



Newsletter of the Pomona Valley Amateur Astronomers

There is no better high than discovery.

E. O. Wilson



Volume 40 Number 5

nightwatch

May 2020

President's Message

Hi all. I don't have a lot to report this month. There is a decent chance that by next month, American astronauts will have flown into orbit on a US-built rocket for the first time since the shuttle program wound down in 2011. The SpaceX Crew Dragon Demo-2 mission is scheduled for May 27, and if all goes well (and on schedule—never a sure thing), NASA astronauts Douglas Hurley and Robert Behnken will launch on a Falcon 9 on a mission to the International Space Station. Fingers firmly crossed that all goes well.

If that mission lifts off on time, it will be the first of a one-two punch of cosmic proportions. The NASA/SpaceX mission is supposed to lift off on the afternoon of Wednesday, May 27. That night, some time after midnight, there will be double shadow transit on Jupiter. Ken Elchert will have more information on that elsewhere in this issue. Now all we need is clear weather—for both events.

I promised to write a substantial article for each newsletter during the quarantine, but alas, the job of converting the med school curriculum to virtual delivery has sucked up all my time and energy. Fortunately we've got a nice slate of articles by Gary Thompson, Ken Elchert, and Ludd Trozpek to round out this issue. I'll aim to get something done for next time.

I hope that you are all staying safe and sane. I look forward to the day that we can meet again in person, whether at a PVAA general meeting or star party or outreach. Clear skies!

Matt Wedel

PVAA Officers and Board

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Vice President ..	Joe Hillberg	909-949-3650
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PVAA General Meeting 03/06/20

During the announcements it was pointed out that the club owns a 17" blank and a 6" blank – ready to be ground into a parabolic mirror. We also have grinding compounds, along with books on refractors and stuff.

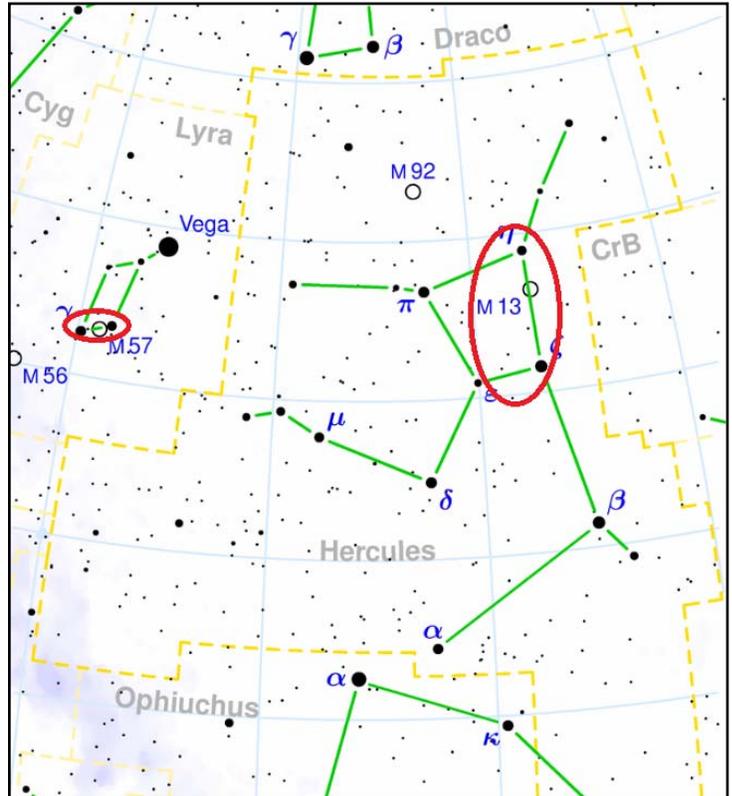
The main speaker for the night was David Nakamoto, and the title of his presentation was "Urban Observing". The problem with big cities is all the light pollution of civilization. Still, many things are visible from your backyard, or a small drive to the nearby park. For us, the mountains and desert make a good getaway from the blaring city lights. Obviously, the moon is a great target, every day of the month showing a different terminal line to explore. Mr. Nakamoto then talked about finding objects too dim for the eye to find in light polluted skies by "star hopping". You will need a star map, find the closest bright star to the object, and then "hop" to the object using a low power to find it, and then zooming into it after you have it centered. M57 – the Ring Nebula and M13 – the Great Globular Cluster in Hercules are good examples. M13 is about one third of the way from the bright stars Vega to Arcturus, while M57 is right between two very close stars – the Beta and Gamma stars in the Constellation Lyra, which are south of the very bright star Vega.

