

# TUCSON AMATEUR ASTRONOMY ASSOCIATION

Observing Our  
MONTHLY EVENTS BULLETIN  
Since



Desert Skies

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April 2021

## Membership Meeting

April 2 @ 6:30 pm - 9:00 pm

TAAA's next general member meeting will be held on Friday, April 2, 2021, and conducted online. The meeting will start at 6:30 P.M. It will be followed by Mary Turner's popular Seasonal Night Sky Presentation. The main presentation and Night Sky Presentation are open to the public. A Members-Only Meeting will follow. To view the meeting, please visit [Tucson Astronomy Facebook Live](#).



### Main Presentation at 6:30.

#### **TITLE: OSIRIS-REx: Mission Update Before Final Farewell Flyby of Bennu**

NASA's OSIRIS-REx mission team has passed many milestones in its long journey to study near-Earth asteroid (101955) Bennu; overcoming unforeseen obstacles including house-sized boulders in its path, pandemics, and concerns of sample loss after successful sample collection in October 2020. This presentation will focus on recent discoveries and results of the Touch-and-Go-Sample Acquisition Maneuver (TAG event) last Oct. 20th.

Before heading back toward Earth, the team will conduct a Final Flyby of Bennu on April 7. Presenter Dolores H. Hill will explain the purpose of the flyby, as well as the important discoveries made all along both about navigating the mission, and about this "rubble-pile" asteroid's formation and the history of the Solar System. The returned sample will reveal even more important details about Bennu, and the organic materials important to life. Join us on Friday, April 2nd for the latest OSIRIS-REx news, and what to look forward to as well.

**PRESENTER: Dolores H. Hill** is former OSIRIS-REx Ambassadors lead and is currently a member of the sample team for NASA's OSIRIS-REx asteroid sample return mission and coordinates LPL (Lunar and Planetary Laboratory) outreach. She is co-lead of the Astronomical League's Target NEOs! Observing Program that transitioned from OSIRIS-REx Target Asteroids! citizen science program, honored as a White House Champion of Change for Citizen Science in 2013. Since 1981 Dolores has analyzed a wide range of meteorites at UA's LPL, and provided technical support to space missions and LPL. A longtime member of the Tucson Amateur Astronomy Association, Dolores also co-founded the Sunset Astronomical Society in Midland, Michigan, and was a member of the Warren Astronomical Society in the Detroit-area. Near-Earth asteroid (164215) Doloreshill is named after her. She looks forward to seeing samples of near-Earth asteroid Bennu in 2023!

**Members-Only Meeting:** The NVRC will present their nominations for the 2021 membership leadership election. There will also be a briefing on the new on-line voting system. After other club business there will be discussions in Zoom breakout rooms.

## Notes From The President

March has resulted in considerable behind the scenes work for TAAA. Starry Messengers (SMSIG) has been at work on educational activities such as evaluating projects for the annual science fair and making sure that TAAA this year continued to give awards to students for astronomy science projects even though everything was conducted virtually. Coordination with the Pima County Public Libraries has continued on the Library Telescope Project, involving a TAAA Zoom training of librarians regarding understanding, using and working with patrons using TAAA's managed telescope donations to the Library system. This training included an excellent video that can now be provided to all patrons interested in checking out the telescopes and all librarians working with the telescopes. The decision was made to conduct the TAAA Astronomy Festival annual spring event virtually. Work is underway on designing and videotaping astronomy education activities and planning virtual star party activities to include both daytime and nighttime virtual events. Please see further information below from Terri Lappin regarding the TAAA Astronomy Festival.

As some of you are aware, consideration is being given to determining how TAAA may best serve members through its publications. The last Bulletin that came out a few weeks ago, generously spearheaded by David Rossetter and Ken Bertschy, was a beginning effort in determining how that publication might be expanded from the previously events-only focused publication. Further consideration of TAAA publication needs is underway. If you have any interest in contributing to this effort at any level, please contact David or myself so we can discuss your interest and get you involved.

In response to the decision to conduct the Grand Canyon Star Party 2021 as a virtual event, TAAA volunteers have been working with astronomers and the National Park Service regarding TAAA's video contributions for the virtual event. Efforts are underway to build upon virtual learning experiences during the last year and grow the GCSP virtual offerings for 2021. While this development takes some extra effort, it is also exciting for TAAA volunteers and NPS to work on.

### by Mae Smith

In the last month, CAC reservations have been allowed within guidelines sent to members. Reserved member use of CAC has been occurring and did fill to the limit of 50% capacity on a couple of nights. In person star parties for public and for paid events have also been occurring on a limited basis. TIMPA was accepting reservations for a limited opening this last month but it was rained out.

Compilation by Jim Knoll of material for an article on CAC to be published in Astronomy Magazine has been underway throughout the month. The article is accepted and we will let you know the expected date of publication when we find out. However, that date is anticipated to be months away.

