# WEEKLY STARGAZERS' NEWSLETTER

by Dr. Bob

**Volume 8, Issue 29**

**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:**
**08/06/24 – 08/12/24**

**FUN FACT OF THE WEEK**

**MOON FOR THE WEEK:**


The Moon will be First Quarter on Monday, 08/12/24. The Moon will waxing during the week as it goes from New toward First Quarter on Monday, August 12th.

The Moon is at Apogee on Thursday, August 8th. This is when the Moon is at its greatest distance from the Earth as it orbits monthly, the distance is 405,297 miles form the Earth.

The Sun rises at 06:55 (6:55 a.m.) this week and sets at 20:38 (8:38 p.m.)

This means that the Sun is above the horizon for Sun is "up" for 13 hrs. and 40 minutes. This is less than last week by less than last week.

The Sun climbs to an altitude of 74.2 degrees which is lower than last week when it was 75.8 degrees above the horizon. The Sun is still in the constellation Cancer, the Crab, this week as it seems to move due to the Earth orbiting the Sun.

The Earth is currently 1.015 AUs from the Sun and getting closer as the Earth heads toward Perigee on January 4th, 2025.

**PLANETS**

**Mercury:** This week Mercury rises in the East after the Sun but sets after the Sun at 9:44, so it will be pretty easy to spot low on the western horizon in the early evening sky.

**Venus** also rises in the East. Venus sets at 9:32 p.m. which is about an hour after the Sun. When Venus is seen in the early evening sky, it is called the Evening Star.

**Mars** rises in the East at 2:26 a.m. which is more than 3.0 hours before the Sun so Mars is a wonderful object in the predawn sky. Look for its amber hue in the early predawn sky.

**Jupiter** rises in the East at 2:57 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.

**Saturn** rises in the East around 10:46 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.

**MARS ROVER PERSEVERANCE**

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

**SATELLITES FOR THE WEEK (ISS PASSES)**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 Jul | -3.5 | 21:36:45 | 10° | NW | 21:40:00 | 60° | SW | 21:42:23 | 17° | SSE | visible |
| 01 Aug | -1.4 | 21:36:22 | 10° | W | 21:38:38 | 17° | SW | 21:40:55 | 10° | S | visible |

**STAR PATTERNS IN THE SKY**

**Sagattarius the archer**

As seen from the northern hemisphere, the constellation's brighter stars form an easily recognizable asterism known as 'the Teapot'.
These same stars originally formed the bow and arrow of Sagittarius. Marking the bottom of the teapot's "handle".

To complete the teapot metaphor, under good conditions, a particularly dense area of the Milky Way can be seen rising in a north-westerly arc above the spout, like a puff of steam rising from a boiling kettle.

The constellation is often depicted as having the rough appearance of a stick-figure archer drawing its bow, with the fainter stars providing the outline of the horse's body.

Sagittarius famously points its arrow at the heart of Scorpius, represented by the reddish star Antares, as the two constellations race around the sky.

Sagittarius is in a star rich region of the sky in that it is toward the center of our galaxy, the Milky Way Galaxy.

**SPACE HISTORY OF THE WEEK**

**July 31, 1999,** the ashes of astrogeologist Eugene Shoemaker were deposited on the Moon. Very fitting because, as you might remember from our discussion last week, In 1994, fragments of Comet SL-9 impacted with Jupiter (Shoemaker-Levy). Shoemaker was co-discoverer of Comet SL 9.

**FYI:**

Gene Roddenberry (August 19, 1921 – October 24, 1991), creator of Star Trek. Ashes were launched into orbit.

Clyde Tombaugh (February 4, 1906 – January 17, 1997), American astronomer and discoverer of Pluto in 1930. A small sample of Tombaugh's

ashes are aboard New Horizons, the first spacecraft to attempt to pass by and photograph Pluto. This is the first sample of human cremated remains which will escape the solar system to travel among the stars.

**August 5th, 1930:**
Neil Armstrong was born Neil Alden Armstrong (August 5, 1930 – August 25, 2012) was an American astronaut and the first person to walk on the Moon. He was also an aerospace engineer, naval aviator, test pilot, and university professor. Before becoming an astronaut, Armstrong was an officer in the U.S. Navy and served in the Korean War. After the war, he earned his bachelor's degree at Purdue University and served as a test pilot at the National Advisory Committee for Aeronautics High-Speed Flight Station, now known as the Dryden Flight Research Center, where he logged over 900 flights. He later completed graduate studies at the University of Southern California.

**QUESTION OF THE WEEK**
**I have heard about measuring star distances using light-years, but what is a "parcec"? Mark L.**

A parsec (symbol: pc) is a unit of length used to measure large distances to objects outside our Solar System.

One parsec is the distance at which one astronomical unit subtends an angle of one arcsecond.

A parsec is equal to about 3.26 light-years (31 trillion kilometres or 19 trillion miles) in length. The nearest star, Proxima Centauri, is about 1.3 parsecs or 4.2 light-years from the Sun.

Most of the stars visible to the unaided eye in the nighttime sky are within 500 parsecs or 1,600 ligh-years from the Sun and within the Milky Way Galaxy. One estimate of the size of the Milky Way is 100,000 light-years

from edge to edge.  This means it takes 100,000 years or 30 kiloparsecs, for light to travel from one edge of the galaxy to the other edge.