

December 2020

Observing our Desert Skies
since 1954



www.tucsonastronomy.org

TUCSON AMATEUR ASTRONOMY ASSOCIATION

Monthly Events Bulletin

General Meeting December 2020

The TAAA's November monthly meeting will be held online on Friday, Dec. 4. We will have one presentation starting at 6:30 P.M. and open to the general public. Followed by a members only meeting at approximately 7:15 P.M.

NON members may view the main presentation on Dec. 4 on Facebook at: <https://www.facebook.com/TucsonAstronomy/>

Invited Lecture

*Fun with Fermi AGN - A Quick
Stroll Through a Lethal Photon
Field*

*presented by
Dr. Paul Smith, Steward
Observatory*

Paul Smith was born in Rochester, NY, during the year Sputnik circled the planet, and numerous atmospheric nuclear tests were conducted, as the two dominant global powers rattled sabers. Dr. Smith muses it might have been the high tensions of the era, or the elevated radiation levels that pulled him into science, particularly astronomy, by grade 4. He earned a B.S. in physics from Saint Louis University, and a Ph.D. in the same field from the University of New Mexico, before moving to Tucson in 1986. For most of the past 35 years, Dr. Smith has been at Steward Observatory, and has been successively involved with the Hubble, Spitzer, and Fermi space observatories. His main research interest is the polarized light emitted from quasars and other types of active galactic nuclei (AGN).

Dr. Smith's presentation centers around NASA's Fermi Gamma-ray Space Telescope and the decade-long effort to support this important science mission by using telescopes in the Tucson area to observe the most active quasars. While extremely active quasars, or blazars, represents a small percentage of the population of known active galactic nuclei (AGN), it makes up over 70% of the objects detected by Fermi in the high-energy gamma-ray sky. Blazars are highly variable in brightness and polarization on short time scales (less than a day), enabling us to study relatively small regions that produce enormous amounts of energy. Many observations at different wavelengths are needed to understand the physics of these systems. Dr. Smith's presentation will take us to the cutting edge of science.

2nd Presentation

Members Only Meeting @ approximately 7:15 PM

TAAA Virtual Star Party

Join Tucson Amateur Astronomy Association for a Virtual tour of the Night Sky on **December 5th** from **7:00—8:30 PM**. We will explore planets, Nebulae, Star Clusters, Galaxies, and much more. The event will be streamed Live from our Facebook Page.

Facebook: <https://www.facebook.com/TucsonAstronomy/events/>

Since 1986

Stellar-Vision Astronomy Shop

3721 E. 37th Street
Tucson, AZ 85713
(520) 571-0877
Credit Cards Accepted

www.stellarvisiontucson.com



STARIZONA

ADVENTURES IN ASTRONOMY AND NATURE

5757 N. Oracle Rd. www.starizona.com
Tucson, AZ 85704 292-5010

PRESIDENT'S MESSAGE

Months ago the Board contemplated whether we would be having in-person meetings by November and considered scheduling an in-person member meeting for this month. Our hesitancy in seeing COVID 19 as being over by November prevented us from scheduling in-person meetings that soon. When things are so unpredictable, many things can still work out well, as that decision to plan for a further delay in in-person meetings did.

We are grateful and appreciative this holiday season of the many things that have worked out well for TAAA this year and for all the pulling together and cooperative efforts that our members have contributed. Those foundational supportive attitudes and actions have resulted in our rallying during these difficult times. And, we have established a great base to work from in plodding through whatever the future holds.

Our hearts are also with our members who have experienced significant losses, or who are coping with incredibly difficult circumstances, or otherwise need to be less involved during such a difficult time. We miss you when you are not with us and look forward to filling that void when you are able to return.