The TAAA Forum that Ben Bailey established months ago on Groups.IO is doing well and having a lot of activity. Tom Rolfsmeyer and Gregg Ruppel from the Astro-Imaging Special Interest Group (AISIG) have inspired activity on the Groups.io site and all of us who enrolled in the TAAA Forum are benefiting from viewing the interesting images. A lot of growth and learning is occurring as well. Great job!! Thanks to all contributors for sharing with us!

As you know, David Rossetter and the NVRC team have been working on changes that were previously decided upon regarding the TAAA Elections process. Much work has been dedicated to assembling a list of candidates for the May election. Currently, software for use in the election process is being tested.

Some March activities of the TAAA Board included:

1. Slight rewording, for clarification, of TAAA COVID-19 policies.
2. Discussion and proposed follow-up regarding CAC construction.
3. Approval of funding for software to be used for voting in TAAA Elections.
4. Agreement to explore endowment fund possibilities for TAAA.

IMPORTANT NOTE: The email address you have been using for me is [ssmith@email.arizona.edu](mailto:ssmith@email.arizona.edu). Please UPDATE my email address to [ssmith@arizona.edu](mailto:ssmith@arizona.edu).

## Upcoming TAAA Events

**Virtual Oracle State Park Star Party**  
**Saturday April 10 - 7:00pm to 9:00pm**  
0 Additional Scopes Needed

Age/Grade Level: All Ages, 200 Participants  
Jim Knoll, Jim O'Connor, Bernie Stinger, and Rick Paul are scheduled, will be recorded in advance  
Plan to have intro by Park Staff, talk by International Dark Sky Association, and evening Star Party.

Streaming to [TAAA Facebook Page](#) and [YouTube Channel](#) as well as Oracle State Park Social Media.

**Virtual Astronomy Festival**  
**Saturday, April 17th - 3:00pm to 8:00pm**  
Online Help Needed

The TAAA's annual Astronomy Festival will be held as a virtual event. We have a full program for the public to enjoy. Virtual viewing with solar scopes during the day, followed by nighttime dark sky viewing. Plus activities and videos throughout the event. Everything will be pre-recorded and simultaneously broadcast on Facebook and YouTube. We are looking to schedule TAAA members who can help engage the public live through the comments on both venues. We want to maintain a continuous presence online so are asking members to sign up to cover an hour at a time on one venue or the other. Please contact [Terri Lappin](#) or [Jim Knoll](#) if you're able to participate in this important role. As we get closer to the date, we'll post a detailed schedule on our Facebook Event. Please share it with your Facebook family and friends.

## Special Interests Groups

### *Starry Messengers*

*by Terri Lappin*

The Starry Messenger SIG plans many of the TAAA outreach activities. Our next meeting is **May 17th at 7pm**. It will be a Zoom meeting no longer than 90 minutes. We'll discuss how the Virtual Astronomy Festival went and consider how we'll support upcoming fall events. Contact [Terri Lappin](#) to receive the Zoom link.  
[SMSIG on the Web](#)

### *Astronomy Fundamentals SIG*

*by Connor Justice*

The next meeting is **April 8th at 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*

The next meeting is **Monday, April 26 at 7:00 pm** via ZOOM.  
Topics: Portals for Image Sharing: Astrobin - Doug Summers  
Imaging Terminology - Guest Presenters  
Please contact [Greg Ruppel](#) for the Zoom meeting information.  
If you have suggestions for topics for future meetings, please pass them along to Tom Rolfsmeyer or me. If you would like to participate in the Imaging Terminology sessions, please let me know.  
[AISIG on the Web](#)

*by Jim Knoll**by Ralph Means*

## **CAC & TIMPA Open for Limited Use**

**CAC & TIMPA** are 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](#)

**Chiricahua 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 (Newly Updated 03-10-21)**

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.

1. 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.
2. Around the New Moon each month (see below dates), CAC will be open for member use. Reservations and CAC Director approval are required. During this timeframe, the CAC Director or designated representative will be on-site to facilitate usage. Members may use CAC outside of these dates with CAC Director approval if they are certified to open and close the site. 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).

a. March 11 (night) - 17 (Day)	d. June 10-16
b. April 8-14	e. July 8 – 14
c. May 6-12	f. August 5 - 11
	g. September & beyond. Might be able to go without restrictions.
3. 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.
4. 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).
5. Utility room will be open for microwave and emergency equipment access and will contain the first aid kit and AED.
6. 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).
7. 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.
8. When site is open, everyone using the site will be subject to the laws of the county and state they are in.
9. All site uses will, of course, comply with any instructions from the Site Director or the Site Director's assigned volunteer.