The planets are also great objects. Right now, Venus is the Evening Star, bright in the West. Later in the evening, both Jupiter and Saturn pop up over the horizon and are close together. Pluto is right next to them, but very hard to see. David has a planetary camera, and has taken great some shots.

He also talked about the Garvey Ranch Park Observatory in Monterey Park in LA County. The observatory has an 8" f/12 refractor that (during non-pandemic times) is open to the public on Wednesday nights, run by the Los Angeles Astronomical Society. The telescope is for visual observations only. The park's address is:

731 S. Orange Ave.
 Monterey Park, CA. 91755

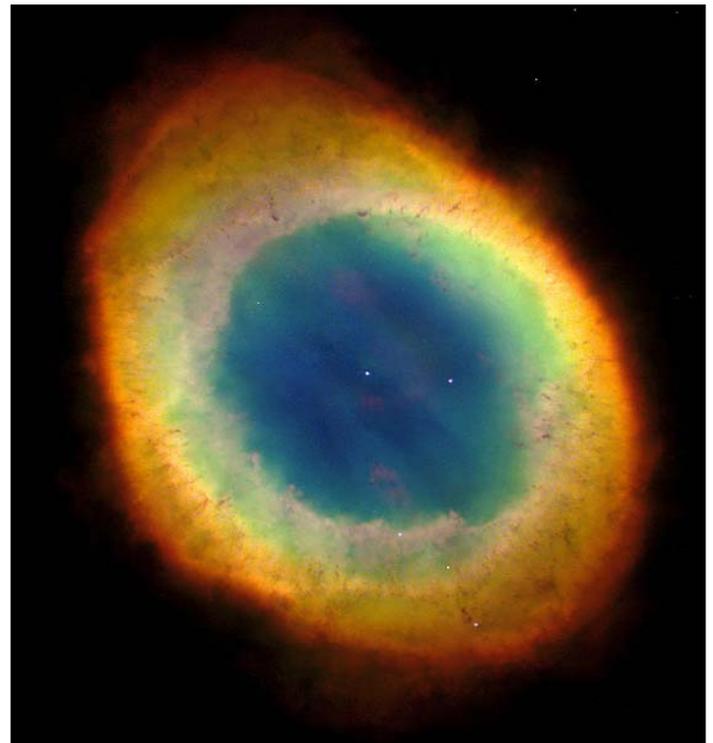
Gary Thompson



By Kvap - Own work, Public Domain,
<https://commons.wikimedia.org/w/index.php?curid=6341790>



By KuriousGeorge - Own work, CC BY-SA 4.0,
 M13 from an 8" SCT in San Diego, California
<https://commons.wikimedia.org/w/index.php?curid=53939873>



M57- the Ring Nebula – Hubble Space Telescope
 (OK, it doesn't even look this good at Mt Wilson.)

