

# 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:

01/24/23 – 01/30/23

## FUN FACT OF THE WEEK:

The Sun measures 1.4 million km across, while the Moon is a mere 3,474 km across. In other words, the Sun's diameter is roughly 400 times larger than the Moon. But the Sun also happens to be 400 times further away than the Moon. This distance gives the Sun / Moon appearance to be roughly the same. That explains how total solar and lunar eclipses are possible.

## MOON FOR THE WEEK:

The Moon is 1<sup>st</sup> Quarter on Saturday, January 28<sup>st</sup>. Since the Moon was at perigee last week, it will be increasing its distance from the Earth during this week.



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

## HORIZON TO HORIZON PLANET VIEW

The sun rises at 7:44 a.m. and sets at 6:02 p.m. This means that there are 10 hrs. and 18 mins of daylight compared to 10 hrs. 49 minutes last week.

The Sun is in the **constellation Capricornus**. Capricornus Capricornus is a faint zodiac constellation located in the southern sky. Its name means "the goat" in Latin. The constellation represents a sea goat, a mythical creature associated with the god Enki in Babylonian mythology and later with the Greek deity Pan.

The constellation is represented by the symbol  $\text{♑}$ .

Like other zodiac constellations, Capricornus was first catalogued by the Greek astronomer Claudius Ptolemy in his *Almagest* in the 2nd century CE. In Greek mythology, the constellation is associated with Pan, the god of the wild, and with the goat Amalthea, who suckled Zeus when he was very young.

The is Earth 0.984 AUs from the Sun. It is 36.4 degrees when it crosses the meridian as compared to 34.9 degrees altitude last week. We will see that the Sun will continually get higher and will remain up longer each day as the seasons change.

### **The Planets:**

**Mercury** rises at 6:10 a.m. This is about 75 minutes before the Sun. This means that you might be able to see the elusive planet low on the eastern horizon at sunrise. The planet will be getting higher in the morning each week.

**Venus** rises at 9:03 a.m. which is about 80 minutes after sunrise. Venus sets at 7:34 p.m. which is 1.5 hrs after sunset. You will begin to see it high in the evening sky. This is when the planet Venus is called the Evening Star.

**Mars** rises up in the eastern horizon at 1:42 p.m. and will be up all night long, The Red Planet crosses the meridian at 8:54 p.m. It will be easy to see this planet with its amber hue. Mars sets in the western sky at 4:08 a.m. The two moons of Mars are Phobos and Demos.

**Jupiter** crosses the meridian at 4:46 p.m. leading Mars by 30 degrees or so. Jupiter is the largest planet in the solar system by far, more than 1,000 times larger than the Earth. This huge planet is very bright and easy to spot with the naked eye. The four Galilean Moon are visible with nothing more than a pair of binoculars: Io, Callisto, Ganymede, and Europa. This planet sets at 10:47 p.m. This planet is like a small solar system with its 79 moons.

**Saturn** crosses the meridian at 2:18 p.m. as the sun begins to head toward the western horizon. Saturn, **Ringed Planet**, has 82 moons, the most moons of any planet in the solar system. The planet sets in the west at 7:37 p.m. Saturn sets before Venus now and is very difficult to spot in the Western 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)

<a href="#">31 Jan</a>	-1.9	19:33:27	10°	NNW	19:35:04	19°	N	19:35:04	19°	N	visible
<a href="#">01 Feb</a>	-1.7	18:45:14	10°	N	18:47:07	14°	NNE	18:48:49	11°	ENE	visible
<a href="#">01 Feb</a>	-1.1	20:20:48	10°	NW	20:21:44	17°	NW	20:21:44	17°	NW	visible

## STAR PATTERNS IN THE SKY

### Lepus the rabbit

This is a constellation lying just south of the celestial equator, immediately south of Orion.

Its name is Latin for "hare".

Although the hare does not represent any particular figure in Greek mythology,

Lepus was one of the 48 constellations listed by the 2nd century astronomer Ptolemy, and it remains one of the 88 modern constellations.

It is located below the constellation Orion (the hunter), and is sometimes represented as a hare being chased by Orion or, alternatively, by Orion's hunting dogs.

There is one Messier object in Lepus, M79. It is a globular cluster of magnitude 8.0, 42,000 light-years from Earth.

One of the few globular clusters visible in the Northern Hemisphere winter, it is a Shapley class V cluster, which means that it has an intermediate concentration towards its center. It is often described as having a "starfish" shape. M79 was discovered in 1780 by Pierre Méchain.

## **SPACE HISTORY OF THE WEEK**

### **Jan 27, 1967: White, Grissom and Chaffee perished in a capsule trial accident.**

Apollo 1, initially designated AS-204, was the first manned mission of the United States Apollo program, which had as its ultimate goal: a manned lunar landing.

A cabin fire during a launch rehearsal test on January 27 at Cape Kennedy Air Force Station Launch Complex 34 killed all three crew members—Command Pilot Virgil I. "Gus" Grissom, Senior Pilot Edward H. White II, and Pilot Roger B. Chaffee—and destroyed the Command Module (CM).

The name Apollo 1, chosen by the crew, was officially retired by NASA in commemoration of them on April 24, 1967.

### **January 28, 1986: Space Shuttle Challenger explodes while taking off with the Teacher Astronaut, Christa McAuliffe aboard.**

The explosion was due to the failure of an o ring under the extremely cold temperatures of the flight.

The crew compartment and many other vehicle fragments were eventually recovered from the ocean floor after a lengthy search and recovery operation. The exact timing of the death of the crew is unknown; several crew members are known to have survived the initial breakup of the spacecraft. The shuttle had no escape system, and the impact of the crew compartment with the ocean surface was too violent to be survivable.

## **QUESTION OF THE WEEK:**

**I heard that the Moon was at perigee last week. With the moon so close, is it possible to see the flag on the moon that the astronauts left? Wess M.**

Wess, this is a common question and a good one. The answer is not very glamorous, I am afraid. To put it succinctly, there isn't a telescope on Earth that can resolve something the size of a flag on the moon from Earth no matter how close the moon is. The bottom line is... something the size of a flag on the moon is simply too small to be seen by any earth-based telescope.