TAAA DESERT SKIES BULLETIN

Observing Our Desert Skies Since 1954

March 2022

www.tucsonastronomy.org

Membership Meeting

March 4 @ 6:30 pm - 9:00 pm

TAAA's next general member meeting will be held online on Friday, March 4, 2022. The Main Presentation starts at 6:30 PM, followed a Members Only meeting. with a bylaws change vote along with other subjects. The Main Presentation is open to the public via Facebook at https://www.facebook.com/TucsonAstronomy/. Members should attend the meeting via Zoom. The Zoom link will be sent to members before the meeting.

Main Presentation at 6:30 AZT

Pathways to Discovery in Astronomy and Astrophysics in the 2020's: The Astro2020 Decadal Survey

Every 10 years Congress charges the National Academy of Sciences with undertaking a survey of Astronomy and Astrophysics over the coming decade. The "Astro2020 Survey", carried out by a main survey committee and roughly a dozen expert sub-panels, identified the most compelling scientific questions to be addressed, and recommended a comprehensive strategy by the National Science Foundation (NSF), National Aeronautics and Space Administration(NASA) and the Department of Energy (DOE) to address those objectives. This survey—in which several Arizona astronomers participated—also fully addressed, for the first time, the state of the astronomy profession and its societal impacts. Dr. Kennicutt's talk will cover some of the highlights from the report (released last November), followed by time for questions and discussion.

Bio: Robert Kennicutt studies observational extragalactic astronomy, and holds part-time faculty positions at Steward Observatory and Texas A&M University. He has worked at the University of Arizona since 1988, with a break in 2005-2017 to serve as the Plumian Professor of Astronomy and Experimental Philosophy at the University of Cambridge. He is a Fellow of the Royal Society of London, the Royal Astronomical Society, the American Astronomical Society, and a member of the National Academy of Sciences. Along with Fiona Harrison at Caltech, he co-chaired the Astro2020 Decadal Survey.

Members Only Meeting after main presentation:

Vote on Constitution and Bylaws Changes will follow a final presentation of the changes. We will be using a Zoom vote.

This will be followed by Zoom breakout rooms discussing various subjects at members' discression.

Notes From The President

by Mae Smith

February 2022

As the weather keeps shifting, TAAA adjusts accordingly. So, our star parties keep happening and growing. We have a number of star parties scheduled in the next month with two of them involving at least 25 people traveling to our dark sky sites. One is nonpaid and involves a Tucson school-aged group taking a bus to CAC. The second is a paid star party that is scheduled at TIMPA. For the last six months, we have been making improvements at TIMPA including clearing a direct path to the restrooms, increasing signage, painting the borders of the telescope pads, and exploring some seating options. It is exciting to recapture a type of Pre-Covid use of CAC and have increased community use of TIMPA

.

The TAAA Board met on February 9th and some of its activities included the following:

1. The Board passed some organizational motions related to future work on the Member Observatory Project that provided for an accounting structure for the project and provided John Kalas, as the Construction Coordinator, with needed, specific Power of Attorney and negotiation powers and procedures for contracts and change orders.
2. Input was solicited regarding the Member At Large positions and the term of office for the next two years for each position (assuming passage of the proposed CBL change). The current Members At Large each intend to re-run for election in 2022 and agreed that in 2022 Gus Gomez would run for one year and Ralph Means and Doug Smith would each run for two year terms. (From the 2023 Election on, all persons running for MAL would run for two year terms.)
3. The OPA vote system that was used in the 2021 election will be used in the 2022 election.
4. SMSIG was given permission to file application to participate in the national Webb education project without Board review since the deadline is February 25th. The Board will review the application at the March meeting and the application may be left active or may be withdrawn with no penalty from the James Webb Project.
5. TIMPA scheduling on the website will be updated to reflect an upcoming change in dates.
6. Messier Marathon is scheduled for March 5th at CAC.
7. Some subgroups have been appointed to work on specific parts of the Member Observatory Project.
8. Some bids will be sought soon for various subsets of CAC projects.
9. The CAC online reservation system is undergoing a trial period and seems to have been working well. Reservations for CAC should be made through the online system and can only be made by TAAA members. TAAA members may log in to Member Planet using their password and file for a CAC reservation. To locate more detailed information about CAC (Rules, Directions, etc), go to the TAAA website at Tucsonastronomy.org, Click on TAAA Resources, click on Observing Sites – CAC.

An overview update of TAAA Minor Policy was given including testing of Hybrid video protocols and background checks. The Member Meeting Fundamentals of Minor Policy Training held in February was very successful and well-attended. TAAA will hold the training in a meeting yearly and the training may be completed online by anyone who cannot attend the meeting. Any overnight stays with youth at dark sites will require the additional one-hour TAAA Advanced Minor Policy Training. Forms for leaders are available online. The GCSP is covered by NPS policy for working with minors since all astronomy volunteers are required to register as NPS volunteers. The GCSP is the only TAAA activity for which the TAAA Minor Policy does not apply.