Garvey Nights

The Garvey Ranch Observatory

781 S. Orange Ave

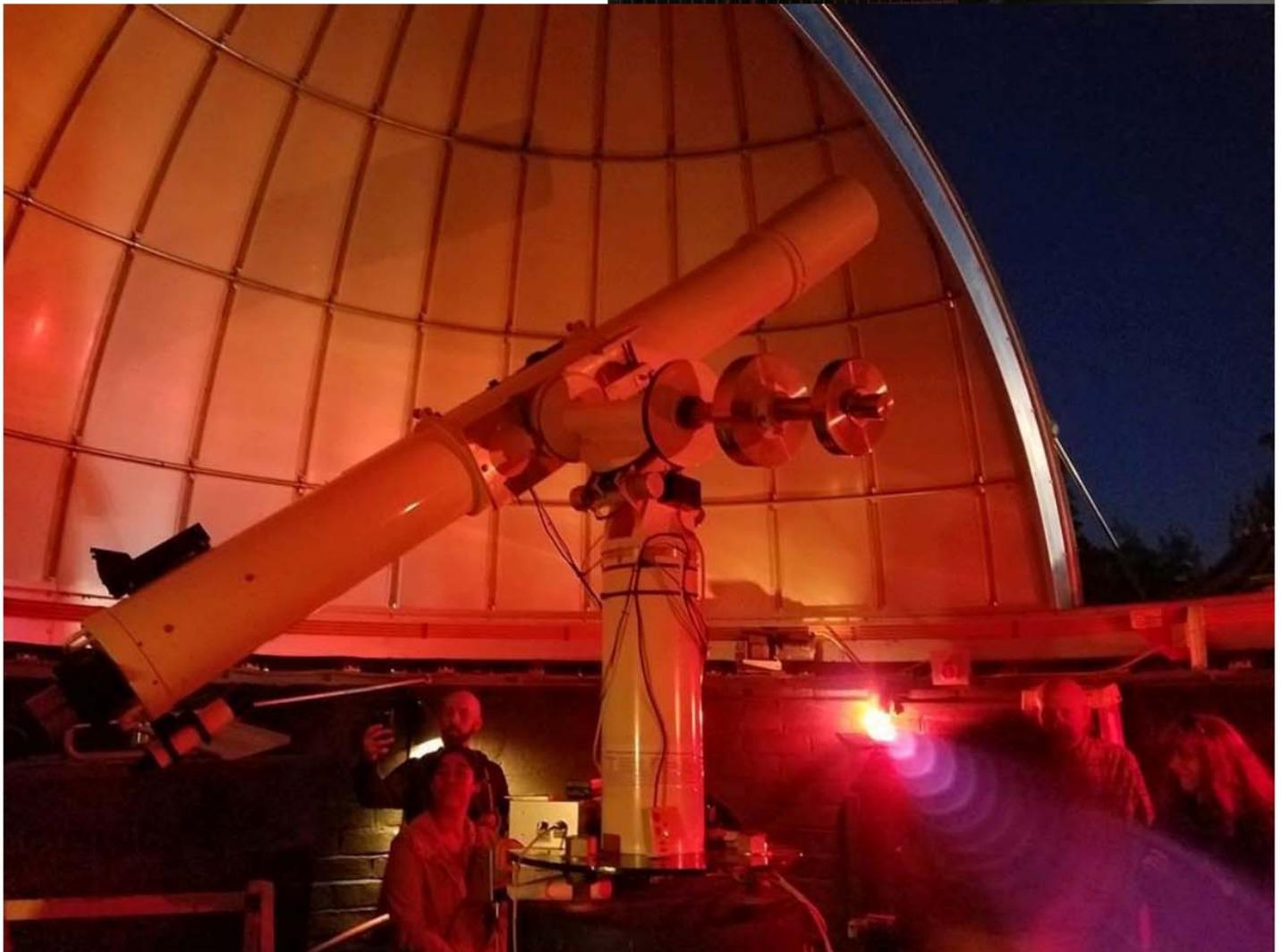
Monterey Park, CA 91755

Open every Wednesday night , rain or shine!

Time: 7 PM to 10 PM

Free for the public!

Telescope-Making workshop, telescope repair and education, mirror grinding, Star Parties, seasonal astronomy classes and social events for the community all hosted by the members of the Los Angeles Astronomical Society.



