens.

On a clear sky morning, go to a safe rural location, without pesky security lights, and look into the sky. The Milky Way is not stellar, it appears to be a wide ribbon of cloud hanging across the sky. When you look at it, you are looking into the edge of our home galaxy. There is an estimated one trillion stars and interstellar gases that make up the Milky Way. As you look closer to the southern horizon, it seems to be brighter, this is because you are looking into the center or middle of our galaxy. The center of our galaxy is in the direction of Sagittarius, where the Teapot asterism is located.

There is one thing that I was never told, or never understood, that I want to share with you. I believed that the Milky Way was only the cloudy ribbon. In fact, all the stars we can see at night are in our Milky Way, whether we are looking at the bright ribbon or not. The **only** object we can see outside of our Milky Way with an unaided eye is the Andromeda Galaxy in Andromeda the Chained Princess.

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Down:

1. the only galaxy that can be seen outside the Milky Way with just the naked eye
2. the lowest Planet in the early morning sky
3. Apollo 10 was the _____ manned mission in the United States Apollo space program
4. the name given to the position of the Moon when it is closest to the Earth in its monthly orbit.
8. Along with Janssen he is credited with discovering the gas helium
9. the constellation that the Sun is currently in

Across:

5. huge constellation second only to Hydra
6. the only planet seen in the early evening sky
7. the shape of the orbit of the Moon around the Earth
10. What special event occurs when the Sun is in Virgo? _____ Equinox
11. What do we look for to help us identify Mars? _____ hue
12. the only bright star in Virgo