

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:

11/22/22 – 11/28/22

FUN FACT OF THE WEEK:

The side of the Moon facing the Earth has younger rock than the far side of the Moon.

MOON FOR THE WEEK:

The Moon is New on Thanksgiving, (11/23). This is when the Moon is between the Sun and Earth. The Moon is getting closer to the Earth and will be at perigee on Friday, November 25th. It will be 362,826 kms from Earth.



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

HORIZON TO HORIZON PLANET VIEW

The sun rises at 7:19 a.m. (EDT) and sets at 5:33 p.m. (EDT). This means that there is 10 hrs. 14 min of daylight hours compared to 10 hrs. 24 mins of daylight hours last week. The Sun is still in the **constellation Libra**.

Libra is the seventh astrological sign in the zodiac. It spans 180°–210° celestial longitude. The Sun transits this sign on average between September 22 and October 23. The symbol of the scales is based on the Scales of Justice held by Themis, the Greek personification of divine law and custom. She became the inspiration for modern depictions of Lady Justice. The ruling planet of Libra is

Venus. Libra is the only zodiac sign that is represented by an object; with the other eleven signs represented by either an animal or mythological character.

The Earth is now 0.989 AUs from the Sun compared to 0.980 AUs from the Sun compared to 0.9909 AUs from the Sun last week. . The Earth reaches perihelion on January 4th.

As a review, one Astronomical Unit is about 93 million miles. Thus, the current distance to the Sun is 1.49×10^8 kms or 0.92×10^8 miles.

The Sun will reach an altitude of 35.7 degrees altitude this week compared to 37.4 degrees altitude last week. This altitude is measured when the Sun crosses the meridian, the line that runs due South from Zenith and Nadir.

The Planets:

Mercury rises at 8:01 a.m. This is 40 minutes after the Sun. This means it is still too close to the Sun to be seen.

Venus rises at 7:58 a.m. which is 3 minutes before Mercury. Mercury and Venus are in conjunction on Monday, 11/21. This means that they are very close to each by line of sight.

Mars rises in the East at 6:47 p.m. The Red Planet with its two moons (Phobos and Demos) will be up all night long, setting in the East at 9:15 a.m. By 2:04 a.m. it crosses the meridian, so it is high in the South before sunrise.

Jupiter rises in the East at 12:40 p.m. Jupiter crosses the **meridian at 8:33 p.m.** Jupiter is a very bright planet and easy to view with the naked eye. If you have a pair of binoculars, you can see the cloud belts in its atmosphere. You can also see the four Galilean moons, Io, Callisto, Ganymede, and Europa whirling about the huge planet. Jupiter is more than 1,000 times larger than the Earth. This huge planet has 79 moons orbiting it in a regular pattern.

Saturn rises at 12:51 p.m. and can be seen dimly at sunset close to the meridian. At 6:04 p.m. Saturn crosses the Meridian and as the skies darken, it

will become much easier to spot. This **Ringed Planet** has the most moons of any planet in the solar system, 82 moons.

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)

The International Space Station has no visible passes this week.

CELESTIAL FEATURE OF THE WEEK:

Triangulum

This is a small constellation in the northern sky. Its name is Latin for "triangle", derived from its three brightest stars, which form a long and narrow triangle. Known to the ancient Babylonians and Greeks, Triangulum was one of the 48 constellations listed by the 2nd century astronomer Ptolemy.

Three star systems in Triangulum appear to have planets.

HD 9446 is a sun-like star around 171 light-years distant that has two planets of masses 0.7 and 1.8 times that of Jupiter, with orbital periods of 30 and 193 days respectively.

WASP-56 is a sun-like star of spectral type G6 and apparent magnitude 11.48 with a planet 0.6 the mass of Jupiter that has a period of 4.6 days.

HD 13189 is an orange giant of spectral type K2II about 2–7 times as massive as the sun with a planetary or brown dwarf companion between 8 and 20 times as massive as Jupiter, which takes 472 days to complete an orbit. It is one of the largest stars discovered to have a planetary companion.

SPACE HISTORY OF THE WEEK

1965, November 26:

France is the third nation to launch a satellite into an orbit about the Earth.

The first six countries to lift a satellite into space:

Soviet Union (4 Oct 1957)

USA (1 Feb 1958)

France (26 Nov 65)

Japan (11 Feb 70)

China (24 April 70)

United Kingdom (28 Oct 71)

QUESTION OF THE WEEK

Compare the moons of Mars and Earth. Kevin T.

Mars has two moon (Phobos and Demos) while Earth has one moon, Luna.

Earth's moon is a large moon compared to other moons in the Solar System with respect to their planet. Mars' moons are among the smallest moons in the Solar System.

Earth's moon is not only large but it is spherical compared to the irregularly shaped moons of Mars.

The Moon is moving away from Earth at about 1.49 inches (3.78 centimeters) per year. And as it moves away, its orbital period increases and Earth's rotation slows down. Astronomers state that the moons of Mars are changing their distances over time. Deimos is very slowly receding from Mars, while Phobos is continuing to spiral towards the Red Planet.