Significant Anniversaries

This year marks significant anniversaries of many astronomically-related events. Here are my top choices:

200th anniversary of the publication of the discovery of electromagnetism by Hans Christian Oersted on April 21, 1820

175th anniversary of first light of the 72-inch Leviathan of Parsonstown (largest telescope until the 100-inch Hooker Telescope on Mount Wilson saw first light on 1917) on February 15, 1845

125th anniversary of the discovery of X-rays by William Roentgen on November 8, 1895

100th anniversary of the Great Debate between Harlow Shapley (Mount Wilson Observatory) and Heber Curtis (Lick Observatory) on the size of the universe on April 26, 1920

95th anniversary of Edwin Hubble announcing his discovery of galaxies outside the Milky Way on January 1, 1925

90th anniversary of the discovery of Pluto by Clyde Tombaugh on February 18, 1930

50th anniversary of the launch of Apollo 13 to the Moon on April 11, 1970

30th anniversary of the launch of the Hubble Space Telescope on April 24, 1990

15th anniversary of the Huygens spacecraft landing on Saturn's largest moon, Titan, on January 14, 2005

I think that it would be very interesting to have a write-up on the founding and early days of the Pomona Valley Amateur Astronomers. Since I'm relatively new to the club I don't know much about it.

Anyway, I hope everyone is still doing well!

Ken Elchert
PVAA Secretary

Ludd's Links

Some good pictures, and plans for future missions. The text is not detailed but some of the captions are interesting.

<https://www.forbes.com/sites/startswithabang/2020/04/13/the-most-important-image-ever-taken-by-nasas-hubble-space-telescope/#64a014133077>

Ludd Trozpek

Two Astronomical Events Coming

There are two astronomical events coming up which are worth a mention. The first is a double shadow transit across Jupiter starting at 1:48 am PDT on May 28. The shadows will be from two of Jupiter's Galilean moons, Europa and Ganymede. Jupiter will be located in the southeast next to Saturn.

The second event is Comet C/2017 T2 (PanSTARRS) which will appear to travel directly through the bowl of the Big Dipper (Ursa Major) starting the night of June 3 when it will appear next to one of the pointer stars, Dubhe. Since everyone knows where the Big Dipper is, the region of the sky to search for the comet will be easy to find with either a telescope or 10 x 50 binoculars.

Ken Elchert

PVAA History

I hope you are enjoying what has ended up to be an anniversary themed issue of the Nightwatch. From Ken's summary of significant past astronomical events to Ludd's amazing tale of internet sleuthing, we explore the past.

January 2009

the Pomona Valley Amateur Astronomers

Volume 29 Number 1

nightwa

President's Address

The year 2009 promises to be a great one for Pomona Valley Amateur Astronomers. Over the next several months PVAA members will have the opportunity to participate in some really exciting and fun activities. Mark your calendars. You won't want to miss out.

Our February 13th general meeting will be one for the history books! PVAA is about to turn 40. Yes, February 2009 will be PVAA's 40th birthday. But, how did it all get started? How did this brainchild of a few Claremont High School students grow to be the club we know today? Our February speaker will be Tony Cook, a founding member of Pomona Valley Amateur Astronomers. Tony, who now works at Griffith Observatory, will speak to us on the birth and history of PVAA. Interestingly, several early PVAA members have gone on to careers in astronomy and science. This will have a rare opportunity to learn something about our club's early days.

The Nightwatch, March 21, 2009 PVAA 40th Anniversary

In keeping with this idea then, here is some information about our very own history. We discovered as the Board looked for content to include in this issue, that PVAA is 51 years old this year. While our own auspicious start was overshadowed last year by the 50th anniversary lectures about the Apollo missions it doesn't mean we should forget our own origins. What follows are reprints of articles from 2009 Nightwatch issues when we celebrated our 40th anniversary with a notable speaker from Griffith Observatory. Enjoy!

