

# TUCSON AMATEUR ASTRONOMY ASSOCIATION

Observing Our  
MONTHLY EVENTS BULLETIN  
Since



Desert Skies

1954

WWW.TUCSONASTRONOMY.ORG

MARCH 2021

## UPCOMING EVENTS

March 5 @ 6:30 pm - 9:00 pm

TAAA's general member meeting will be held on March 5 and be conducted online. The meeting will start at 6:30 P.M. The main presentation is open to the public. It will be followed by a members-only open discussion and breakout rooms at approx. 7:30 P.M.

To view the meeting, please visit [Tucson Astronomy Facebook Live](#)

**Main Presentation at 6:30:**

**Presentation:** This talk will provide a brief introduction to how radio telescopes operate, what sort of observations can be made with them, and the advantages and disadvantages of radio observing. Amateur astronomers can build and operate radio telescopes. Ardis will look at some of the different types of radio telescopes that can be constructed, and what resources are available for those interested in learning more or getting started in radio astronomy.

## Tuning into the Radio Universe

Presenter's Bio: **Ardis Herrold** works as the Education Specialist for Vera C. Rubin Observatory, (formerly known as the Large Synoptic Survey Telescope, and being built in Chile to survey the night-sky with unprecedented depth and detail). A lifelong amateur and educator, Ardis established and advised a high school club, the Radio Astronomy Team (the RATs) for nearly three decades at Gross Pointe North High School in Michigan, where she taught. She and many of her former students have a long-established relationship with the Green Bank Observatory in West Virginia, home of the world's largest fully steerable radio telescope.



## NOTES FROM THE PRESIDENT

As has been the case for much of the last year, there appears to be a lack of clarity about how we should be approaching COVID at the moment. So, this month's decisions involved some opening up and also some limits. As you may be aware, the TAAA Board at the February 10th meeting worked on some revised policies that would open both dark sky sites, CAC and TIMPA, to limited use. The final decisions of the Board on the specifics have been sent out to members and, if you have questions, let any Board Member, including myself, know. The National Park Service and TAAA have also been working this month on determining the parameters for the 2021 Grand Canyon Star Party (GCSP). A conclusion on that was reached on Friday the 19th. All persons on the GCSP attendance mailing list were sent a notice on Friday that the June 5-12, 2021 GCSP will be conducted as a total virtual event. Work is currently underway to present a high-quality interesting program of virtual star party activities as well as exciting high-quality astronomy presentations. The Virtual GCSP in 2020 was a tremendous accomplishment as we were all new to delving in so thoroughly into the virtual world. This year we will build on the experience that has been

*by Mae Smith*

developed over the last year with a goal of making the 2021 GCSP an even better virtual event. Current plans are for the 2022 GCSP to be an in-person event.

Some of the TAAA Board actions taken at the February 10, 2021 meeting include:

1. A TAAA Working Group will be formed to review the history of policies for the TAAA newsletter and recommend current approaches to TAAA publications.
2. TAAA Board Members will review the list of policies on the website and divide up responsibilities for reviewing the specifics of the policies and making recommendations for availability and for any needed revisions/updates.
3. Procedures for developing a TAAA program for endowments and bequests will be developed.
4. Smoking of any substance will be prohibited at TAAA Dark Sky Sites. Persons who wish to smoke will need to exit the boundaries of the TAAA site to do so, even if the use is for medical reasons.

### AAA Trivia: Some TAAA Monthly Publications and Recent Electronic Activities

- 1.a What is the special meaning of the term, "Desert Skies", to TAAA?
1. b When was "Desert Skies" published?
- 1.c What did "Desert Skies" include?
2. a What is the TAAA "Bulletin"?
2. b When was the TAAA "Bulletin" published?
2. c What has been included in the TAAA "Bulletin"?
- 3.a When did the TAAA monthly publication "go electronic" and what was the main reason?
- 3.b What is the most recent TAAA electronic (Virtual) event?
- 3.c What are the most recent electronic (Virtual) recordings added to the TAAA inventory and how are they currently being used?

Answers to Trivia are at the end of this publication

*by Terri Lappin*

The Starry Messenger SIG plans many of the TAAA outreach activities. Our next meeting is on March 15th at 7pm. It will be a Zoom meeting. Contact [Terri Lappin](#) to receive the Zoom link.

The SMSIG is planning a Virtual Astronomy Festival on April 17th. Over the next month we will be recording videos, both demonstrations and observing, that will be available through Facebook and later on our YouTube page. If you want to help with the technology required to do this, please contact Terri Lappin. Your help is most appreciated.