February 2022 Notes from the President ADDITIONAL INFORMATION:

GRAND CANYON STAR PARTY 2022–South Rim: The 2022 GCSP will be an in-person event spanning from June 18-25. TAAA will, as usual, be managing our same limited number of free campsites for astronomer volunteers. Those campsites will additionally be available to us for early set-up on Friday June 17th. Please note that many of us have years of past memories of GCSP events that occurred prior to COVID-19. **We are not yet sure of the details but we know that the 2022 GCSP will differ from those in-person events of previous years due to COVID mitigation measures**. Due to the extra planning for those mitigation measures, we do not envision operating on the same time-lines as previously. **The 2022 TAAA GCSP Registrar** is awaiting the GCSP Committee's joint work between TAAA and NPS to make some impending decisions necessary to grant permission for her to send out the first official notice. **Please be patient** as we simply cannot pass on information to you that we don't yet have. We will post updates on the TAAA website as more and more questions can be answered. See http://tucsonastronomy.org/upcoming-events/grand-canyon-star-party/ for the latest information.

TIMPA: As mentioned above, the TIMPA Working Group has been gradually making improvements at the TIMPA site. TIMPA has some darker viewing, especially toward the North and West, than many locations in Tucson. While TIMPA use has decreased some during COVID, now, before summer monsoons, is a great time to come and enjoy the site. Come and support the efforts of the TIMPA Working Group to provide TAAA with a pleasant, very workable Tucson site.

TAAA Astronomy Festival. Each year TAAA holds an Astronomy Festival. (This is a substitute for the international Astronomy Day which occurs too far into the Summer Tucson heat to be workable here.) This year, as for several years, the TAAA Astronomy Festival will be held at Brandi Fenton park. Please drop by and help out, if you can, on **April 9th**. There will be solar viewing from 3:00-6:30 and night viewing from 7:30-9:00pm. We will have a raffle for a telescope. We also help people learn to use their own scope and special activities for children are offered during the day. Come, share the fun!! This is a great event and it is a great place to see some of the variety of services TAAA offers!!

TAAA Desert Skies Bulletin
David Rossetter – Editor
Terri Lappin & Jim Knoll - Proofreading
Greg Ruppel -Images;
Ken Bertschy - Graphics

Nominations and Volunteer Resource Committee

by David Rossetter

TAAA Election 2022

Candidate Volunteers Needed!

The TAAA Leadership Election is on May 6, 2022, at the monthly Membership Meeting. Before this can happen, the Nominations and Volunteer Resource Committee (NVRC) must put together a list of nominees for each position. The first step is to find interested TAAA members who want to help lead the club. We hope you will be interested in serving the club in an elected position on the Board of Directors or the Nominations and Volunteer Resource Committee.

The NVRC has prepared candidate "packets" for the different positions. These packets are compressed .pdf files containing Job Descriptions, informative documents that govern the club and provide policy guidance such as the Constitution and Bylaws (with important sections for each position highlighted), and good information such as our Articles of Incorporation. In addition, we have a candidate biography form to be filled out and returned to the NVRC. Packet access is through the Members Only section of the TAAA Web Site. Use your MemberPlanet login to access the TAAA Landing Page. After logging in, you will find the link in the list on the right of the Landing Page. Or just email the NVRC and we will send you the link. We would appreciate hearing from you soon with a real commitment by the end of February. We can move that deadline into early March.

We have open (no-incumbent) positions for Vice-President and Treasurer. Please talk to us about the desired qualifications for these positions.

Timeline

- February – Find and Evaluate Candidates
- March – Final Candidate Interviews and Selection
- April – Announce Candidates before and at Membership Meeting
- After April Meeting to One Week Prior to May Meeting – Write-In Candidates
- May Membership Meeting – Vote!
- Details on process and voting procedures to come

Voting Procedures Changes This Year

If the Constituion and Bylaws change is approved, there will be some changes in the election this year. First, the Secretary and Treasurer will be elected to a two-year term. The President and Vice President will be elected to a one-year term (this time only) to set up staggered terms with the Secretary and Treasurer. Next year the President and Vice President will be elected to a two-year term.

Two of the Members at Large will be elected to a two-year terms and one Member at Large will be elected to a one-year term. **MAL candidates must select whether they are running for a two-year or one-year term. For the actual vote, the top two vote getters running for a two-year term will win the two-year term election. The top one-year term vote getter wins that vote.** There is no "cross-over" between the positions this year. This one-time procedure is to set up the staggered MAL postions.

As always, please contact the NVRC if you have any questions.

David Rossetter - Chair, John Christensen, Alen Force

Proposed Constitution & Bylaws Changes Vote

The March 4, 2022 General Membership Meeting will include a vote on two proposed changes in the Constitution and Bylaws. This will occur during the member-only meeting on Zoom. Only voting members will be sent a Zoom link via email to the meeting. If you are not a voting member, you will need to watch the public presentation via Facebook and will not have access to the member-only portion of the meeting.

The first set of proposed changes were created to lengthen the terms for the Board of Directors from one year to two years. It was felt by the Board and the NVRC that there were several advantages to having longer terms, the main one being consistent leadership. Additionally, the Board recommends that the board members are elected in a staggered cycle, four members elected during even numbered years and three members being elected during odd numbered years. This reduces the number of candidates required for each election cycle simplifying the election process. The proposed changes below reflect these ideas.

ARTICLE III; Section 2.
Election of the Board of Directors: … Elected and ex-officio members of the Board of Directors shall hold office for a term of ~~one year~~ two years *(with the exception spelled out in Article IV Section 3, paragraph 8c)* beginning on June first and until their successors are elected or qualified.