Claire Stover

February 2009

Volume 29 Number 2

nightwa

President's Address

On Friday, February 13th there will be a very special meeting of Pomona Valley Amateur Astronomers. PVAA is 40 years old! And we will have a very special speaker. Tony Cook, one of the founding members of our club will speak about the beginnings and early history of PVAA. Tony has worked at Griffith Observatory in Los Angeles for many years and now holds the job title Astronomical Observer. But when he helped start up the Pomona Valley Amateur Astronomers in 1969 he was a student at Claremont High School. It is great that now, 40 years later, he is back to visit and PVAA is still going strong.

Because this is an historic event in the life of Pomona Valley Amateur Astronomers, it will be video recorded and preserved for future members. To facilitate the recording, the meeting will be held in our old meeting room, McAllister Auditorium in Galileo Hall. To get there go down the steps to the patio, past the fountain, through the glass doors and straight ahead into the auditorium.

So come out on Friday evening, meet one of the first PVAA members and learn something new about our club. I look forward to seeing you there. Happy stargazing!

March 2009

Volume 29 Number 3

nightwa

President's Address

At the February meeting, Tony Cook told us about a group of teenagers with a common interest in astronomy. In 1969 their curiosity about the Universe led them to form the Pomona Valley Amateur Astronomers. Several of those original PVAA members now work in space, astronomy, and other scientific fields. What started as a hobby has led to a career.

At our PVAA meetings, when I look out at the faces in the audience, I can't help but notice something. There are few young people. Ironically, a group which was founded by high school students, now has very few members under the age of 35.

References:

<http://stellafane.org/>

<http://www.pvaa.us/nightwatch/>

We'd love to hear of more tales of past PVAA members, activities, and adventures. Please email whatever you'd like to share to nightwatch@pvaa.us and John and I will include it in an upcoming issue.

Claire Stover

March 2009

February Meeting

It seemed appropriate that we began our 40th Anniversary meeting with something brand new. After all, isn't science all about learning and new discoveries?

Laura Jaoui shared her plans to teach an Astronomical Observing for Beginners course through the City of Claremont Human Services Department (www.ci.claremont.ca.us). The classes are for ages 10 and up and will let participants know about local clubs, museums, and observatories. It will then teach them the basics of observing using amateur telescopes and binoculars. Laura could use Club member's help for the last hour of the class when she will take the students outdoors and look through a variety of scopes at night sky objects. The classes are being offered on Wednesday April 1st and Friday, May 1st from 5 – 8 PM. If you are available to assist, plan on arriving around 6:30 PM to set up. The classes will be held at Alexander Hughes Community Center, 1700 Danbury Ave. in Claremont, next Baseline and Towne Ave. Check with Laura prior to the class date to make sure there were enough signups for the class to be held.

Laura then introduced us to her former high school classmate, Tony Cook. Tony shared with us the history of astronomy clubs in general the United States and of our own club in particular 40 years ago. The first Club in the States was the Springfield Telescope Makers of Springfield, Vermont which was formed during 1920. It was encouraging to hear that this club is still going strong and runs a large convention once a year called Stellafane. The Pomona Valley Amateur Astronomers had its origins with their first meeting on February 7, 1969. Besides Tony, some of the original members were Ed Hartoney, Doug Northway, David Bowling, David Coleman, Brad Bassler, Mark Moran, Jeff Schroeder, and Peter Orland.

Most of the friends were students at El Roble Junior High School or from High Schools in Claremont so they ranged in age from about 13 to 16. These science buffs became interested in space at an exciting time – when they were young they heard of the Sputnik launch in 1957, Yuri Gagarin became the first man in space in 1961, and the Apollo program ran from 1961 to 1975, resulting in six manned moon landings between 1969 and 1972. The young men read up on astronomy and discussed the concepts, some made their own telescopes, and they observed notable events such as meteor showers; from Mt Baldy if they were able to get a ride from someone's parents.