[SMSIG on the Web](#)

**Chirichaua Astronomy Complex**

*by Jim Knoll*

**TIMPA**

*by Ralph Means*

### CAC & TIMPA Open for Limited Use

Effective **March 1, 2021**, **CAC & TIMPA** will be open at reduced capacity. Reservations can be made beginning the 15th of the month prior to your reservation month and can only be made one month at a time. CAC capacity will be limited to 5 public and 5 member pads and TIMPA will be limited to 3 pads. Unless you are qualified to open and close the site, dates will be limited to what is published in the COVID Rules of Use. Restrooms will be open. For CAC, the RMO will be closed and NO access to the refrigerator. Reservations must be made through the appropriate Director listed below. The COVID Rules are posted on the TAAA Website (<http://tucsonastronomy.org>) under the respective Observing Site (TAAA Resources, Observing Sites) and contain additional information.

TIMPA Director. [Ralph Means](#).

CAC Director. [Jim Knoll](#).

**Chirichaua Astronomy Complex (CAC)** is the club's dark observing site, located in Cochise County approximately 100 miles southeast of the center of Tucson. If you would like to attend, you must contact CAC Director Jim Knoll. Reservations are on a first come – first serve basis. You need to reserve for both nights if observing both nights.

[CAC on the Web](#)

**TIMPA** (Tucson International Modelplex Park Association)

Dark Sky site west of the Tucson Mountains.

[TIMPA on the Web](#)

Locations: The TIMPA observing site is located a few miles beyond the Desert Museum. The CAC observing site is located in southeast Arizona near Sunsites, AZ, about 1.5 hours' drive. More information is on the respective web site pages linked above.

### CAC COVID-19 Rules of Use Addendum

(Updated 02-14-21)

CAC will be open for limited use effective March 1, 2021 with the following restrictions. If the COVID-19 Pandemic worsens, the TAAA Board may revise these restrictions at any time.

- All use of CAC during the COVID-19 pandemic is with the assumption of potential risks and liability of such use by the individual users. TAAA is not encouraging such use and will require all members who decide to use the facility to take all appropriate precautions to keep themselves safe from potential infection.

- With volunteer availability and CAC Director approval, CAC will be open for a limited timeframe each month for member use around the New Moon weekend (see below dates). If a member is trained to open and close the site, the member can use the site outside of the dark-sky weekends with CAC Director approval. Reservations open the 15th of the month prior to the month being reserved. Reservations can only be made for one month at a time (first come first served basis). Weekends with volunteer support are expected to include the following dates in the next few months.

- March 11 (night) - 17 (Day)
- April 8-14
- May 6-12
- June 10-16
- July 8 - 14
- August 5 - 11
- September & beyond. Might be able to go without restrictions.
- The Site Director will allow no more than half the pad site capacity to attend. In the case of CAC, no more than 5 public pad and 5-member pad attendees.
- Two bathrooms and shower room will be open when more than one person is present. Members are required to sanitize after each use (supplies provided).
- Utility room will be open for microwave and emergency equipment access and will contain the first aid kit and AED.
- The Reynolds-Mitchel Observatory (RMO) will remain closed. No access to refrigerator. (Persons needing refrigeration of medication or other items must bring an ice-chest).
- All users will be required to notify the director by text or email when they enter and leave the site, unless the director or a designated CAC management team member is on site.
- When site is open, everyone using the site will be subject to the laws of the county and state they are in.
- All site uses will, of course, comply with any instructions from the Site Director or the Site Director's assigned volunteer.

## **ASTRONOMICAL LEAGUE**

*by Doug Smith*

### **What's Up list for March 2021 – April 2021**

Fellow amateur astronomers. Many of the Astronomical League observing programs can be done from our backyards. The following is a list of objects visible during February and March for the more common observing programs.

#### **Constellation Hunter Program – Northern Sky**

The following constellations are well placed for observing for March and April:

Camelopardalis	Cancer	Canis Minor	Gemini	Leo	Leo Minor	Lynx
Monoceros	Sextans	Ursa Major				

#### **Messier Observing Program**

The following Messier Objects are well placed for observation during March and April (listed in ascending RA): M50, M47, M46, M93, M48, M44, M67, M81, M82

## **Lunar and Binocular Lunar Observing Program**

New Moon: March 13, April 12  
40 Hours waxing: March 15, April 14  
72 hours waxing: March 16, April 15  
4 days old: March 17, April 16  
7 days old: March 21, April 20  
10 days old: March 24, April 23  
Full (14 days old): March 28, April 27  
Gibbous: March 6, April 4  
72 hours waning: March 10, April 9  
40 hours waning: March 11, April 10

## **Solar System Observing Program**

The following list describes the various solar system objects and their visibility during March and April:  
Mercury is an early morning object in early February, reaching greatest elongation on March 6. Moves into an evening object in late April.