ARTICLE IV; Section 3. *(Add Paragraph 8)*
8. The election for the members of the Board of Directors shall be staggered as follows:
   a. During even numbered years, starting with the 2022 election, the Secretary, Treasurer and two Member At Large positions shall be up for election.
   b. During odd numbered years, starting with the 2023 election, the President, Vice President and the third Member At Large position shall be up for election.
   c: This paragraph applies only to the 2022 election. To start the staggered pattern the President, Vice President and the third Member At Large position shall be up for election, but shall be elected to one year terms.

The second set of changes involves not allowing family members to run for election or hold positions on the Board of Directors at the same time.

Add to Article 3, Section 2 after sentence pertaining to age limits:
Members of the same family may not run for election in the same election cycle or hold positions on the same Board. For purposes of this paragraph, "same family" refers to spouses, domestic partners, children, siblings, whether by blood, by current marriage (an in-law) or by prior marriage (for example a step son/daughter).

Ballot Language:

I approve the Constitution and Bylaws change (presented through the January 24, 2022, all-member email and February 4, 2022, General Meeting) which changes all Board of Directors term lengths from one year to two years and defines a staggered election cycle. (YES/NO)

I approve the Constitution and Bylaws change (as presented in the January 24, 2022, all-member email and February 4, 2022, General Meeting) which prohibits family members (as defined) from running for or serving on the Board of Directors at the same time. (YES/NO)

The vote will be a simple Zoom ballot live during the member-only portion of the March 4th General Membership Meeting.

School/Public Star Party Requests

March 2022

by Jim Knoll

Thank you for volunteering your time and talents for our extremely important outreach mission. Below is the Star Party list for March, 2022. Please let me know if you can support any events listed below. If you are new to Star Party outreach, let me know and we'll be sure to help you get started. It is important you sign up for star parties if you plan to attend, whether you bring a scope or help in other ways, so I can manage who from TAAA will be on-site and for you to be included in any reminder or weather emails.

The public Astronomy Events are also listed on the TAAA (tucsonastronomy.org) and Night Sky Network (NSN) (nightsky.jpl.nasa.gov) calendars. Also, all PUBLIC star parties will be listed on the TAAA Facebook events page and will be updated based on weather, etc. in real-time. You can follow any of those events and get a notification when I update the event. Again, this is only for PUBLIC star parties listed on Facebook. Contact Jim Knoll

Wednesday March 2 -- EAST TUCSON
St. Augustine Catholic High School
8800 E 22nd.
Grades 9 - 12; 150 Participants; **FILLED**
Setup Time: 6 pm. Start: 6:30 pm. End: 8:00 pm.
Nearest Moon Phase: New
Directions: East on 22nd past Pantano Parkway. Entrance to the school will be off 22nd and S Camino Seco (sign for the school at that intersection).
Viewing Location: Parking Lot. Spaces will be reserved so you can set up behind your vehicle.

Thursday March 3 -- NORTHWEST TUCSON
Leman Academy of Excellence
7720 N Silverbell Rd, 85743
Grades K - 7; 250 Participants; 4 Scopes Needed
Setup - Telescopes: 6 pm. Start: 6:30 pm. End: 8:00.
Nearest Moon Phase: New
Directions: I-10 Exit 246 (Cortaro Road). West on Cortaro to Silverbell. South on Silverbell a short distance to school on the left.
Viewing Location: School Courtyard.

Thursday March 3 -- WEST TUCSON
Americschools Academy @ Cooper Center for Environmental Learning
5403 W Trails End Rd, 85745
Grade 4; 25 Participants; 2 Scopes Needed
Setup Time: 6:15 pm. Start: 7 pm. End: 8:30 pm.
Nearest Moon Phase: New
Directions: West on Grant Rd, becomes Silverbell, becomes Ironwood Hills Drive which dead-ends at Camino De Oeste. Turn south. ALTERNATE: West on Speedway west of I-10. North on Camino De Oeste. Both paths: Turn west on Trails End Road and follow signs to "Cooper Center".
Viewing Location: Open area near restroom facilities. Access the site from the dirt road at the east end of the main parking lot (near the dumpsters).

Wednesday, March 9 -- BENSON (Kartchner Caverns State Park)
Paulo Freire Freedom School - Downtown (STEM School)
2980 S Hwy 90, Benson
Grades 6 - 8; 28 Participants ; 2 Scopes Needed
NSN Toolkit Requested: Black Hole Survival Kit
Setup Time: 6:15 pm. Start: 7 pm. End: 9 pm.
Directions: I-10 Exit 302. South on Highway 80 approximately 9 miles to Kartchner Caverns State Park. Proceed to the Group Campground location.
Viewing Location: Kartchner Caverns State Park Group Camping Area.

Thursday March 10 -- WEST TUCSON
Borton Elementary @ Cooper Center for Environmental Learning
5403 W Trails End Rd, 85745
Age/Grade Level: Grade 4
Participants: 25
FILLED
Setup Time: 6:15 pm. Start: 7 pm. End: 8:30 pm.
Nearest Moon Phase: First Quarter
Directions: West on Grant Rd, becomes Silverbell, becomes Ironwood Hills Drive which dead-ends at Camino De Oeste. Turn south. ALTERNATE: West on Speedway west of I-10. North on Camino De Oeste. Both paths: Turn west on Trails End Road and follow signs to "Cooper Center".
Viewing Location: Open area near restroom facilities. Access the site from the dirt road at the east end of the main parking lot (near the dumpsters).