November Board Meeting

Some actions at the October 9, 2020 TAAA Board Meeting included:

1. It was announced that Jim Knoll was appointed as Interim CAC Director.
2. The Board approved a list of proposed changes in the TAAA Constitution and Bylaws to be presented to and voted on by TAAA Members. The suggestions would allow for flexibility in TAAA election practices that would accommodate use of both in-person and technology-managed strategies in conducting TAAA elections of Board Members and the NVRC Committee.
3. The Board decided that although the usual Holiday Party would not be held this year, a holiday message would be sent from the TAAA Board to TAAA Members.
4. The decision was made to postpone the usual holiday sale of items to members to a later date when personal contact was more allowable.
5. A revised position description was approved for the CAC Planning Committee Director. (The name, CAC Planning Committee, replaces the former name of SPG or Strategic Planning Committee.)
6. A TAAA member suggested a change in TAAA's name and the suggestion was reviewed. The Board felt that discussion of the TAAA name would best be handled by waiting until personal gatherings were allowable and the topic could be presented for discussion in a TAAA Leader meeting.

7. A change in processing member applications and renewals through the website was approved. This change may result in some extra financial charges but should make the process easier for both renewing and newly joining members.

CAC Master Plan

Please note that the CAC Master Plan has always included the expectation that at some point there may be enough people interested for TAAA to be able to establish a group of Member Observatories at CAC. Names of people interested in the future leasing of a Member Observatory at CAC are currently being collected.

If you wish to be on that list, please contact:

memberobservatories@tucsonastronomy.org

The CAC Master Plan has been in existence for 12 years and sometimes a member has become aware of the possibility of future member observatories and indicated an interest. If you did so, please do not assume that your name is on the current list of interested persons. **Please make sure to re-indicate your interest now at the email address to make sure your name has not inadvertently dropped off the list over the years.**

TAAA & Radio Astronomy

At various times over the years, some TAAA members have indicated an interest in pursuing Radio Astronomy but, as far as I know, we have never had a group of members have a real discussion about options in Radio Astronomy and how it could become a part of TAAA (or discuss the pros and cons of pursuing radio astronomy).

In taking a more thorough look at the CAC Master Plan, we noted that it also contains the possibility of the inclusion of radio astronomy at CAC. If you have an interest in radio astronomy, have some thoughts about radio astronomy, know about radio astronomy, or would like to participate in a discussion/interaction (via email, zoom or telephone, at present) regarding how radio astronomy could or could not be added to TAAA possibilities/interests/activities (whether related to CAC or not), please contact:

Mae Smith: ssmith@email.arizona.edu

and/or

Doug Smith: alcor@tucsonastronomy.org

December TAAA Events

By Jim Knoll

We have not done very many in-person events yet due to Covid-19. We might try a limited public event at Agua Caliente Park in January, requiring advance registration to limit participants and it will be video or imaging only, no visual observing. Actual implementation will be evaluated early January. We do have a couple virtual events in December.

December 5th. Virtual Star Party. 7 - 9 pm MST. This one will be streamed live to our Facebook Page. We will spend the first hour observing pre-selected targets. For the second portion, we will open it to participants for requested targets. To participate, go to the TAAA Facebook page (<https://www.facebook.com/TucsonAstronomy>). The live video should pop up around 7 pm. We will try to answer participant questions (on Facebook Chat) as we go through the event. Any TAAA member help would be appreciated. You can participate in the Facebook Chat through the live stream and help us answer any questions. In 2021, we plan to continue quarterly virtual star parties. Thanks to Bernie Stinger, Jim O'Connor, and Rick Paul for sharing their telescope observations using Malincam and imaging cameras.

December 10th. I will be participating and giving a short presentation on TAAA and our involvement in **Science, Technology, Engineering, Math (STEM)** support. This is a 2x per month **STEM** lunchtime Zoom discussions. The December 10th event will focus on astronomy and will have three short (5 minute) astronomy presentations than breakout room discussions. The event will take place at Noon on the 10th. To register/participate, go to:

<https://asu.zoom.us/meeting/register/tZEscOiqpj8iE9Vc77tynVqXekAfwFojm766>.

You will be added to their **STEM** list and you will receive future announcements. Many are quite interesting. You should be able to unsubscribe by replying to them if you decide later to be dropped from their list.