I'd like to think the Club helped to encourage and further their interest in science as many of the founding members went on to careers in the field. Peter Orland is a Particle Physicist at the City University of New York while Tony is the Astronomical Observer at Griffith Observatory in Los Angeles. Jeff Schroeder worked at the San Antonio College Planetarium for 27 years and is now employed by JPL. Other noteworthy names from the Club's past include Webb School teacher, David Chandler, enthusiastic Club promoter and past Club President Harv Pennington, and Pomona College Astronomy Professor Bob Chambers who arranged for the Club to start meeting at Pomona College many years ago.

It was great to hear of the long and esteemed history of our Club and to hear Tony's challenge to us; to not only share our hobby with the general public but to use our public outreach to help inspire another generation of young people to continue their scientific inquiries and studies and so to make their own mark in the world of science.

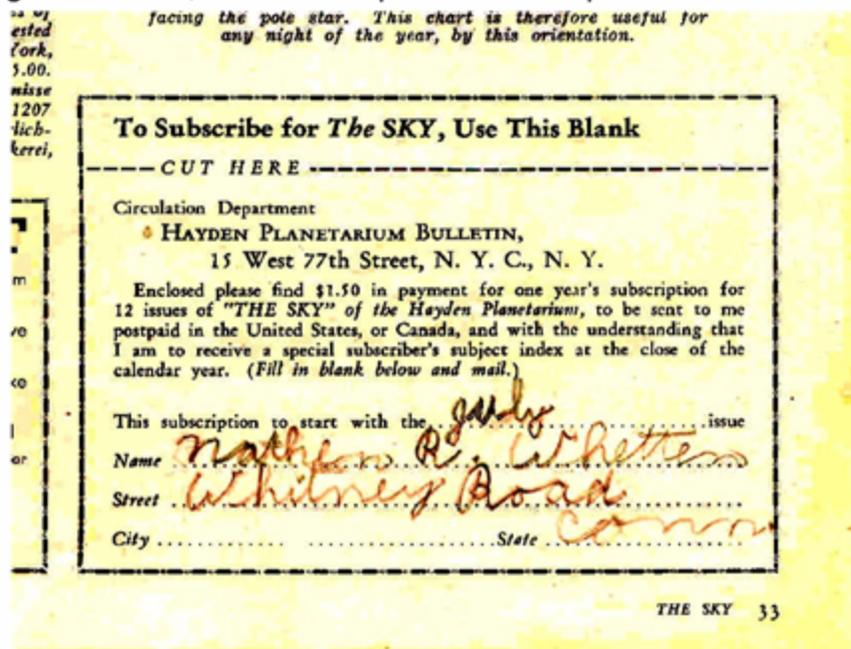
Claire Stover

References: <http://stellafane.org/>

An 80-year Reconnection

Sky and Telescope magazine began publication in November, 1941. It was formed by the merger of two astronomy magazines from the 1930s: *The Telescope*, published by the Perkins Observatory at Ohio Wesleyan University, which first appeared in March 1931, and *The Sky* magazine, a publication of the Hayden Planetarium in New York City, that first appeared under that name in October 1936.

Copies of these earlier magazines are not commonly seen today but I've been fortunate to run across a half-dozen copies of *The Sky* over the past few months. One in particular, the June 1937 issue, is shown below. Thumbing through that issue, I noticed on p. 33 a subscription blank that had



been filled in, in a juvenile hand. I'm always curious about such things and wondered what might have become of Nathan R. Whetten, the young man who had possessed the magazine in 1937. As it turned out, the Internet provided the answer. Nathan R. Whetten had gone on to earn a Ph.D. in physics from Yale and had a distinguished career in physics in industry on the east coast. It was a simple matter to identify him with near certainty. He is still living in eastern New York. I sent him a copy of the covers and several pages from the July 1937 issue including his subscription form, hoping it would give him warm memories from his youth. Last week I received his very pleasant reply; see nearby.

There is no hint how his childhood copy of the *The Sky* made it to southern Arizona (where I found the magazine) in nearly perfect shape. It obviously had been well cared for over eight decades.