Venus is an evening object during April. Too close to the Sun during March.

Jupiter and Saturn are morning objects in March and April, rising earlier each day..

Mars is still well placed for observation during March and April, but setting earlier each day..

Uranus is still visible in the evening sky but is setting earlier each day. By end of April its too close to the Sun to see.

Neptune is an early morning object in late March and April, rising earlier each day.

## **Urban Observing Program**

The following deep sky objects are well placed for observing during March and April:  
M50, NGC 2392, NGC 2539, M48, M44, M67, M81, M82

## **ASTRONOMY FUNDAMENTALS SIG**

*by Connor Justice*

Meeting – March 11 @ 6:30 pm - 8:00 pm

Topics to be determined.

Contact [Conner Justice](#) for Zoom link and more information.

Access videos of previous meetings through the Members Only section of the TAAA web site (via MemberPlanet).

[AFSIG on the Web](#)

## **ASTRO-IMAGING SIG**

*by Greg Ruppel*

Meeting: March TBA

Contact [Gregg Ruppel](#) for more information and Zoom links.

Access videos of previous meetings through the Members Only section of the TAAA web site (via MemberPlanet).



As outlined in the Content Committee report, all password-protected club content (videos, documents, and photos) is accessible from the Members-Only page on MemberPlanet ([www.tucsonastronomy.org](http://www.tucsonastronomy.org) and the MEMBERS ONLY tab). Look through the links list on the right (with explanations in the main text).

## Nomination and Volunteer Resource Committee

by David Rossetter - Chair

The annual election for members of the BOD and NVRC is coming up in May. The NVRC slate of nominees will be announced at the April meeting. If you are interested in running for an elected position, please contact the NVRC [Imbed [nvrcchair@tucsonastronomy.org](mailto:nvrcchair@tucsonastronomy.org)] for more information.

Please update your interests and volunteer skills in the Members Only (MemberPlanet) database. Go online to MemberPlanet (best from the TAAA's web site – [www.tucsonastronomy.org](http://www.tucsonastronomy.org) and the MEMBERS ONLY tab). In addition to making sure your contact information is correct, we want to find out more about you. There are optional fields to select your interests and volunteer skills. This will really help us ensure the TAAA is providing the best services for you. It also allows ways for you to offer your skills to the club if you so desire and share your interests with others.

## TAAA Website Changes

The year 2020 brought many changes to the ways TAAA members interacted. The use of Zoom meetings to do business, hold classes, conduct star parties and hold meetings has allowed TAAA to transcend the challenges of 2020 with good results.

Many of these Zoom events have been recorded creating a wonderful record for members to refer back to, but as we have found, created a virtual storage space problem for TAAA. We found leaders and members accumulating the videos but running out of Google-drive or Dropbox space. Additionally, it was challenging for other members to access this material being stored in various locations.

This prompted the Board to commission a group to take an overall look at TAAA's content and storage requirements. In January, Ed Foley with Jim Knoll and David Rossetter explored options for the storage and protection of our content and made recommendations to the Board which they approved at their January meeting. The conclusion has led to a reorganization of TAAA video content on a TAAA Youtube.com channel and our documents

to be stored on our website host server.

This stored content can now be readily accessed via the TAAA web site. Currently much of the content is accessible to TAAA members, only. To see that content - from our [tucsonastronomy.org](http://tucsonastronomy.org) web page, click 'Member Only' on the top ribbon menu. The system will then ask you for your Memberplanet sign in information. You'll then enter the TAAA landing page. To see our content – click the words 'TAAA Docs and Videos' midway down the body of the page. This link brings you to the index of our growing list of content. The list includes, TAAA Monthly meeting videos, the Astro-Imaging SIG meetings, our Virtual Star Parties, previous months' Monthly Bulletin, the Board minutes, and a page of Handbooks and TAAA reference materials. We will continue to gather other items of interest to members on this index or on the general body of the web page over time.

Other items of interest appear under the home page of the web site under About TAAA/Governance. These include the Constitution and Bylaws, our public Financial Statements and a link to Guidestar.com which reviews and collects public information about non-profit companies.