2020 Review. Here is a snapshot of what we did in 2020.

Public/School/Non-Profit

In-Person Events: 36 (53% schools / 42% public)
Virtual: 7 (5 TAAA / 2 Lunar & Planetary Lab)

Tucson Stargazing Adventures

Resorts: 18
Other: 3

TAAA Information & Contacts

AISIG

For information regarding the **Astro-Imaging (AISIG)** meetings contact contact Tom Rolfsmeyer at

astro-photo@tucsonastronomy.org

AFSIG

For information regarding **Astronomy Fundamentals (AFSIG)** contact Conner Justice at

fundamentals@tucsonastronomy.org

Ladies Night Out

For information regarding **Ladies Night Out** contact Terri Lappin at

smsig@tucsonastronomy.org

SMSIG

For Information regarding **Starry Messengers (SIMSIG)** contact contact Terri Lappin at

smsig@tucsonastronomy.org

Chiricahua Astronomy Complex CAC

For information regarding **CAC** policies, to make **CAC** reservations or to learn **CAC** emergency Rules of Use contact John Mead at

cac-director@tucsonastronomy.org

TIMPA

For information regarding **TIMPA**, to make **TIMPA** reservations or to learn **TIMPA Rules of Use during Covid19** contact Ralph Means at

bookbuyer1769@gmail.org

Scopes & Equipment

For members to inquire about loaner scopes/equipment, contact Ralph Means at

bookbuyer1769@gmail.org

Astronomical League Observing Programs

What's Up List for December 2020 – January 2021

by Douglas Smith ALCOR

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 December and January for the more common observing programs.

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for December and January:

Andromeda, Aries, Auriga Cassiopeia, Orion, Cygnus, Lacerta, Perseus, Pisces, Taurus and Triangulum

Messier Observing Program

The summer Milky Way is setting early. The winter Milky Way is not rising until late. Now we are looking away from Milky Way so objects are more sparse.

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

M103, M33, M74, M76, M34, M77, M45

Lunar and Binocular Lunar Observing Program

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

New Moon: December 15, January 13

40 Hours waxing: December 17, January 15

72 hours waxing: December 18, January 16

4 days old: December 19, January 17

7 days old: December 22, January 20

10 days old: December 25, January 23

Full (14 days old): December 29, January 28

Gibbous: December 8, January 5

72 hours waning: December 11, January 10

40 hours waning: December 12, January 11

Urban Observing Program

The following deep sky objects are well placed for observing during December and January:

NGC457, NGC663, Cr 463, NGC 752, Stock 2, NGC 869, NGC 884, Tr 2, M77, Tr 3, Stock 23, Mel 20, NGC 1342, M45

The following Double Stars are well placed for observation during August and September:

Gamma Aries, Gamma Andromeda

Solar System Observing Program

The following list describes the various solar system objects and their visibility during December and January:

Mercury is an early evening object in December moving back towards Sun in January.

Venus emerges from behind the Sun in December getting brighter in January.

Jupiter and **Saturn** set earlier and earlier in December. On December 12 they are within 1 degree of each other.

Mars is well placed for observation during December and January.

Uranus is not too far behind Mars.

Neptune is still well placed, about halfway between Saturn and Mars.

by Douglas Smith ALCOR

TAAA Trivia!

NOTE: Sometimes people have questions, comments, or additional information related to content in the TAAA Trivia. If you do, contact Mae at ssmith@email.arizona.edu.

Trivia this month:

1. What was the name of TAAA when it was first formed and what abbreviation was used for the name? In what year was the organization formed and named, and who was the first President?
2. What was the second name of TAAA and what abbreviation was used for the name? In what year was the second name adopted and who was TAAA President at the time of the name change?
3. What was the third name adopted for TAAA and what abbreviation was used for that name? In what year did that name change occur and who was the TAAA President at the time of that name change?
4. So, currently how old is TAAA? And how old is our current name?
5. After reading the answers to these questions, reflect on TAAA's current name. How well does it represent the focus and membership of our current club? What do you like about the current name? What do you not like about the current name? (If you are willing to share comments, email Mae at ssmith@email.arizona.edu. I would love to put together a collection of responses – without identifying who made what response.)