—Ludd A. Trozpek

April 24, 2020

Dear Mr. Trozpek,

I was astounded and amazed to receive an issue of the SKY that I had possessed in 1937, when I was 8 years old. I was equally amazed that you had taken the time and effort to locate me. I really appreciate it and thank you very much.

I don't remember much about the SKY magazines. But they may have had quite an influence on me. I got my PhD in physics from Yale, and my thesis was on cosmic rays!

Many thanks!!! - N. Rey Whetten

Best wishes!
N. Rey Whetten

NASA Night Sky Notes

May 2020

**This article is distributed by NASA Night Sky Network**

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Become a Citizen Scientist with NASA!

David Prosper

Ever want to mix in some science with your stargazing, but not sure where to start? NASA hosts a galaxy of citizen science programs that you can join! You'll find programs perfect for dedicated astronomers and novices alike, from reporting aurora, creating amazing images from real NASA data, searching for asteroids, and scouring data from NASA missions from the comfort of your home. If you can't get to your favorite stargazing spot, then NASA's suite of citizen science programs may be just the thing for you.

Jupiter shines brightly in the morning sky this spring. If you'd rather catch up on sleep, or if your local weather isn't cooperating, all you need is a space telescope - preferably one in orbit around Jupiter! Download raw images straight from the Juno mission, and even process and submit your favorites, on the **JunoCam** website! You may have seen some incredible images from Juno in the news, but did you know that these images were created by enthusiasts like yourself? Go to their website and download some sample images to start your image processing journey. Who knows where it will take you? Get started at bit.ly/nasajunocam

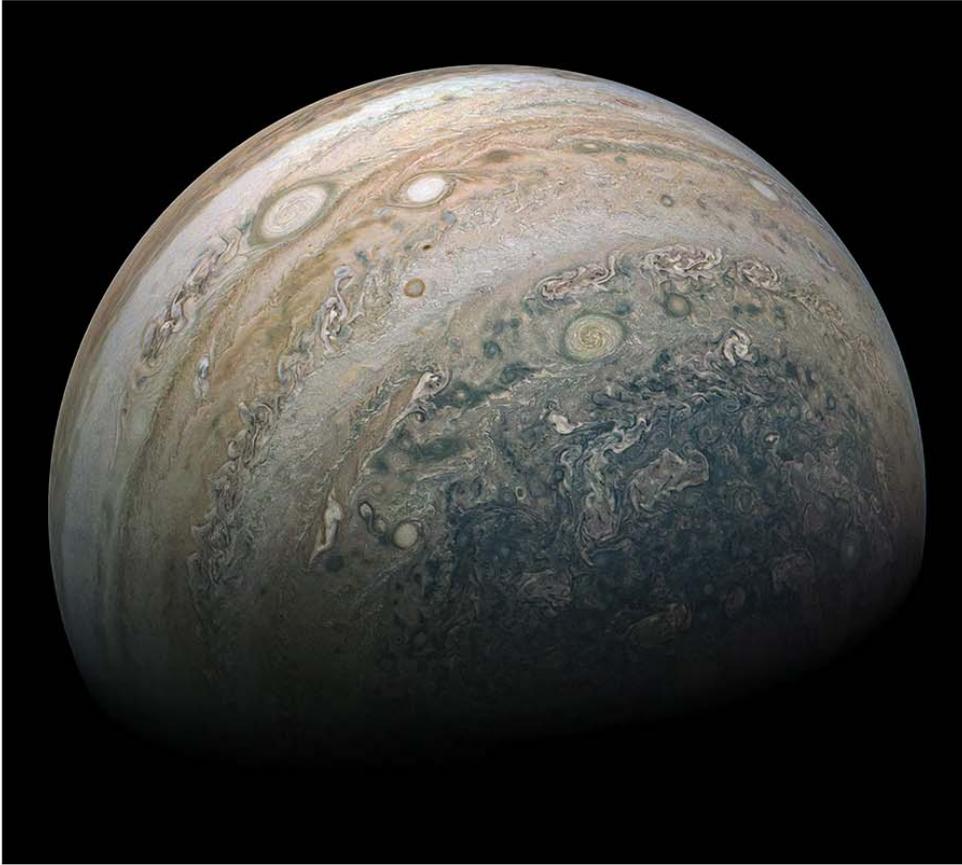
Interested in hunting for asteroids? Want to collaborate with a team to find them?? The **International Astronomical Search Collaboration** program matches potential asteroid hunters together into teams throughout the year to help each other dig into astronomical data in order to spot dim objects moving in between photos. If your team discovers a potential asteroid that is later confirmed, you may even get a chance to name it! Join or build a team and search for asteroids at iasc.cosmosearch.org

