# The Observer

September 2018 (#44)

***Schedule of public programs on last page!***

## SUMMER PLANET SHOW DRAWS TO AN END

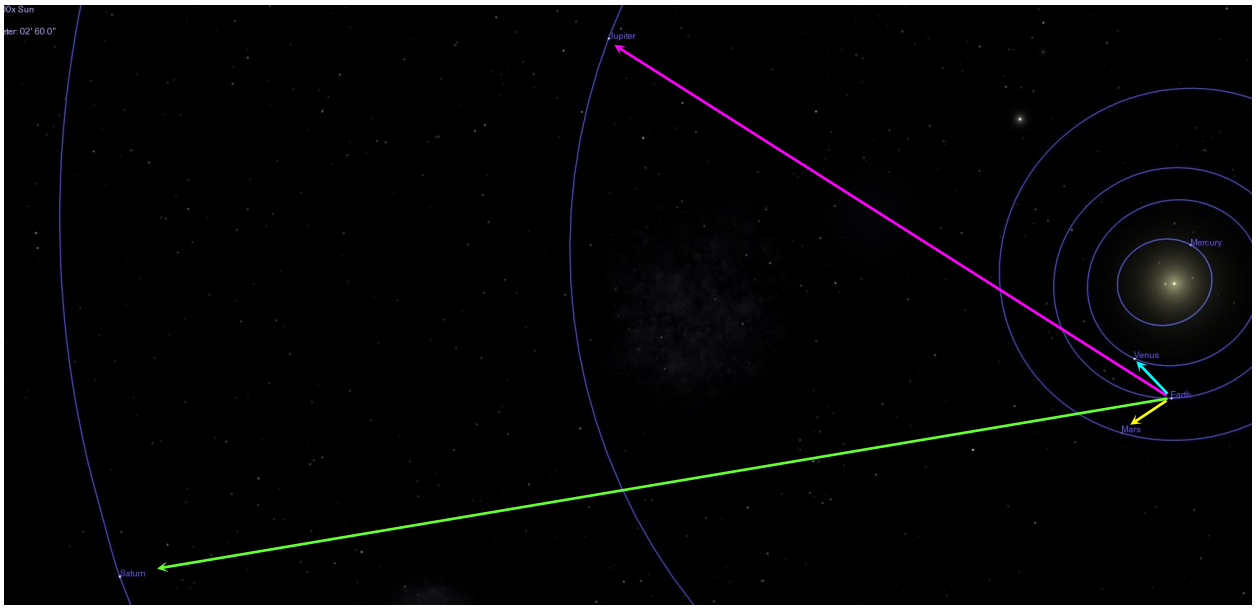
If you are reading this observatory's newsletter, you probably have been watching the evening display of planets that has been visible all summer long. However, that is drawing to an end. Night by night the planet Venus is dropping toward the horizon and toward the sun, and soon it will no longer be visible in the evening sky (but it will then be visible in the morning sky). This is occurring because Venus is catching up with Earth and passing between Earth and the sun. Watch Venus disappear as the days go by. In time the other planets that have been visible—Jupiter, Saturn, and Mars—will one by one pass into the setting sun, only to emerge in the morning sky as the Earth circles its way around the sun.


**The sky after sunset, September 15. The moon here is enlarged for clarity.**

Jefferson Community & Technical College
HIGHER EDUCATION BEGINS HERE

Harrison County Parks and Recreation Department

www.jefferson.kctcs.edu/observatory




**The positions of the planets in the Solar System on September 15. All are moving counter-clockwise around the sun, with the planets closer to the sun moving faster than the planets further from the sun. The arrows from Earth to the other planets show why the planets are arranged in the sky (from East to West) in the order of Mars (yellow arrow), Saturn (green), Jupiter (violet), and Venus (blue). As Venus speeds by Earth, it will pass between Earth and the sun, thus disappearing into the sunset. As Earth speeds ahead of Mars, Jupiter, and Saturn, it will swing around the sun, so that one by one each of those planets will disappear behind the sun as seen from Earth.**

# SUPER SPACE STATION PROGRAM IN OCTOBER

All programs at the observatory are cool, but the program that will occur on October 13 will be *Super*. Why? For one reason, it will feature the moon, Saturn, Mars, and Jupiter, plus a nice selection of stars, constellations, and other heavenly objects. But what is particularly special about this program is that the International Space Station will pass overhead, starting around 8:05 PM. The ISS will pass close to the bright star Arcturus, right by the star Cor Serpentis, past Saturn, and across the “handle of the teapot”.

It should be fun to watch (if, of course, the weather cooperates—the weather has been very uncooperative this year). The image below shows the sky at exactly 8:09 PM on October 13, with the ISS in the constellation Ophiuchus.

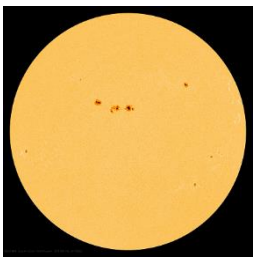

## BAD WEATHER? NO PROGRAM!

In the past, our schedules have said that the programs will be held "*rain or shine*" and that "*programs will be cancelled in the case of hazardous conditions such as severe weather or snowy or icy roads.*" However, at a recent program the weather was not forecast to be severe—just a lot of rain, and at the time of the program the rain had not occurred as forecast during the course of the day, and the radar seemed to be indicating nothing significant. Our staff does not want people to make the drive to the observatory, only to find no one there (and in the past we have indeed had visitors to the observatory in poor weather), so a staffer headed out to the observatory. Unfortunately, the rain then built up, and in a short time made up for what it had not done earlier in the day—with the result being that our staffer had quite the unpleasant journey home, through flooding roads in the dark. Anyone who might have tried to go to visit observatory would have likewise had a bad journey. Therefore we are changing our schedules to read *"Programs will be held even in the event of clouds or light rain. However, programs will be cancelled when*

*conditions may produce hazardous driving on the two-lane roads that lead to the observatory (conditions such as heavy rain, thunderstorms, fog, severe weather or flash flood warnings, snow or ice, high wind, etc.). In short, please do not make the trip to the observatory in bad weather."* We are going to be more conservative about holding programs in less-than-ideal weather.

# Upcoming programs at the Observatory

**All times are Eastern Time. All programs are held at the South Harrison Park location. Programs will be held even in the event of clouds or light rain. However, programs will be cancelled when conditions may produce *hazardous driving* on the two-lane roads that lead to the observatory (conditions such as heavy rain, thunderstorms, fog, severe weather or flash flood warnings, snow or ice, high wind, etc.). In short, please do not make the trip to the observatory in bad weather.**



- **September 22, 2018 (equinox daytime program)**. *Program begins at 10:00 am.* Come observe the sun through a safe solar filter, and learn about the sun, the seasons, and time—and what is so special about the equinox—weather permitting (what we will be able to see depends on the weather).

- **October 13, 2018 (evening program)**. *Program begins at dark (at approximately 7:30 pm).* A **SUPER PROGRAM** featuring the waxing crescent moon, Jupiter, Saturn, Mars, and an overflight of the International Space Station (at 8:00) in which the Space Station passes right by the star Arcturus—all weather permitting (what we will be able to see depends on the weather).


- **November 3, 2018 (evening program)**. *Program begins at dark (at approximately 7:00 pm).* Come observe the stars and planets of the night sky—weather permitting (what we will be able to see depends on the weather).