## NOTES FROM THE EDITORS

We hope you are enjoying our (Ken's) first shot at a new look for the Bulletin. We are hoping this new, fresh, look is easier to read and enjoyable for you. Let us know how you feel about it.

As mentioned in Mae's "Notes from the President", a committee was set up to review bulletin and newsletter policies. Currently, the "Monthly Events Bulletin" contains information about club events, reports from committees and special interest groups, information about club facilities, and club business. Historically, the "Desert Skies" newsletter (and its variations) was for more creative content (member submissions, photos, member information, etc.) but it has not been published in a long time. The committee will look into all possibilities for future club publications and policies associated with them. Feel free to let us know your feelings and desires along these lines (as well as your willingness to contribute).

Contact us by email and we will pass on your input.

[David Rossetter](#)

[Ken Bertschy](#)

## PUBLIC ASTRONOMY EVENTS

### University of Arizona Steward Observatory

**Monday, March 8**

**7:30 pm MST | Arizona**

**"Imaging Exoplanets and Searching for Life with the Giant Magellan Telescope"**

**Monday, Apr 5**

**7:30 pm MST | Arizona**

**"Imaging New Worlds in the alpha Centauri System"**

### Lunar and Planetary Laboratory

(LPL) events calendar (all events online): <https://www.lpl.arizona.edu/calendar>

# Lecture Series Offered by Whipple Observatory

51st annual “New Vistas in Astronomy” lecture series  
to feature nationally recognized astrophysicists in an all-virtual environment

The free public lecture series hosted by the Fred Lawrence Whipple Observatory has been running since 1970. Speakers to include astronomer and author Abraham Loeb, and 2021 Henry Draper Medal awardee and Event Horizon Telescope collaboration founding director **Sheperd Doeleman**.

March 3: **Kim Arcand** of NASA’s Chandra X-Ray Observatory

March 17: **Wystan Benbow** of the Very Energetic Radiation Imaging Telescope Array System (VERITAS) in Arizona

March 31: **Tony Stark** of the South Pole Telescope (SPT) in Antarctica

April 17: **Kelly Korreck** of NASA’s Parker Solar Probe

May 1: **Andrea Dupree**, a senior astrophysicist at the CfA with recent acclaim for her studies on the dimming of the star Betelgeuse

May 12: The series will end with a lecture from **Sheperd Doeleman**, founding director of the Event Horizon Telescope (EHT) collaboration, who will detail what it’s like to take the first picture and other media of a black hole. Doeleman was recently awarded the prestigious Henry Draper Medal from the National Academy of Science.

More information, including lecture access and speaker information is available on the New Vistas in Astronomy online brochure.

Each lecture is free and open to the public worldwide, accessible via the Whipple Observatory’s YouTube channel at <http://www.cfa.harvard.edu/fwo/youtube>. Viewers with Zoom may access lectures directly through the New Vistas in Astronomy online brochure. Traditionally held on Wednesdays, this year’s lecture series will include three Saturday lectures to increase public access to science, and all lectures will be recorded and available on YouTube for later viewing.



## March & April TAAA 2021 Astronomy Event Information

TAAA Members,

We are still mostly in a Virtual Event mode. Hopefully in the Fall we can get back into more in-person events. Below is information on upcoming events for March & April. Let [Jim Knoll](#) know if you have any questions.

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Thursday March 4 — VIRTUAL

Leman Academy

Age/Grade Level: Grade 3

# Participants: 50

0 Scopes Needed: Will be covered virtually with two scopes (Jim Knoll, Bernie Stinger/Rick Paul scheduled)

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Saturday March 13 -- Chiricahua National Monument -- In-Person

Chiricahua National Monument at Faraway Ranch

12856 E Rhyolite Creek Rd, Willcox

Age/Grade Level: All Ages

# Participants: 30

0 Scopes Needed (Jim O'Connor will give Walk Around the Night Sky & Bernie Stinger with one telescope using monitor to view)

Setup Time: 6:30 pm. Start Time: 7:30 pm. End Time: 9:30 pm.

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Saturday March 20 -- NORTHEAST TUCSON -- LIMITED ATTENDANCE, MUST REGISTER with Pima County -- In-Person (Pending COVID-19 Status)

Pima County Natural Resources Parks & Recreation (NRPR) - Agua Caliente Park

12325 E Roger Road, 85749

Age/Grade Level: All Ages

# Participants: 30

0 Scopes Needed (Jim & Susan Knoll, Bernie Stinger, Rick Paul, Bryan Betcher scheduled)

Setup Time: 6:45 pm. Start Time: 7:30 pm. End Time: 9:30 pm.