Want to help discover planets around other star systems? NASA's TESS mission is orbiting the Earth right now and scanning the sky for planets around other stars. It's accumulating a giant horde of data, and NASA scientists need your help to sift through it all to find other worlds! You can join **Planet Hunters TESS** at: planethunters.org

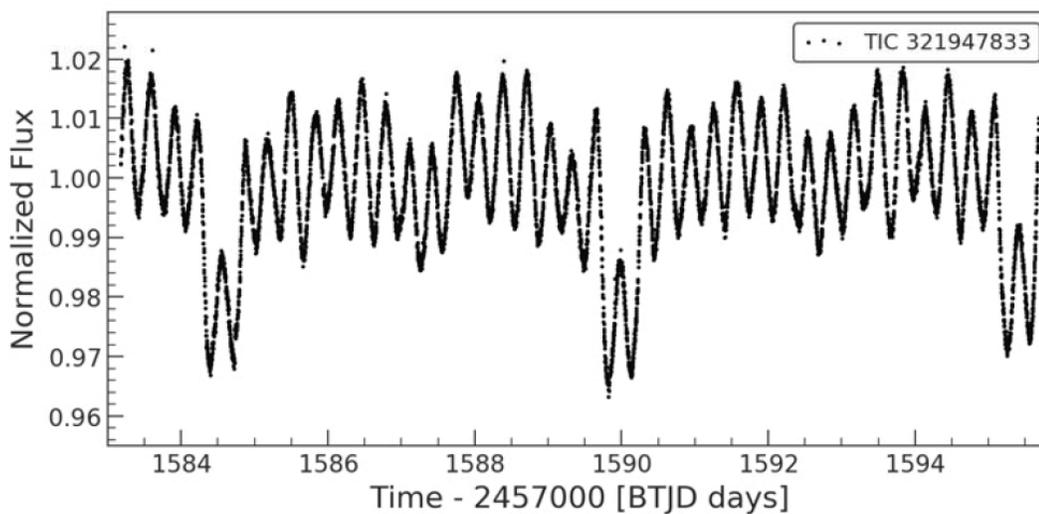
Intrigued by these opportunities? These are just a few of the many ways to participate in NASA citizen science, including observing your local environment with the GLOBE program, reporting aurora with Aurorasaurus, measuring snowpack levels, training software for Mars missions – even counting penguins! Discover more opportunities at science.nasa.gov/citizenscience and join the NASA citizen science Facebook group at facebook.com/groups/Sciencing/ And of course, visit nasa.gov to find the latest discoveries from all the research teams at NASA!

NASA Night Sky Notes

May 2020



GREAT SOUTHERN JUPITER: Incredible image of Jupiter, submitted to the JunoCam site by Kevin M. Gill. Full Credits : NASA/JPL-Caltech/SwRI/MSSS/Kevin M. Gill



Light curve of a binary star system containing a pulsating (variable) star, as spotted on Planet Hunters TESS by user mhuten and featured by project scientist Nora Eisner as a “Light Curve of the Week.” Credit: Planet Hunters TESS/NASA/mhuten/Nora Eisner