Thursday, March 10 -- CENTRAL TUCSON
Alice Vail Middle School
5350 E 16th St.
Grades 6 - 8; 200 Participants: **FILLED**
Setup Time: 6 pm. Start: 6:30 pm. End: 8 pm.
Moon Phase: First Quarter (moon viewing until dark)
Directions: From Craycroft and Broadway, south on Broadway until 16th St. Right on 16th and the school is on the left.
Viewing Location: School yard south of buildings adjacent to cafeteria.

Friday March 11 -- FAR SOUTH (GREEN VALLEY) (NRPR) - Canoa Ranch
5375 S I-19 Frontage Road
All Ages; 50 Participants; 2-3 Scopes Needed
Setup Time: 6 pm. Start: 7pm. End: 9 pm.
Nearest Moon Phase: First Quarter
Directions: I-19 South to Exit 56. Cross under the interstate and take the frontage road north to the park entrance.
Viewing Location: Open area center of complex.

Saturday March 12 -- NORTHEAST TUCSON (NRPR) - Agua Caliente Park
12325 E Roger Road, 85749
All Ages; 50 Participants; **FILLED**
Setup Time: 6:15 pm. Start: 7 pm. End: 9pm.
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).

Sat - Sun March 12-13 -- CENTRAL TUCSON
Tucson Festival of Books @ UA Mall (SOLAR)
University of Arizona Mall
All Ages; # Participants: Lots
4 Scopes Needed (2 morning and 2 afternoon shifts) or all day if you prefer. Specify date and shift when volunteering. Still need one scope for Saturday morning and one for Sunday morning and afternoon. Volunteers to man the TAAA Booth and Night Sky Network Toolkit activities (specify morning, afternoon, both shifts, or specify time available)
Morning Shift: Setup: 7:30am Start: 8:30am End:1pm
Afternoon Shift: Setup: 12 Start: 1pm End: 5:30pm
Directions: UA Mall (S of Flandrau Science Center)
Viewing Location: Science City Tent.

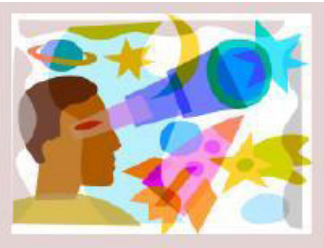
Sunday March 13 -- UA Campus
UA American Society of Preventive Oncology
UA Environment & Natural Resources (ENR2)
(1064 E Lowell St)
Adults; 250 Participants: 3 Scopes Needed
Setup Time: 6 pm. Start: 7 pm. End: 9 pm.
Nearest Moon Phase: Between First Quarter and Full
Directions: Unload and park in loading zone between ENR2 building and NWS building. The gate with access should be open. Take elevator to rooftop.
Viewing Location: ENR2 Roof

Tuesday March 22 -- CENTRAL TUCSON
Whitmore Elementary School
5330 E Glenn St.
Grades K - 5; 100 Participants
FILLED; 1 Toolkit Needed
Setup Time: 5:30 pm. Start: 6 pm. End: 7:30 pm.
Nearest Moon Phase: Third Quarter
Directions: From Grant/Swan. North on Swan. East on Glenn St. School on southside of Glenn 1/2 between Swan & Craycroft.
Viewing Location: Playground (field). Enter school property on west side and enter field through double gate. Viewing on southside of main building.

Saturday March 26 -- EAST TUCSON
Radio Society of Tucson (SOLAR)
8711 E Speedway Blvd
All Ages; 100 Participants;**FILLED**
Setup time: 7:15 am. Start: 8 am. End: 11 am.
Directions: Speedway Blvd at Camino Seco. Turn N at Camino Seco to Calvary Tucson East Church.

Saturday March 26 -- FAR WEST TUCSON
(NRPR) - Tucson Mountain Park Ironwood Picnic
7300 W Hal gras Road,
All Ages; 50 Participants; **FILLED**
Setup Time: 6:15 pm. Start: 7 pm. End: 9 pm.
Nearest Moon Phase: 3rd Quarter
Directions: On Kinney Road, 1.5 miles south of Gates Pass Road or 3.8 miles north of Ajo Way.
Viewing Location: Right side of road (parking pullout) near the 2nd restroom facilities (right side of road) at the Ironwood Picnic area (~3/4 of way into picnic area or approximately .6 miles).

Special Interests Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

I am delighted with the support shown by TAAA members for our exhibit at the Tucson Festival of Books/UA Science City! This in-person event takes place on the weekend of March 12 & 13 at the University of Arizona campus. We have a full slate of volunteers for both the exhibit and the solar observing!

A training session will be held for exhibit volunteers on Sunday, March 6th at 1pm. We'll meet in the lobby of Steward Observatory, 933 N Cherry Ave, on the UA Campus. You will have time to practice our activities. This year's theme is the search for life on Mars and beyond. The front doors at Steward will be locked. Contact Terri Lappin, 520-977-1290, if you are late.

