

# Talks & topics:

All programs are appropriate for adults. If children wish to attend, it is at the discretion of their parents or guardians, though a general recommendation is that programs would be appropriate for children ages 10 and up. If you aren't sure about the age recommendation for a program, please ask.

Need some presentation ideas if it's the first time I will be visiting your location? Look for presentations marked by \*\* for my recommendations. These are programs that traditionally and consistently have brought in the largest audiences over the past 20 years.

Don't see something you like? Let me know if you have a topic idea to help connect to other programs you are offering. I may be able to create a program for you!

### **Topics about our Solar System:**

### **Investigating Our Sun**

Our Sun: It's the closest star to us and without it, we wouldn't be here. We have learned a lot about our star over the centuries, but there is still so much we haven't figured out. In this presentation, we will investigate what we know about our Sun, including how it affects us both positively and negatively.

## \*\*Roving the Red Planet

There are currently 6 U.S. spacecraft either on or orbiting Mars right now and, if all goes well, a new rover will be headed to Mars in July 2020. What have we learned about the Red Planet with this robotic fleet? Plenty! This presentation will cover the past, present, and future of Martian exploration.

### **Jupiter: King of the Planets**

Jupiter has been known on Earth since before the dawn of recorded history, but only since the invention of the telescope have we learned much more about this massive planet and its family of moons. Michelle presents a look back at the milestones of exploration of Jupiter, what we have learned so far, and the accomplishments of Juno, the most recent robotic explorer to grace Jupiter's skies.

#### **Saturn: Ringed World**

Saturn is often the first object that people see through a telescope, and sighting it through a telescope is often the event that hooks people on astronomy forever. The Saturnian system is, indeed, astonishing! This presentation will highlight the astounding discoveries at Saturn by the Voyagers and Cassini spacecraft, and showcase the stunning imagery of Saturn, its rings, and varied moons.

#### **Pluto Revealed**

Before 2015, Pluto was mostly unknown to us. Now, thanks to a flyby from NASA's New Horizons spacecraft, we now know Pluto as one of the most dynamic - and strange! - places in the entire Solar

System. This presentation will highlight the latest images and results from NASA's exploration of this amazing world.

## The Voyagers: Venerable Space Travelers

In 1977, two spacecraft, Voyager 1 and Voyager 2, each launched with the goal of visiting outer planets in our Solar System. We'll discuss the history, scientific advancements, and legacy of the Voyagers, and look ahead to the upcoming end of the mission of these venerable travelers.

## \*\*Armchair Tour of the Solar System

Explore our Solar System without stepping foot outside the library! We will showcase some of the latest NASA spacecraft images of our Solar System, touching on our stunning Sun, giant planet Jupiter, dwarf planet Pluto, and everything in between. *Note: This program can be presented as a stand-alone program or as Part 1 of a two-part series with Armchair Tour of the Universe (see below)*.

## The Great North American Eclipse

Did you see the solar eclipse in 2017? We have two more coming up in October 2023 and April 2024! Learn what eclipses are, where to see them, when to look, and how to view solar eclipses safely.

### **History-themed presentations:**

#### The Space Race

In the 1960s, the U.S. and the Soviet Union were locked in a race to send men to the Moon. How did it all begin? How did the Soviets try to beat the Americans? And, what happened to the Soviet effort after Neil Armstrong and Buzz Aldrin walked on the Moon in July 1969? Let's relive the Space Race!

## The Apollo Program to the Moon: History and Legacy

In July 1969, Apollo 11 successfully met JFK's challenge to land a man on the Moon and return him safely to Earth within the decade. What did we learn from our explorations of the Moon? Why did we not return after 1972? And what did we get out of the billions spent? We will discuss the history of the development of Apollo, the science learned from the Moon landings, and the Apollo technology that has benefitted us since that time.

## Space Food: Past, Present, and Future

This presentation will highlight the development of space eats from the earliest days of space travel, show how food is eaten on the International Space Station today, and what food might look like for future long-term missions to asteroids and Mars.

## Women in Astronomy

Women have played a part in astronomical discoveries for centuries. We will explore advancements made by the ladies of science, from comets, to pulsars, dark matter, and more. *Connections: March is Women's History Month.* 

## **Popular topics:**

### A Lab Aloft: The International Space Station

The ISS is a cutting-edge Earth-orbiting laboratory where astronauts from all over the world live for six

months at a time and conduct amazing experiments. What is life like aboard this enormous spaceport? How does the science research benefit humanity on Earth? Take a behind-the-scenes tour of the ISS without having to leave your seat!

## **Space News Roundup**

What's the latest news in astronomy and space exploration? We will highlight the most recent space science discoveries that are making headlines.

## **Looking for Earth Elsewhere**

We have found thousands of planets around other stars. Are any like Earth? This presentation will highlight the search for extrasolar planets and present the most recent findings of planets which could be just like our own home.

## \*\*Through the Eyes of Hubble

The Hubble Space Telescope has had more impact on astronomy and the public's awareness of astronomy than any other telescope in history. This presentation will highlight some of the well-known, and not-so-well-known, images and science from the last 29 years of Hubble's mission - plus a sneak peek at what's next: the James Webb Space Telescope.

### The Science of Climate Change

The concept of climate change is a hot topic these days, and it often appears in political discourse. In this presentation, though, we will put the politics to the back burner and focus, instead, on the science evidence: What does science say is happening? Where does the data come from? What might be in our future according to past and present data?

#### **Armchair Tour of the Universe**

Go on a trip around the Universe without leaving your library seat! This presentation will take you on a whirlwind visit through our Universe's most amazing objects using images from the world's most advanced telescopes. Don't miss your chance to travel billions of light-years in an hour! *Note: This program can be presented as a stand-alone program or as Part 2 of a two-part series with Armchair Tour of the Solar System.* 

### **NEW PROGRAM!** Shining a Light on Black Holes

Black holes are mysterious and amazing. Where do they come from? What happens near one? What happens when something falls into one? We'll explore these cosmic oddballs in detail.

### **NEW PROGRAM!** The Future of Space Exploration

What's around the corner for space exploration? What might space tourism look like? And when might we finally land humans on Mars? We'll explore the answers to these questions and more as we look toward the future of robots and people in space.

## **General astronomy:**

### \*\*Astronomy Using Your Eyes

So much observation of our daytime and nighttime skies can be done without a telescope. This presentation will focus on an overview of celestial observations you can do with just your eyes, including Moon phases, eclipses, planets, stars, and much more in a session suited to an astronomy novice.

## **NEW PROGRAM!** Intro to Skywatching with a Telescope

Bring the Universe to your neighborhood! (Your library name here) (has/soon will have) (telescopes/a telescope) for you to check out and use at home. Learn how to operate the telescope and get tips for skywatching with your eyes and with mobile phones.

Note: This program is suited mainly for locations that have, or soon will have, a telescope or telescopes for checkout. It is difficult to do a very general program about telescopes because there is too much variation in types of telescopes, features, cost, etc. I will tailor my program to the model of telescope that you have.