Answers are on page 5.

Member Star Parties

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 from Tucson. Maps to both sites can be found on the TAAA website. Locked gates protect both sites. Call or email the contact person to learn when the gate will be unlocked.

TIMPA

Contact Person: Ralph Means
Email: [fundamentals\[at\]tucsonastronomy.org](mailto:fundamentals[at]tucsonastronomy.org)
Email: bookbuyer1769@gmail.com
Phone: 520-460-8770

The AFSIG hosts the TIMPA star parties. An AFSIG representative will open the gate for an evening of viewing. The Gila Monster Observatory with its Meade 14" Schmidt-Cassegrain telescope will be open for your viewing pleasure. The TIMPA site features a large parking area and full restroom facilities. Be prepared for cool temperatures after sunset. Guests are welcome, accompanied by a TAAA member. We hope to see you there!

Chiricahua Astronomy Complex

Contact Person/RSVP to: Jim Knoll
Email: [cac-director\[at\]tucsonastronomy.org](mailto:cac-director[at]tucsonastronomy.org)

Chiricahua Astronomy Complex (CAC) is the club's dark observing site, located in Cochise County approximately 100 miles southeast of the center of Tucson. The site includes concrete telescope pads with electricity, a roll-off roof observatory with a Celestron 14" telescope, a picnic Ramada, and a full bathroom facility with shower room. The new Reynolds-Mitchell Observatory includes a 40" telescope and a large warm room. At an elevation of 4800 feet, be prepared for cooler temperatures. Try to arrive before sunset. Our use permit limits the number of attendees at any one time, so reservations and cancellations are required. If you would like to attend, you must contact CAC Director Mike McDowell. Reservations are on a first come – first serve basis. You need to reserve for both nights if observing both nights.

Trivia Answers!

- Question 1:** The TAAA was formed in 1954 and that year adopted the name, Tucson Amateur Astronomers, which was abbreviated TAA. The first President of TAAA was named Earl Burch and he served as President for one year. The group established a regular meeting place using the Steward Observatory Building and a relationship was established with the Sky and Telescope magazine. Members often brought their telescopes to meetings and shared the sky, and a telescope maker's group was started within TAAA. That year there usually were one to six telescopes at a meeting.
- Question 2:** The second name of TAAA was Tucson Astronomical and Astronautical Association and was abbreviated TAAA. Don Strittmatter, who was TAAA's third President and served as TAAA President for 19 years, was President when the name was changed. Unfortunately, I have not located information regarding the specific year that the second name was adopted. Information that I have indicates that the name change occurred between 1955 and 1974. My understanding is that part of the name change related to the national project in which TAAA heavily participated that involved locating and viewing satellites in the sky. TAAA published weekly reports in the Tucson newspaper regarding data on satellites that TAAA had located that week. Also, apparently, part of the reason for the name change from Tucson Amateur Astronomers (TAA) was the development of the Tucson Airport Authority (TAA), which was a popular topic of discussion with Tucsonans and caused some confusion for our members. If anyone has access to the exact date or even the exact year of the name change, please, please, send the information to me. I would love to know.
- Question 3:** The third name adopted for TAAA was assumed in 1978, and it was the current name of Tucson Amateur Astronomy Association, continuing the TAAA abbreviation. The TAAA president at the time of that name change was Tom Caudell, our fourth President. The name change reflected TAAA's heavy astronomy involvement in the new Flandreau Planetarium, and the TAAA Mirror Grinding Project, located at Flandreau. TAAA member meetings were held at Flandrau.
- Question 4:** So, currently how old is TAAA? And how old is our current name? 1954-2020; TAAA is approximately 66 years old. TAAA was approximately 24 years old when it adopted its current name; so the name, Tucson Amateur Astronomy Association, has been used for approximately 42 years.
- Question 5:** In the past, TAAA has changed its name to better reflect who the members are and what their focus is. And, logistical factors have mattered, as well. How well does our current name reflect who we are and what we are about? What are your thoughts and ideas about our current name? I would love to read them and to compile a collection of responses/ideas that we can use for reflection.