If you aren't a volunteer, then I hope you'll attend the book festival and come visit our exhibit which will be located someplace on the mall in front of the Lunar & Planetary Lab building. Even though it's an outdoor event, due to the sheer number of attendees, masks will be required.

On April 9th, 3pm to 9pm, the TAAA will host the 2022 Astronomy Festival which will be held at Brandi Fenton Memorial Park, located at River and Alvernon. We will have educational activities and telescope viewing. Please help us share our hobby with the people of Tucson. Look for more information next month or contact Terri Lappin or Jim Knoll.

SMSIG on the Web

Astronomy Fundamentals SIG

by Connor Justice

The next meeting is March 10th at 6:30 pm - 8:00 pm. Topics to be determined.
Contact Conner Justice for Zoom link and more information.

AFSIG on the Web

Access videos of previous meetings through the Members Only section of the TAAA web site.

TAAA Ladies Night Out

by Susan O'Conner

TAAA Ladies Night Out

Ladies' Night Out is a social interest group for women members of the club. The group meets once a month at a local restaurant for fellowship and conversation. If you are interested in Ladies' Night Out, please contact Susan OConnor

Thursday, March 17
6:30pm

El Charro Cafe
311 N Court Ave
(Near the SW corner of W Franklin and N Court)

Preview the menu at http://www.elcharrocafe.com/

RSVP Susan

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting is Monday, March 21 @ 7:00 pm via ZOOM. AISIG meetings going forward will be on the 3rd Monday of each month. Email Gregg Ruppel for the ZOOM link or find it in the TAAA Forum.

Check out AISIG On the Web or contact Gregg Ruppel for the latest information and Zoom links. Gregg and the AISIG folks are very active on the TAAA groups.io forum. Check out all the helpful advice and amazing images there. For more information or instructions on how to join the forum, check out the TAAA Forum.

Imagers, to help ensure that the TAAA Desert Skies Bulletin has explicit permission to publish your fine work, we need you to submit your images directly to Gregg Ruppel, our Image Editor and Astro-Imaging SIG guru. Or come up with alternative arrangements with Gregg. To keep the bulletin at a reasonable size, we would like you to restrict the size of your images to around 10MB (a little over is okay if needed). That way, I do not have to mess with your files. If you desire, please include a link to the full-size version so our members can see your work in all its glory. Finally, if you do submit an image (or more), I will include you in a pre-publication version of the bulletin for your approval of the quality and layout. Feel free to ask me (David Rossetter – Desert Skies Bulletin Editor) or Gregg if you have any questions.

December Highlights from the Astro-Imaging SIG

From: Tom Eby

M77 has a very bright active AGN core, is about 27 MLY distant while NGC 1055 is around 57 MLY.

61 x 2 min f/2.2, asi2600 camera. Unguided CEM70ec mount. 1-degree field.

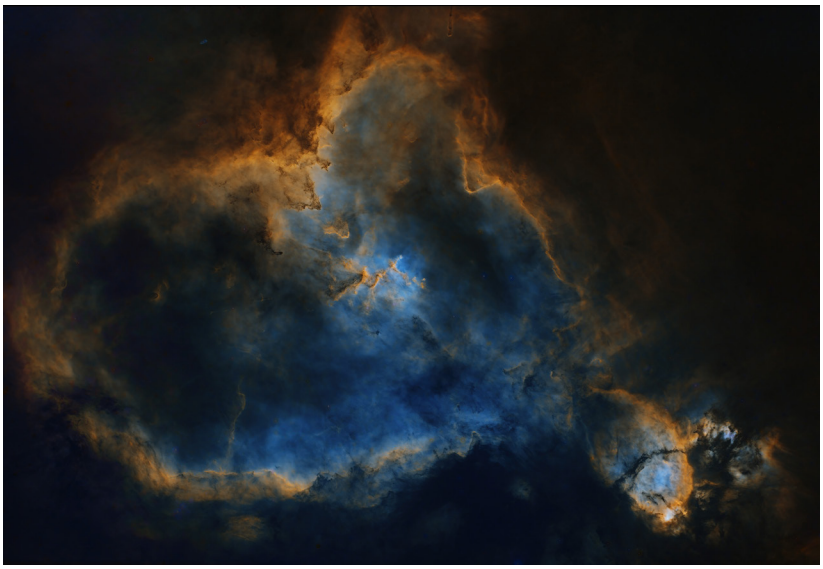
NGC 680 group

The wide field image is about 1 degree sq.
Taken 12/01/2021.
R11 f/2.2, asi2600, unguided CEM70ec.
110 min total exposure. 0.63 as/px.

M74 from Tom Eby

This is a 170 min total exposure taken 12/5/2021.

Unguided CEM70ec, asi 2600 OSC, no filters.