Nearest Moon Phase: First Quarter

Directions: Tanque Verde Road east past Houghton to Soldier Trail. Go about two miles north to Roger Rd. Turn east for about 1/2 mile to the Park on the left (north).

Viewing Location: Parking Lot Bus Lanes (north end of parking lot).

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Saturday April 10 -- Oracle State Park -- VIRTUAL

Oracle State Park Facebook Page

Age/Grade Level: All Ages

# Participants: 200

0 Scopes Needed (Jim Knoll, Jim O'Connor, Bernie Stinger, Rick Paul scheduled) (will be recorded in advance).

Plan to have intro by Park Staff, talk by International Dark Sky Association, and evening Star Party.

Start Time: 7:00 pm. End Time: 9:00 pm.

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Saturday April 17 -- Astronomy Festival -- VIRTUAL

TAAA Facebook Page

Age/Grade Level: All Ages

# Participants: 200

0 Scopes Needed. Email [Terri Lappin](#) or [Jim Knoll](#) if you would like to help out with Toolkits or virtual observing/Q&A. Most events will be recorded in advance. Plan to have Solar Observing, Night Sky Network Toolkits, Walk Around the Night sky via Planetarium program, Q&A on using telescopes and astronomy in general (live via Zoom), and wrapping up with an evening star party. Most streamed to Facebook and YouTube. Start Time: 3:00 pm. End Time: 9:00 pm.

*by Mae Smith*

If you have any input to offer or wish to discuss anything in the TAAA Trivia, Please contact Mae Smith, (  
ssmith@email.arizona.edu)

1.a What is the special meaning of the term, “Desert Skies”, to TAAA?

Desert Skies is the name of two different TAAA publications: the Desert Skies Newsletter and the Desert Skies Journal.

1.b When was “Desert Skies” published? The Desert Skies Newsletter was published from 2006 to 2013 and at the time was the only publication of TAAA. The Desert Skies Journal was published from 2013 until the spring/summer of 2017 and at the time TAAA had 2 monthly publications, the Desert Skies Journal and the Bulletin.

1.c What did “Desert Skies” include? The Desert Skies Newsletter included a wide array of information including news, list of members involved in certain activities, pictures of events and activities, leaders of activities, what was happening, outside events of interest, star parties, etc. It was compiled with a “newsy, member friendly environment” approach. It hasn’t been published for 4 years.

2. a What is the TAAA “Bulletin”?

The TAAA Bulletin was created as an events-only publication listing star parties and other TAAA monthly events. It is the only monthly publication that TAAA currently has. Since COVID it has been modified to include some other material such as Astronomy League information and Notes from the President.

2.b When was the TAAA “Bulletin” published?

Publication of the TAAA Bulletin began in 2013 and was started as strictly an event supplement to the Desert Skies Journal and generally was limited to 6 pages.

3.a When did the TAAA monthly publication “go electronic”?

For many years monthly TAAA publications were sent via snail mail with a discount for bulk mailing. The publication for the month would be printed. Then there was a regular group of dedicated TAAA volunteers who met once a month for the purpose of integrating the pages of the newsletter, folding them and preparing them for delivery to the post office for mailing.

The Desert Skies Newsletter was electronically sent to members for the first time in January 2009. One of the reasons listed in the November 2008 Desert Skies issue for going electronic and sending the newsletter via email was that “The annual cost of newsletter production is over \$4,000; Club operating expenses are expected to increase; Continued printing and mailing would require a dues increase.”

3.b What is the most recent TAAA electronic (Virtual) event?

On February 12th, TAAA conducted a virtual star party event aired on Facebook and available through YouTube.

3.c What are the most recent electronic (Virtual) recordings added to the TAAA inventory and how are they currently being used? TAAA is currently very active in using electronic video communications.

This week Jim knoll made and posted on the TAAA webpage as well as provided copies for the Pima County Library of a video demonstrating how to use the telescopes that TAAA contributes to Pima County Libraries.

Recently a video presentation of the Development of and Current Facilities at CAC was assembled and presented at the February TAAA Member meeting by Jim Knoll, Ed Foley and Mike McDowell. That video has been made available on the TAAA website; has been used several times by Bob Reynolds in presentations regarding the Member Observatory Project at CAC; and will be used again by Jim knoll on Tuesday in his presentation to the Sci-Tech Festival regarding the TAAA CAC facility.