

TAAA's next general member meeting will be held on Friday, May 7, 2021, and available online. The Main Presentation starts at 6:30 PM and is open to the public. A Members Only Meeting will follow. Non-members may attend the Main Presentation via Facebook at <u>https://www.facebook.com/</u> TucsonAstronomy/. Members should attend the meeting via Zoom. The Zoom link will be sent to members via email before the meeting.

Main Presentation at 6:30

Title: Science for Everyone: Empowering Students with Citizen Science and More

Presentation: Science-including astronomy-is a messy process of discovery. And science education doesn't always present the content in a way that actively engages students in the scientific process. At the same time, many science fields face challenges analyzing the wealth of data they collect. To help solve these challenges in astronomy, researchers have turned to citizen science through platforms such as the Zooniverse. These projects enable interested members of the public (adults as well as kids) to help analyze data by classifying galaxies, identifying features on Mars, or even isolating signals from meteoroids and near-Earth objects. Additionally, these projects create promising opportunities for students by broadening their science education to include contributions to ongoing research. And by integrating students' research contributions with their typical science classes and relevant real-life experiences, students gain a greater appreciation for science and improve their abilities to critically examine, understand, and use data.

May 7 @ 6:30 pm - 9:00 pm



Presenter: Christine O'Donnell is a postdoctoral researcher at Arizona State University with a joint appointment between the School for Earth & Space Exploration and the Center for Gender Equity in Science & Technology. Her current research focuses on developing and assessing science education curricular materials, and her past work also featured research into galaxy formation and dark matter. Christine completed her Ph.D. in Astronomy & Astrophysics at the University of Arizona in Summer 2020. Outside of her work, Christine enjoys crafting/ making hobbies, like glassblowing, crocheting, and knitting, and spending time with her cat.

Members-Only Meeting: We will be announcing the results of the annual leadership election during this time. The online vote closes at 7:00 during the meeting so be sure your vote is in by then.

See more about the election in the NVRC report later in this bulletin.

Stay tuned after the vote for the post-meeting, informal, breakout discussions!

A special thanks goes to our TAAA virtual volunteers and leaders for all their intense work in the last month. They have worked industriously during COVID but the last month has been particularly demanding. Various virtual productions have been completed and sent to the National Park Service as the majority of our TAAA contributions to the Virtual 2021 Grand Canyon Star Party (I think there is one more recording left to be completed early this month for GCSP). In addition, a team of volunteers worked to test and ensure that the TAAA Elections software would work properly. We had a wide-array of people donating time, energy, equipment, recording locations, and expertise to the 3:00 -7:30 productions of continuing event activities for our TAAA April 17th Astronomy Festival. And, of course, every month we have our behind the scenes as well as up-front contributors to the virtual Monthly Member Meetings. There is also our on-going TAAA Zoom Coordinator and all the TAAA leaders who reserve and conduct TAAA meetings on Zoom. Impressive is not only the quantity of member involvement and effort that has been contributed to these virtual efforts. But I am repeatedly impressed with the quality of those efforts.

As TAAA President, I love to share information about TAAA's move into the virtual world as I am always so proud of the level of quality of those efforts and the professional approach that our leaders and members take in their virtual work. I hesitate to list names as I am afraid I will unintentionally omit someone, but I will trust that our Bulletin Editors will assist and add names where appropriate:

GCSP virtual efforts: Jim Knoll, Jim O'Connor, Bernie Stinger, Rick Paul

Elections virtual efforts: David Rossetter, Ben Bailey, Ken Bertschy, John Christensen, Jim Knoll, John Mead, Ed Foley, Doug Smith

Monthly Meeting Virtual Efforts and Advertising: Terri Lappin, Jim Knoll, Karen Liptak, Sue Abramson Astronomy Festival Virtual Event: Jim Knoll, Terri Lappin, Jim O'Connor, Rick Paul, Bernie Stinger, David Rossetter, Tom Sarko, Gus Gomez

by Mae Smith

The TAAA Board met on April 14th and took the following actions:

1. The Board was provided with the recently filed 990 (income tax) report for review. A beginning budget for 2021-22 was reviewed. However, it will be updated prior to the next meeting to include input from leaders and voted on by the outgoing Board at the May meeting.

2. Information was provided that TAAA membership has increased during Covid from a low 400+ membership to 495 members on the date of the Board meeting. Considerable positive input has been provided from both local and distant TAAA members regarding having had opportunities to attend and participate in meetings virtually via Zoom and the hope that such opportunities will continue in the future.

3. The Board is in favor of continuing TAAA meetings on Zoom post-Covid so that the virtual component would continue to occur in addition to in-person meetings. However, the ability to continue Zoom in particular meetings will depend upon the availability of suitable technology support in rooms where meetings are held. It is still unclear where infrastructure to support Zoom will and will not be available in the future. This will be a consideration for leaders scheduling meetings.