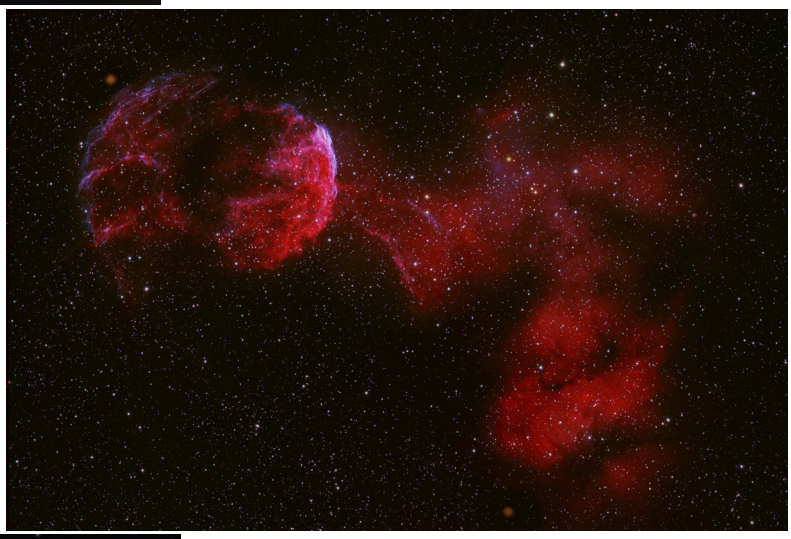


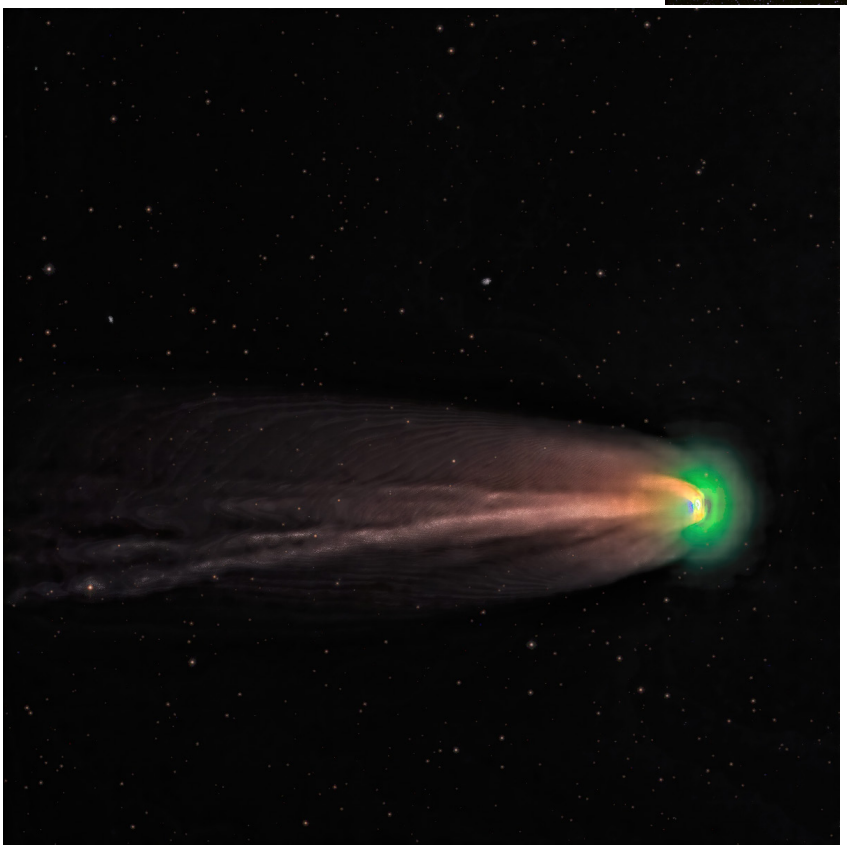
Heart nebula
(starless) from Randy Smith

https://astrob.in/b7x5ev/0/
C11w/ HyperStar, ASI 2600 MM-P,
20x180 for each SHO filter.

IC 443
from Randy Smith

C 405 Bi-Color image (H/O/O) 1/9/22
C11, ASI 2600MM, 37 3 minute
exposures with Ha and 47 with Oiii filter.





Comet Leonard
from Alex Woronow

OTA: PlaneWave 17" f/6.8
Camera: FLI ML16803
Observatory: Deep Sky West, Chile
EXPOSURES:
1 each L,R,G,B: 60sec
Processed by Alex Woronow (2022)
using PixInsight, Topaz

Observing Sites

CAC & TIMPA are open at full capacity (all pads are open).
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.
Remember, reservations are required! (see below)

TIMPA

by Ralph Means

TIMPA (Tucson International Modelplex Park Association), Dark Sky site west of the Tucson Mountains.
TIMPA on the Web

TIMPA Star Party Dates this month: ***March 4 and 5*** (Newly added)
March 25 and 26

Location: The TIMPA observing site is located a few miles beyond the Desert Museum (3250 N. Reservation Road, Tucson, AZ 85743).

The TIMPA site is only partially improved. There are no inside buildings provided other than restrooms. TAAA does not provide seating (members are welcome to bring folding chairs). Please note that members visiting the TIMPA site may encounter things commonly found in partially improved desert areas such as desert creatures and/or their remnants (such as gopher holes or ant hills), uneven terrain, weeds and desert pollens. Members using the site are encouraged to bring red lights and to move cautiously taking appropriate safety measures. The site does not have potable water, so bring your own non-alcoholic drinks.

Please contact the TIMPA Director to make a reservation: Ralph Means

Chirichaua Astronomy Complex

by Jim Knoll

CAC Weekend Dates coming up (Friday/Saturday):

March 4 – 5 (New Moon March 2, CAC Messier Marathon March 5)
April 1 - 2 (New Moon March 31)
April 29 – 30 (New Moon April 30; Member Star-B-Que April 30)

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 make a reservation on the CAC Webpage at CAC Reservations.