# Committee Reports

## **MemberPlanet**

Be sure to log into MemberPlanet soon (from the Members-Only page at [www.tucsonastronomy.org](http://www.tucsonastronomy.org) and the MEMBERS ONLY tab) and update your contact information. We especially need to make sure you have a valid email address. This will be used for the online voting system. If you have a family membership with the TAAA, ensure that your designated family member has an account on MemberPlanet. If they do not, please contact [David Rossetter](#) (the MemberPlanet Manager) to establish an account for them. If they prefer to not have a MemberPlanet account but still want to vote, please send David their name and email for the vote.

## **Nominations and Volunteer Resource Committee**

**by David Rossetter**

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 [nvrcchair@tucsonastronomy.org](mailto:nvrcchair@tucsonastronomy.org) before the end of March for more information.

In addition to announcing the nominees, we will be briefing the membership at the April meeting on the new online voting system and procedures. You will have the opportunity to ask questions if we don't make everything clear. This will be followed by an all-member email with all the details.

The NVRC is looking for a new [Membership Manager](#). Please [contact](#) us if you would be interested.

Thanks to the NVRC members for all their hard work: Ben Bailey, Ken Bertschy, John Christensen, and special thanks to former NVRC member, Sandy Nichols, for his chipping in.

## **Notes From The Editors**

We are slowly getting the hang of publishing this bulletin using Adobe InDesign. Hopefully, things are getting more readable and informative. Next month, we will be meeting with the "Publications Working Group". The idea is to plan for the future of TAAA newsletter-type publications.

Thanks to Terri Lappin for her amazing editing skills! Any errors are due to editors making changes after Terri proof-read.

Please let us know if you have any ideas or feedback. In addition, we are always looking for submissions describing the work or events your committee or group is up to.

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

[David Rossetter](#)

[Ken Bertschy](#)



### **What's Up list for April 2021 – May 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 April and May for the more common observing programs.

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

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

Cancer, Canes Venatici, Coma Berenices, Leo, Leo Minor, Sextans, Ursa Major

#### **Messier Observing Program**

The following Messier Objects are well placed for observation during April and May (listed in ascending RA):

M81, M82, M95, M96, M105, M108, M97, M65, M66, M109

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

The following is a list of the dates for the lunar phase when observations should be made during April and May:

New Moon: April 12, May 12

40 Hours waxing: April 14, May 14

72 hours waxing: April 15, May 15

4 days old: April 16, May 16

7 days old: April 20, May 20

10 days old: April 23, May 23

Full (14 days old): April 27, May 27

Gibbous: April 4, May 4

72 hours waning: April 9, May 9

40 hours waning: April 10, May 10

#### **Solar System Observing Program**

The following list describes the various solar system objects and their visibility during April and May:

Mercury is an early evening object for the last half of April and all of May, reaching greatest elongation on May 16.

Venus is an evening object during April and May.

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

Mars is still well placed for observation during April and May, 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. Becomes an early morning object in May.

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

#### **Urban Observing Program**

The following deep sky objects are well placed for observing during April and May:

M81, M82, NGC 3242

The following Double Stars are well placed for observation during April and May:

Gamma Leo

## **University of Arizona Steward Observatory**

**Monday, April 5 - 7:30 pm MST/AT**  
**“Imaging New Worlds in the alpha Centauri System”**  
**Dr. Kevin Wagner, Steward Observatory**  
[ZOOM](#)

**Monday, April 12 - 7:30pm MST/AT**  
**“Our Future in Space.”**  
**Professor Chris Impey, Steward Observatory**  
[Flyer](#) - [Zoom](#)

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## **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 31](#): **Dr. Antony “Tony” Stark**, Senior Astronomer for CfA at the South Pole Telescope (SPT).

[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.

Each lecture is free and open to the public worldwide. Click the links above for lecture and access information. All lectures will be recorded and available on the Whipple Observatory’s [YouTube channel](#) for later viewing.

# Lunar and Planetary Laboratory

**Thursday, April 1 - 6:00pm AT**

**College of Science Lecture: [Beyond Earth](#) - Jessica Barnes and Pierre Haenecour**

Life on Earth is comprised of water and organic molecules. In this talk, we explore the cosmic origins of these components, how they were delivered to the Earth, and how the exploration of asteroid Bennu by the OSIRIS-REx mission will help elucidate how Earth became habitable.

**Tuesday, April 6 - 3:45pm AT**

**LPL Colloquium: Dr. Jessica Barnes**

**[The Magmatic History of the Moon as Told by Chlorine Isotopes](#)**

**Wednesday, April 7**

**[OSIRIS-REx Final Flyby of Asteroid Bennu](#)**

The links take you to each event's information page with access information.

Be sure to check out other events and all of the College of Science Lectures listed on the [LPL events calendar](#).

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If you have information on other (preferably local) quality astronomy events, please let the [editors](#) know so we can include them here!