WEEKLY STARGAZERS' JOURNAL

by Dr. Bob

Volume 6, Issue 14

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:
04/05/22 – 04/11/22

MOON FOR THE WEEK:
The Moon is First Quarter on Saturday (4/9). The Moon will be at **apogee**, its furthest distance from Earth, on April 7th. It will be 404,438 kms (251,306 miles) from Earth.

To see the Moon this week, look for it after sunset low on the Western horizon. By Saturday, look for it high in the due South at sunset, along the **meridian.**

HORIZON TO HORIZON PLANET VIEW

Sun:
The sun rises at 7:24 a.m. (EDT) and sets at 8:44 p.m. (EDT). The Sun is still in the constellation **Pisces,** the Fishes. As we have been discussing for the past several weeks, the Earth is still increasing its distance from the Sun in its orbit.

The Planets:
Before sunrise, you can see **Venus**, **Mars**, **Saturn, and Jupiter.** The fifth naked-eye planet, Mercury, is too close to the Sun and is lost in its bright glare.

The easiest planet is still **Venus**. It is high and very bright in the Eastern predawn sky. **Mars** and **Saturn** are very close together in the morning sky, on April 4/5th there were in conjunction. They are higher in the sky than Saturn and are easy to see, if the skies are clear and dark.

Jupiter trails Venus by a few degrees to the East. It will be fairly bright but not as bright as Venus. As the weeks progress Jupiter, Mars, and Saturn will be higher in the early morning skies and easier to spot. More about that in later issues.

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):

01 Apr	-2.1	21:17:55	10°	NNW	21:20:34	21°	NNE	21:20:57	21°	NE	visible
02 Apr	-1.5	20:30:24	10°	N	20:32:18	14°	NNE	20:34:13	10°	ENE	visible
02 Apr	-1.9	22:06:02	10°	NW	22:07:56	31°	WNW	22:07:56	31°	WNW	visible
03 Apr	-3.6	21:17:57	10°	NW	21:21:17	60°	NE	21:22:03	45°	E	visible
04 Apr	-2.7	20:30:02	10°	NNW	20:33:07	33°	NE	20:36:11	10°	ESE	visible

STAR PATTERNS IN THE SKY

Corvus is a small constellation in the Southern Celestial Hemisphere. Its name means "raven" in Latin. One of the 48 constellations listed by the 2nd-century astronomer Ptolemy, it depicts a raven, a bird associated with stories about the god Apollo, perched on the back of Hydra the water snake.

Corvus and Crater (along with Hydra) were death symbols and marked the gate to the underworld. These two constellations, along with the eagle Aquila and the fish Piscis Austrinus, were introduced to the Greeks around 500 BCE; they marked the winter and summer solstices respectively.

SPACE HISTORY OF THE WEEK

April 8, 1964: Gemini 1 was launched.

Gemini 1 was the first unmanned test flight of the Gemini spacecraft in NASA's Gemini program. Its main objectives were to test the structural integrity of the new spacecraft and modified Titan II launch vehicle. It was also the first test of the new tracking and communication systems for the Gemini program and provided training for the ground support crews for the first manned missions.

The spacecraft stayed attached to the second stage of the rocket. The mission lasted for three orbits while test data were taken, but the spacecraft stayed in orbit for almost 64 orbits until the orbit decayed due to atmospheric drag. The spacecraft was not intended to be recovered; in fact, holes were drilled through its heat shield to ensure it would not survive re-entry.

April 9, 1959: NASA selects original 7 Mercury astronauts
The Mercury Seven were the group of seven Mercury astronauts announced by NASA on April 9, 1959.

They are also referred to as the Original Seven or Astronaut Group 1.

They piloted the manned spaceflights of the Mercury program from May 1961 to May 1963. These seven original American astronauts were Scott Carpenter, Gordon Cooper, John Glenn, Gus Grissom, Wally Schirra, Alan Shepard, and Deke Slayton.

Members of the group flew on all classes of NASA manned orbital spacecraft of the 20th century — Mercury, Gemini, Apollo, and the Space Shuttle.

Gus Grissom died in 1967, in the Apollo 1 fire. The others all survived past retirement from service. John Glenn went on to become a U.S. senator, and flew on the Shuttle 36 years later to become the oldest

person to fly in space. He was the last living member of the class when he died in 2016.

Malcolm Scott Carpenter (1925–2013), U.S. Navy (1 flight)
MA-7 (Aurora 7) – May 1962 – Second orbital Mercury mission
Leroy Gordon (Gordo) Cooper Jr. (1927–2004), U.S. Air Force (2 flights)
MA-9 (Faith 7) – May 1963 – Final Mercury mission, first American mission to last more than a day; Cooper became the last American who flew in space alone
Gemini 5 – August 1965 – Command Pilot – First eight-day space mission, first use of fuel cells

John Herschel Glenn Jr. (1921–2016), U.S. Marine Corps (2 flights)
MA-6 (Friendship 7) – February 1962 – First orbital Mercury flight; Glenn became the first American to orbit the Earth
STS-95 Discovery – October 1998 – Payload Specialist – Spacelab mission, Spartan 201 release; Glenn became the oldest person in space

Virgil Ivan (Gus) Grissom (1926–1967), U.S. Air Force (2 flights)
MR-4 (Liberty Bell 7) – July 1961 – Final suborbital Mercury flight; Liberty Bell 7 sank after splashdown and was not retrieved until 1999
Gemini 3 – March 1965 – Command Pilot – First manned Gemini mission, first manned mission to change orbital plane; Grissom became the first person to be launched into space twice
Apollo 1 – January 1967 – Commander – Killed in a fire during a launch pad test one month before the launch

