

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

Etowah GYSTC
Website QR code



OBSERVATION PERIOD:

02/07/23 – 02/13/23

FUN FACT OF THE WEEK:

Mars has a lot of rust in its soil!

Although there isn't any liquid water on Mars, it's surface is rusty red and so is its sky. It is thought that Mars was covered with water eons ago, there's still ice at its north and south polar caps, just like on Earth. The planet remains very rich in iron oxide.

MOON FOR THE WEEK:

The Moon is Third Quarter on Monday, February 13th. The Moon has passed Apogee and is heading back to Perigee, closest distance to the Earth during this orbit. The Moon is currently 403,037 kms from Earth and by the 19th, it will be only 358,267 kms away.



To convert kms to miles, multiply kms by 0.62 miles/km.

HORIZON TO HORIZON PLANET VIEW

The sun rises at 7:31 a.m. and sets at 6:19 p.m. This means that there are 10 hours, 48 minutes of daylight compared to 10 hours and 29 minutes daylight last week.

The Sun is still in the **constellation Capricornus**. Capricornus is a faint zodiac constellation located in the southern sky. Its name means "the goat" in Latin.

The is Earth 0.987 AUs from the Sun compared to 0.985 AUs from the Sun last week. It is 41.5 degrees altitude at the meridian compared to 38.3 degrees last week.

The Planets:

Mercury rises at 6:23 a.m. This is about 65 minutes before the Sun. This is a good time to try to see Mercury in the pre-dawn sky, if you have a good low eastern horizon and clear skies.

Venus sets at 8:20 p.m. which is 2.0 hrs after sunset. You can see it high in the evening sky. Since we can see it in the evening sky, it is often called the “Evening Star”. This planet is not the closest planet to the sun but it is the hottest one. The thick layer of CO₂ gases hold in the heat, raising the temperature to well over 830 degrees Fahrenheit.

Mars rises up in the eastern horizon in the early afternoon and crosses the meridian at 8:00 p.m. You should have no trouble seeing the Red Planet if your skies are clear. If you see it with a telescope, look for the two Martian moons: Phobos and Demos.

Jupiter sets at 9:53 p.m. It is a very bright planet with its four Galilean moons. You can't see the moons with your naked eye but you can easily see them with a small pair of binoculars. Look for Io, Callisto, Ganymede, and Europa. This planet is like a small solar system with its 79 moons. You can identify the moons by name if you go to https://skyandtelescope.org/wp-content/plugins/observing-tools/jupiter_moons/jupiter.html. This is a great interactive tool to identify the four Galilean moons of Jupiter.

Saturn is too close to the Sun this week to see it. It will be a couple weeks before we see Saturn again in the evening sky.

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)

There are a couple passes but they are too low to the horizon and too dim to even mention. Better luck next week.

STAR PATTERNS IN THE SKY

Cancer the Crab

Cancer is one of the twelve constellations of the zodiac. Its name is Latin for crab and it is commonly represented as one.

Cancer is a medium-size constellation with an area of 506 square degrees and its stars are rather faint. Its brightest star Beta Cancrri having an apparent magnitude of 3.5.

Cancer contains two stars with known planets, including 55 Cancrri, which has five: one super-earth and four gas giants, one of which is in the habitable zone and as such has expected temperatures similar to Earth.

Located at the center of the constellation is Praesepe (Messier 44), one of the closest open clusters to Earth and a popular target for amateur astronomers.

SPACE HISTORY OF THE WEEK

February 7, 1984: first unteathered space walk.

On Feb. 7, 1984, two Challenger space shuttle astronauts, Capt. Bruce McCandless II and Col.I Robert L. Stewart, performed the first untethered spacewalk during the STS-41B mission. "Free of any lifeline and propelled into the dark void by tiny jets, they became, in effect, the first human satellites, "

February 8, 1828: Jules Verne was born.

was a French novelist, poet, and playwright best known for his adventure novels and his profound influence on the literary genre of science fiction. Adventure novels including Journey to the Center of the Earth (1864), Twenty Thousand Leagues Under the Sea (1870), and Around the World in Eighty Days (1873).

Verne has been the second most-translated author in the world since 1979, ranking between Agatha Christie and William Shakespeare. He has sometimes been called the "Father of Science Fiction", a title that has also been given to H. G. Wells and Hugo Gernsback.

February 11, 1984: First shuttle landing at Kennedy Space Center.

On February 11, on STS-41B, the tenth Space Shuttle flight, OV-99 Challenger achieved the first landing of a Shuttle orbiter at KSC, thus becoming the first spacecraft to land at its launch site. STS-7 was originally scheduled to make the first landing at KSC, but unacceptable weather caused a wave-off and subsequent landing at Edwards AFB, CA.

QUESTION OF THE WEEK:

I had a discussion with a friend about why one would want to use a pair of binoculars to stargaze. He said that you only use the binoculars to magnify the stars, planets, and deep sky objects. I said that it is more important to use binoculars to see fainter objects by collecting more light from the dim objects. Are either of us correct? Brent T. and Tony W.

I would say that both of you are correct. A typical pair of binoculars will have a magnification of 10-15 power. This is enough for you to see some detail with Jupiter that you cannot see with the naked eye and spot some details with deep sky objects, including some galaxies. But not enough to see things like the rings around Saturn or small deep sky objects. You will be able to see about 50 of the 110 Messier objects with a pair of 60x15 binoculars.

On the other hand, you are able to see much dimmer objects with the binoculars than with naked eye. Typical binoculars have an objective of 50 -70 mms. This allows you to see much dimmer objects. For example, if you live in the desert, away from light pollution, you can see a lot more stars than if you live within a large city or urban area. However, everything being equal, we can see about 3,000 stars with the naked eye in a good viewing location.

Your observations expand greatly with a pair of 7 x 50 binoculars, you can see up to 150,000 stars!

So binoculars let you see some magnification and greater light gathering ability as well.