

September 2020

Observing our Desert Skies
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TUCSON AMATEUR ASTRONOMY ASSOCIATION

Monthly Events Bulletin

General Meeting September 2020

TAAA September Meeting

The 6:30 P.M. presentation is open to the general public. This will be followed at approximately 7:15 P.M. by some activities for TAAA members only.

View on Facebook at:

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

Invited Lecture
Using Stars to Understand
Saturn's Atmosphere
presented by
Zarah Brown
University of Arizona

Zarah Brown is a 4th year graduate student at the University of Arizona's Lunar and Planetary Laboratory. She studies Saturn's upper atmosphere using Cassini data with her adviser, Tommi Koskinen, and did her undergraduate research on Saturn's rings. She has degrees in both astrophysics and fine arts and helps run LPL's annual Art of Planetary Science show.

The upper atmospheres of Jupiter, Saturn, Neptune and Uranus are all hotter than would be expected if they were heated in the same way that Earth's upper atmosphere is heated—a longstanding unanswered question in planetary science called the "energy crisis." In the months before the Cassini spacecraft's final plunge into Saturn, it made a series of observations of Saturn's upper atmosphere to try and understand the origin of the additional heat. In a technique called stellar occultation, Cassini used the passages behind Saturn's upper atmosphere of stars in Orion and Canis Major to provide detailed information about the ringed planet's density and temperature. This unique set of observations has shed light on the outer planet energy crisis and was published in Nature Astronomy this April.

TAAA ELECTION RESULTS

Members of the Tucson Amateur Astronomy Association met at the August 2020 general (Zoom) meeting. After the guest presentation, the NVRC hosted the 2020 Leadership Election. The vote was done using Zoom (as well as paper absentee ballots).

Members present voted to "Accept Slate of Nominated Candidates by Acclamation".

President:	Mae Smith
Vice President:	John Meade
Secretary:	Chuck Hendricks
Treasurer:	Mike McDowell

Board of Directors Members at Large:

Ed Foley
Ralph Means
Doug Smith

Nominations, Volunteer and Resource Committee:

Ken Bertschy
John Christensen

Astronomical League Observing Programs

What's Up List for September and October 2020

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 September and October for the more common observing programs.

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for September and October:

Aquarius, Aquila, Cepheus, Cygnus, Delphinus, Equuleus, Lacerta, Lyra, Pegasus, Sagitta and Vulpecula

Messier Observing Program

The summer Milky Way is setting. Can still see lots of clusters – open and globular. But starting to look away from Milky Way so objects getting more sparse.

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

M56, M55, M71, M75, M29, M72, M73, M15, M2, M39, M30.

Urban Observing Program

The following deep sky objects are well placed for observing during September and October:

Cr 399, NGC 6818, NGC 6826, M27, NGC 6910, NGC 6934, NGC 6940, NGC 7009, M15, M2, M39, NGC 7160, NGC 7209, NGC 7243

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

Beta Cygnus, Gamma Delphinus, Delta Cepheus

Lunar and Binocular Lunar Observing Program

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

New Moon: September 18, October 17

40 Hours waxing: September 20, October 19

72 hours waxing: September 21, October 20

4 days old: September 22, October 21

7 days old: September 25, October 23

10 days old: September 28, October 26

Full (14 days old): September 3, October 1

Gibbous: September 11, October 9

72 hours waning: September 15, October 14

40 hours waning: September 18, October 15

Solar System Observing Program

The following list describes the various solar system objects and their visibility during September and October:

Mercury is an early evening object in September and October.

Venus is a bright morning object in September and October but is shrinking and moving to go behind the Sun.

Jupiter and Saturn rise earlier each night and are well placed for viewing, high in the sky in the early evening hours during September and October but are setting earlier each evening. They are fairly close together.

Mars is at opposition and is well placed for observation nears its maximum size for the year. It reaches the zenith around midnite.

Uranus is not too far behind Mars. Now visible at a reasonable time of night..

Neptune is 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: .

Question 1: Who received the David Laird Award in 2020? In 2019?

Question 2a: What TAAA virtual star party event was recently held and who conducted it?

Question 2b: What two sections of TAAA resumed meeting in August and who can be contacted for information?

Question 2c: What TAAA Leader's Name was misspelled in the July Notes?

Answers are on page 3.

PRESIDENT'S MESSAGE

Substantial August has been a calm month as we have been gradually seeing some positive signs of the Covid 19 spread decreasing from the very high July figures. While the spread has been decreasing, it had not lowered enough by our August Board meeting to warrant changing our prior Covid 19 policies and procedures. Thus, while there is some use of CAC and TIMPA, it is quite minimal. Of course monsoon season has interfered, as well.

Traditionally, August is one of TAAA's slowest months with Winter Visitors usually gone and erratic rain and clouds. It is typically, also, a slow star party month with the weather being hot for Tucson visitors and with interfering rains and clouds. So, in a number of ways a slow August is reminiscent of normalcy. Things should be picking up, however, as the UA has been planning for 30,000 people (1/2 the normal amount) on campus after Labor Day.

Some actions/discussions at the August 12th Board meeting included:

1. An announcement that accuracy of membership roles have been verified and, thus, Ben Bailey has been performing the migration to Groups.IO. If you are on the list for Groups.io (our new platform for the TAAA Forum) or

wish to be and have questions contact Ben Bailey at Benbailey@tucsonastronomy.org.