Unless you are qualified to open and close the site, dates will be limited to those around the New Moon and are listed on the CAC web page. Hosted personnel are generally on site a few days before and after these dates. All facilities are currently open, but the Board will review COVID status each month.

Messier Marathon. *We will be doing one at CAC Saturday evening March 5th into Sunday morning March 6th. We will have a few volunteers to help you along if needed. This is a great opportunity to socialize while searching out marathon objects. We will also have the grills available for an impromptu Star-B-Que before observing Saturday, so bring something to grill or eat. Make a reservation per the above link.*

CAC Director: Jim Knoll CAC on the Web

Observing Sites Star Party Dates 2022

TIMPA
February 11 and 26
Match 4 and 5
March 25 and 26
April 2 and 23 and 29
May 20 and 21. 27 and 28
June 24 and 25
July monsoon season no dates set.
August monsoon season no dates set
September 23 and 24
October 21 and 22
November 18 and 19
December 16 and 17.

CAC
January 28 – 29 (New Moon January 31)
March 4 – 5 (New Moon March 2, CAC Messier Marathon March 5)
April 1 – 2 (New Moon March 31)
April 29 – 30 (New Moon April 30; Member Star-B-Que April 30)
May 27 – 28 (New Moon May 30)
June 24 – 25 (New Moon June 28)
July 29 – 30 (New Moon July 28)
August 26 – 27 (New Moon August 27)
September 23 – 24 (New Moon September 25)
October 21 – 22 (New Moon October 25)
November 25 – 26 (New Moon November 23)

In Tribute Ad Astra

We are sorry to announce the death of long-term TAAA member, Deborah Soule. Deb passed away peacefully on Sunday, January 30, 2022, in the home of a family that she had started living with after COVID in 2021.

Deb and her husband, John, were regular TAAA participants for years. John loved to assist with star parties. After his eyesight became limited, John loved to talk about the last official TAAA star party he helped conduct as part of an Eagle Project with disability modifications at the School for Deaf and Blind in Tucson.

After John and Deb moved to assisted living, they still stayed in touch with TAAA: riding the bus to attend the opening ceremony for the RMO, asking TAAA to yearly conduct a star party for persons at their residence, faithfully attending the TAAA Holiday Party, and donating John's astronomy materials to TAAA. John presently lives at the Ranch Estates of Tucson. If you wish to send him a card, you may contact Mae Smith for a mailing address.

Deb is survived by her father and two sisters, as well as several nieces and nephews, most of whom live in Maine. She is remembered for her patience and kindness as well as a tenacious adherence to a walking routine. No memorial service will be held in Tucson, but one will be held with her relatives in Maine where her ashes will be spread. John has many positive memories of Maine, and it is planned for him to attend the service there.

Deb and John have been a valued part of our TAAA family for many years. They were missed at the Holiday Party this year. Deb's presence will continue to be missed by those of us who knew her. You may find the official obituary and a picture of Deb at https://tucson.com/lifestyles/announcements/obituaries/deborah-soule/article_da8fb734-865d-11ec-bf03-2b31401ec84b.html.

Memorial gifts may be made to the Humane Society of Southern Arizona.

by Doug Smith

What's Up list for March 2022 – April 2022

The following is a list of the objects for various AL observing programs that are well placed for observation during March and April 2022.

Constellation Hunter Program – Northern Skies
The following Northern Constellations are well placed for viewing during March and April:
Orion, Gemini, Taurus, Auriga, Leo, Lynx, Perseus, Canis Minor, Camelopardis, Monoceros

Messier Observing Program
The following Messier objects are well placed for viewing during March and April:
M42, M43, M1, M35, M36, M37, M38, M41, M46, M47, M48, M79, M45

Lunar Observing Program
The following dates are for the various phases of the moon listed in the Lunar program for March and April:

New Moon: March 2, April 1, April 30
40 Hours waxing: March 4, April 3
72 hours waxing: March 6, April 4
4 days old: March 7, April 5
7 days old: March 10, April 9
10 days old: March 13, April 12
Full (14 days old): March 18, April 16
Gibbous: March 24, April 23
72 hours waning: March 29, April 27
40 hours waning: March 30, April 28

Solar System Observing Program
The following is a list of planets that can be observed during March and April.

Mercury is visible in the morning sky during March. During April Mercury is an early evening object, at its brightest on April 15 and reaching greatest elongation on April 28.
Venus is an early morning object during March and April.
Mars is an early morning object during March and April.
Jupiter becomes an early morning object early March. By the end of April it rises about 1.5 hours before sunrise.
Saturn is an early morning object during March and April, rising earlier each day. By end of April it rises about 3 hours before sunrise.
Uranus is an early evening object during March and April, setting earlier each day. At the start of March it sets about 5 hours after sunset. By end of April it is setting less than ½ hour after sunset.
Neptune is an early morning object during March and April, rising earlier each day. By the end of April it is rising almost 2 hours before sunrise.
SPECIAL EVENT: March 29 – March 30: Mars, Venus and Saturn should be very close together in the early morning sky. All 3 planets are rising about 2 hours before sunrise.

