Berkeley Public Library
Weekly Sky Report
September 9 – September 15, 2018

The Planets

This is a great time to check out one of the two **telescopes from Central Library**. However, even without a telescope, you can enjoy our lovely solar system. Three of our neighboring planets are about as close as they get to us. **Mars**, with its mysterious methane, intriguing organic material, underground lakes, and giant dust storms, is peaking over the south Berkeley Hills just after nightfall. With its planet-wide dust storms, Mars is now a gorgeous ruby red jewel in the sky and recently has made its closest approach to Earth since 2003. That was the year when Mars was the nearest to us it had been in almost 60,000 years! It still is just about as close, and even now the red planet is shining brighter than the gas giant Jupiter. **Jupiter** and **Saturn** have also recently passed opposition, so they are at their best for viewing. If you get a chance to see Saturn through a telescope, the rings are now tilted for a great sight of their topside. In relation to Earth, the rings seem to wobble over time and, when seen edge-on as Galileo was the first to do, can appear to disappear altogether. And don't forget to look in the western sky for the incandescent Evening Star, **Venus**.

NASA TV

There's a very early morning rocket launch from Japan this week; there's a better time a few days later to watch the cargo craft arrive at the International Space Station. The capture and installation will go on for a few hours. Watch live on nasa.gov.

Sept. 14, 5:40am Capture; 8am Installation of the JAXA Kounotori HTV-7 Cargo Craft

Tiangong-2

This is an exciting time when a number of countries are beginning to reach for the stars, whether it's for exploration or to create their own Space Force. China is right behind the U.S. and Russia with their efforts. Here's a chance to see one of their prototypes pass over us.

Sept. 13, 8:46pm, West North West; 8:49pm, North North East, Altitude 62°, 8:49pm North East, Altitude 57°; Magnitude 1.2

Sept. 15, 8:26pm, West North West; 8:30pm, South South West, Altitude 77°, 8:31pm, South East, Altitude 37°; Magnitude 1.1

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Comets

If you have a good pair of binoculars or a telescope (don't forget the **2 telescopes you can check out from the Central Library!**), you have a chance to see one of the brighter comets to pass our way in a while. It has the catchy name 21P Giacobini-Zinner, and hopefully it will get brighter over the next few weeks. This weekend it will be passing near the star Capella in the constellation Auriga. You will have to stay up late or get up early as this constellation rises in the north east and then is almost straight overhead right before dawn. The moon is waning this week, so the skies will be getting darker and make for better viewing all around. This comet is also the source of the Draconid meteor shower, which will be in early October. Usually this is not a very active shower, but it is fun to know that these shooting stars come from the remains of this comet's tail as it loops around the sun over and over again. Check heavens-above.com for more info.

Much of the information for this report comes from the wonderful web site, Heavens Above. You can enter your home city location and bookmark it for easy access: http://www.heavens-above.com. Other sources include: http://www.space.com and http://www.nasa.gov. And check spacex.com for launches.

Recommended Reading

Wonders of the night sky you must see before you die The subtitle of this book is "The guide to extraordinary curiosities of our universe." This is a bit of hyperbole: some of the curiosities include spotting the Ursa Major or the Big Bear, the constellation that includes the Big Dipper, as well as looking at stars in the reflection of a body of water. Not exactly extraordinary sights. However, the book does include information on how to see the Orion Nebula, the Great Globular Cluster in the constellation Hercules, the International Space Station, and other worthwhile sights. There are some interesting tidbits on each page. For example, there is an easy tip for using the stars of the constellation Cassiopeia to find the location of the Andromeda Galaxy, which is one of the true wonders of the night sky. There is also information on seeing a comet, which will hopefully be visible this fall, and a list of dates for upcoming events such as Venus in its crescent phase, and Mercury passing in front of the sun. These events are noteworthy, but mean that the book will be out of date before too long—so check it out now!

Wonders of the night sky you must see before you die. By Bob King.

520 King

This **Sky Report** is brought to you by Berkeley Public Library's Cornerstones of Science, which is funded in part by the Silberstein Foundation. Cornerstones of Science is part of a multi-library initiative to bring STEM (Science, Technology, Engineering and Math) programming to patrons.

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