Walter Marty (Wally) Schirra Jr. (1923–2007), U.S. Navy (3 flights)
MA-8 (Sigma 7) – October 1962 – Third orbital Mercury flight

Gemini 6A – December 1965 – Command Pilot – First rendezvous in space, with Gemini 7
Apollo 7 – October 1968 – Commander – First manned Apollo mission; Schirra became the first person to be launched into space three times and the only person to fly Mercury, Gemini, and Apollo missions

Alan Bartlett Shepard Jr. (1923–1998), U.S. Navy (2 flights)
MR-3 (Freedom 7) – May 1961 – First manned Mercury flight; Shepard became the first American in space
Apollo 14 – January 1971 – Commander – Third manned lunar landing; fifth man to walk on the Moon

Donald Kent (Deke) Slayton (1924–1993), U.S. Air Force (1 flight)
Apollo-Soyuz Test Project – July 1975 – Docking Module Pilot – First joint American–Soviet space mission, first docking of an American and Russian spacecraft

QUESTION OF THE WEEK:
Why do they build telescope observatories on the top of mountains since it is so hard to get there? Tracy M.

There are at least 3 reasons to build observatories on the top of mountains:

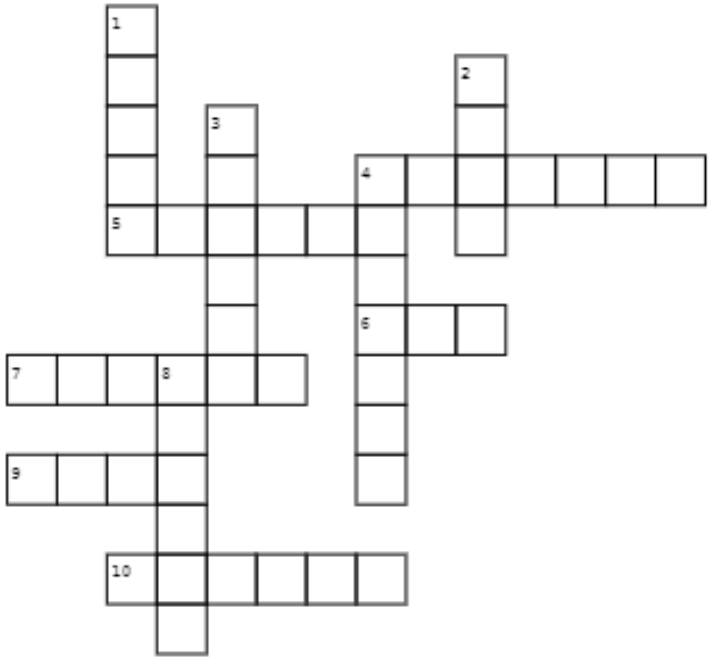
1) The location is away from light pollution,
2) air is colder so therefore less humid, and
3) at higher altitudes, there is less air to have to look through to see the stars. The ultimate observatory is IN space but one must use it from a remote location on the ground via radio signals.

Top 10 Biggest Telescopes in the World

Name of Telescope	Description
1. Gran Telescopio Canarias	**Location:** Canary Islands, Spain **Built in (Date or Year):** 2009 **Aperture Size:** 409 inches
2. Keck 1 and Keck 2, Mauna Kea Observatory	**Location:** Hawaii, U.S.A **Built in (Date or Year):** 1993 and 1996 (respectively) **Aperture Size:** 394 inches each
3. SALT, South African Astronomical Observatory	**Location:** Northern Cape, South Africa **Built in (Date or Year):** 2005 **Aperture Size:** 362 inches
4. LBT, Mount Graham Observatory	**Location:** Arizona, U.S.A **Built in (Date or Year):** 2004 **Aperture Size:** 330 inches
5. Subaru, Mauna Kea Observatory	**Location:** Hawaii, U.S.A **Built in (Date or Year):** 1999 **Aperture Size:** 323 inches
6. Antu, Paranal Observatory	**Location:** Chile **Built in (Date or Year) :** 1998 **Aperture Size:** 323 inches
7. Kueyen, Paranal Observatory	**Location:** Chile **Built in (Date or Year) :** 1999 **Aperture Size:** 323 inches
8. Melipal, Paranal Observatory	**Location:** Chile **Built in (Date or Year) :** 2000 **Aperture Size:** 323 inches
9. Yepun, Paranal Observatory	**Location:** Chile

	Built in (Date or Year) : 2001 **Aperture Size:** 323 inches
10. Gemini South, Cerro Tololo Inter-American Observatory	**Location:** Chile **Built in (Date or Year):** 2001 **Aperture Size:** 318 inches

The Stargazers' Journal (3-29-22)



Down:

1. NASA approves the name of the second
2. NASA approves the name of the second
3. The orbital position where the satellite is furthest from the Earth.
4. The name of Venus when seen in the pre-dawn sky. " _____ Star"
8. NASA approves the name of the second

Across:

4. NASA approves the name of the second
5. The name of the god who put Crater and Hydra into the sky as constellations.
6. NASA approves the name of the second
7. The constellation that the Sun is in during this time of the year.
9. First artificial space craft to orbit the Moon.
10. NASA approves the name of the second human space flight mission.