Urban Observing Program
The following deep sky objects are well placed for observing during March and April:

M45, Hyades, NGC 1647, NGC 1807, NGC 1817, M38, M36, M42, NGC 1981, M37, M35, NGC 2169

The following non deep sky objects are favorably placed for viewing during March and April:
Trapezium, Gamma Leo, Beta Monoceres

Since September 1922, Steward Observatory has been hosting public evening lectures in astronomy. The lectures begin at 7:30 p.m. MST and will be held in Steward Observatory (933 N Cherry) Room N210 on the University of Arizona campus. The Raymond E. White, Jr. Telescope in the historic Steward Observatory Dome will be open for public viewing after the conclusion of the lecture, weather permitting!

All of the lectures and the use of the relescope are free of charge and open to the general public.

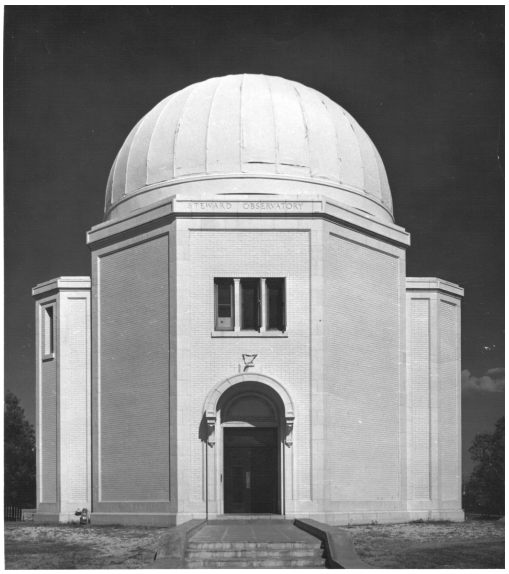
For more information, contact Dr. Thomas Fleming or at 621-5049.

Spring 2022 Lectures

For Spring 2022, if you attend the lecture in person, we ask that you wear a face mask while you are inside Room N210. Face masks will be available in the room should you need one.
Should you not wish to attend in person, you can watch the lecture LIVE on ZOOM.

March 14	Dr. Schuyler Wolff Steward Observatory	Looking Forward to JWST: Planetary Debris Disks
March 28	Mr. Ryan Endsley Steward Observatory	Looking Forward to JWST: The First Galaxies
April 11	TBA	
April 25	Dr. Megan Mansfield NASA Sagan Fellow Steward Observatory	Searching for Atmospheres on Rocky Planets with JWST

Stream past lectures here.



THE UNIVERSITY OF ARIZONA

BH PIRE Webinar Series: Spring 2022

The upcoming Black Hole PIRE series features the most advanced approaches to studying the astrophysics of the black hole in the center of the Milky Way. Four renowned astrophysicists will share their research around understanding the unique environment around Sagittarius A*.

All are welcome to join these remote talks. Each session will last one hour including Q&A and are designed as stand-alone topics. Please plan to join for any or all sessions and share this series with your colleagues.

Registration now open for initial webinar sessions. See links below.

March 29, 2022 1600 UTC	Our Galactic Center: A Unique Laboratory for the Physics & Astrophysics of Black Holes Andrea Ghez, UCLA | 2020 Nobel Prize in Physics
April 2022	Horizon Scale Physics Around Sagittarius A* Feryal Ozel, UArizona

Skyward

By David H. Levy

March 2022

Star Gazers

What crowd is this? What have we here? We must not pass it by;
A telescope upon its frame, and pointed to the sky...
William Wordsworth, 1806

While I was working on my master's degree at Queen's University in Canada some 42 years ago, I came across this poem, loved it, and decided to include it in my thesis. Norman MacKenzie, my thesis advisor, a scholar and a genius, pencilled one comment at the bottom of this poem: "Wordsworth wrote some wretched verse." Norman did not have much of a sense of humour, but I am still laughing at his written comment.

In his poem, Wordsworth complains about how many people who look through a telescope are disappointed in what they see. At no point in time is that idea more cogent than now. If a telescope we look through cannot offer us a view as good as a space telescope, then that telescope is a failure.

By the end of the poem, the crowd abandons the telescope:

"One after one they take their turns, nor have I one espied
That doth not slackly go away, as if dissatisfied."

Eureka, one of my telescopes.
Photo by David Levy.

For me, the night sky is far more than our imagined perceptions of what we can see through a telescope. Some of us can look at an internet photograph all day long, but not I. The beauty of the sky lies in its reality. The planets I see are real worlds. The constellations I point out to young observers contain real stars. One evening I asked a group if they had seen the recent eclipse of the Moon. "Yes," answered one, "I saw it online." No, he didn't. Eclipses are real only if you see them in the sky, while they are happening.

It is a given that a back yard telescope will never show us Jupiter as detailed or as colorful as a telescope out in space will. What that telescope does show us is the genuine sky, a sky without artificial color enhancement, a sky as it really exists on top of our heads on every clear night. It shows us a sky untarnished by the trivial events of the day, and unspoiled by petty concerns that are bothering us. Our own telescope truly shows us the Moon as it was a third of a second ago, a star as it appeared thirty-four years ago, or a galaxy as it appeared twelve million years in the past. Our back yard telescope shows us what is there, and unlike the crowd from 1806 that left dissatisfied, the people of today can understand that the sky they see is real.