2. There was no change in COVID19 policies at the August meeting. July decisions are still being followed for TIMPA, CAC, and club events/activities. (At the time of the Board meeting, one of the two new building slabs had been poured at CAC.)

3. The board voted to obtain a TAAA Zoom account for leader use that would serve less than 100 people. TAAA Procedures for Use by Leaders are being developed.

4. The First Friday Member Meeting date of January 1, 2021 was changed to January 8, 2021.

5. The Board wishes to collect TAAA policies in a central location and make them accessible, as appropriate, to leaders/members. Don Cain has volunteered to assist with that effort.

6. The new TAAA Board that was elected at the August 7th meeting will take office September 1 and serve through May 31, 2021.

Trivia Answers!

Trivia Question 1: Last month we announced that long term former TAAA member, Derald Nye, recently received the 2020 David Laird Award from IOTA (International Occultation and Timing Association). We are sorry to have previously failed to provide TAAA with the information that TAAA Member Jim Stamm received the 2018/2019 David Laird Award, as well. We are delighted to recognize the long term industrious contributions to science of both of these dedicated individuals. Great work!!

Trivia Question 2a: There was a new TAAA Virtual Star Party that was available on Facebook and You Tube on Saturday August 15th. It was conducted by Jim Knoll, Bernie Sanders and Jim O'Connor. Bernie was in Minnesota and Jim O'Connor was in Ohio with Jim Knoll in Tucson. You can still locate it on Facebook and You Tube.

Trivia Question 2b: Astronomy Fundamentals (AFSIG) and Ladies Night Out (LNO) resumed activities this month by meeting on Zoom. For questions regarding AFSIG contact Conner Justice at: fundamentals@tucsonastronomy.org.

For questions about Ladies Night Out, contact Susan O'Connor at:

calendar-designer@tucsonastronomy.org

or Terri Lappin at:

Terrilappin@tucsonastronomy.org.

Trivia Question 2c: The Coordinator of the Astronomy Imaging SIG is Tom Rolfsmeyer, not Rothsmeier. I apologize for the error in last month's Notes. Remember AISIG is meeting every month on Zoom if you need information contact Tom at:

astro-photo@tucsonastronomy.org.

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: John Mead
Email: [cac-director\[at\]tucsonastronomy.org](mailto:cac-director[at]tucsonastronomy.org)
Phone: 618-521-4270

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.

Astronomical League Observing Programs

The Astronomical League Observing Programs are designed to provide direction for your observing, teaching you skills useful for the full enjoyment of our hobby. Each program has a set of requirements. Upon completion of the requirements, you qualify for a certificate and are awarded a pin. This program is only for those who are members of the Astronomical League.

Upon completing the requirements for a program, submit your observations to the TAAA ALCOR. Our ALCOR will review them and then forward them onto the appropriate program coordinator for further review. If they are complete you will be awarded your certificate and pin at one of our meetings.

For more information, ask our ALCOR or visit <http://www.astroleague.org/observing.html>



Our ALCOR is Doug Smith

Beginner Programs

- ◆ Binocular Double Star Program
- ◆ Binocular Messier Program
- ◆ Constellation Hunter Program
- ◆ Dark Sky Advocate Award
- ◆ Deep Sky Binocular Observing Program
- ◆ Galileo Observing Program
- ◆ Lunar Observing Program
- ◆ Messier Observing Program
- ◆ Meteor Observing Program
- ◆ Outreach Observing Award
- ◆ Sketching Observing Award
- ◆ Sky Puppy Program
- ◆ Solar System Observing Program
- ◆ Southern Skies Binocular Program
- ◆ Universe Sampler Program

Intermediate Programs

- ◆ Advanced Binocular Double Star Observing Program
- ◆ Asteroid Observing Program
- ◆ Caldwell Observing Program
- ◆ Carbon Star Observing Program
- ◆ Comet Observing Program
- ◆ Double Star Observing Program
- ◆ Earth Orbiting Satellite Observing Program (EOSOC)
- ◆ Globular Cluster Observing Program
- ◆ Lunar II Observing Program
- ◆ Open Cluster Observing Program
- ◆ Planetary Transit Special Observing Award
- ◆ Southern Skies Telescope Observing Program
- ◆ Sunspotters Observing Program
- ◆ Stellar Evolution Observing Program
- ◆ Two in the View Observing Program
- ◆ Urban Observing Program

Advanced

- ◆ Advanced Binocular Program
- ◆ Analemma Observing Program
- ◆ Arp Peculiar Galaxies Northern Observing Program
- ◆ Asterism Observing Program
- ◆ Bright Nebula Observing Program
- ◆ Dark Nebula Observing Program
- ◆ Galaxy Groups and Clusters Observing Program
- ◆ Herschel 400 Observing Program
- ◆ Herschel II Observing Program
- ◆ Hydrogen Alpha Solar Observing Program
- ◆ NEO Observing Program
- ◆ Occultation Observing Program
- ◆ Planetary Nebula Program Observing Program
- ◆ Radio Astronomy Observing Program
- ◆ Variable Star Observing Program
- ...and more including the Master Observer Award