4. Covid policies were reviewed with some attendance expansion at dark sky sites. Policies will again be closely reviewed at the next Board meeting to determine if further expansion is warranted. No change in First Friday Member Meetings is expected over the summer. (That is, they are scheduled to remain virtual only, according to UA requirements for availability of space.)

5. Planning is continuing for Member Observatory and Dob space development at CAC, based upon specific member-commitments. Donations have been received for a new storage container to be purchased for CAC.

6. A plan for development of a TAAA Endowment program has been approved and the option to donate to the TAAA Endowment Fund has been added to the website.

TAAA Trivia: Astronomy Day

- 1. What is Astronomy Day?
- 2. When was Astronomy Day in 1991 and what did TAAA do?
- 3. When was Astronomy Day in 2001 and what did TAAA do?
- 4. When was Astronomy Day in 2011 and what did TAAA do?
- 5. When is Astronomy Day in 2021 and what did TAAA do

Answers later in this Bulletin

School/Public Star Party Requests

by Jim Knoll

We are starting to get back into in-person Star Party activities. Anyone interested in supporting and feels comfortable with in-person, let me know. Some below are still requesting video/image displaying on a monitor.

Below is the Star Party list for May 2021. It includes 4 Star Parties. Let me <u>know</u> if you can support any of these events. 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 Astronomy Events are listed on the <u>TAAA</u> and <u>Night Sky Network</u> (NSN) calendars. You do not need to log in to see any PUBLIC events. You need to LOG IN to see the school/non-profit non-public star party listings. Also, all PUBLIC star parties will be listed on the <u>TAAA Facebook events page</u> 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.

NORTHEAST TUCSON - Agua Caliente Park

Saturday May 1 - Setup 6:45; 7:30 - 9:30 In Person - Limited Attendence to 50; All ages. 12325 E Roger Rd, Tucson. Viewing Location: Parking Lot Bus Lanes (north end of parking lot) Nearest Moon Phase: Third Quarter MUST REGISTER with Pima County

Chiricahua National Monument - Saturday May 8

In-Person - # Participants: 30, All Ages Chiricahua National Monument at Faraway Ranch 12856 E Rhyolite Creek Rd, Willcox 0 Scopes Needed. Jim O'Connor will give Walk Around the Night Sky & Bernie Stinger & Bryan Betcher with telescope observing using monitor. Setup Time: 6:30 pm 7:30 pm - 9:30 pm. NW TUCSON - Sanctuary Cove - Tuesday May 11 Setup 6:45; 7:30 - 9:30; # Participants: 100, All Ages 8001 N Scenic Dr, Tucson Viewing Location: Amphitheater Nearest Moon Phase: New

EAST TUCSON - Desert Christian HS @ K-8 Cmps. Thursday May 20 - Setup 6:30 pm 7:15 - 9:15 # Participants: 45, Grade 10-12 9415 E Wrightstown Rd., Tucson Viewing Location: Basketball Court / Sports Field behind school Nearest Moon Phase: 1 Quarter

Special Interests Groups

Starry Messengers

by Terri Lappin

With an increase in face-to-face events, the Starry Messenger SIG wants to reconnect with volunteers who want to support our outreach events through non-telescope means. We have around 100 activities, presentations, and projects to choose from spanning the entire range of astronomy topics. If you're interested in activities such as determining meteorites from Earth rocks, demonstrating eclipses, or talking about black holes, please consider volunteering for our Night Sky Network (NSN) Toolkit program. Best of all, most don't depend on the weather, which means we don't need to cancel outreach events due to clouds! To see a list of these projects (and download them), visit https://nightsky.jpl.nasa.gov/download-list.cfm. The TAAA has nearly all the materials to support these projects. We can train you or you can train yourself using videos from the NSN. Generally, we work in pairs so you can ease into the role of outreach volunteer by shadowing someone with more experience. For more information about the Night Sky Network Toolkit Program, contact Terri Lappin.

The next planning meeting of the Starry Messengers will be May 17th (yes, that's Tax Day) at 7pm. It will be a Zoom meeting. Contact <u>Terri Lappin</u> to receive the Zoom link.

The SMSIG held our first fully virtual Astronomy Festival in April. We will discuss how that went. While we plan to be in person next year, we will discuss how we might incorporate a virtual presence into the program going forward.

And, the word on the street is that the UA ScienceCity will return to the Tucson Festival of Books in 2022 as an in person event! Let's hope that holds true. The Starry Messengers need to begin discussing what topic and activity we want to do. We'll hold an open discussion during our May 17th meeting to bounce around some ideas.

SMSIG on the Web

Astronomy Fundamentals SIG

by Connor Justice

The next meeting is May 13th 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 to be determined. Check out <u>AISIG On the Web</u> or contact <u>Greg Ruppel</u> for the latest information and Zoom links

Gregg and the AISIG folks will be providing highlights of their work each month in this publication. In addition, they have been very active on the <u>TAAA groups.io</u> 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 <u>TAAA Forum</u> web page.

April Highlights from the Astro-Imaging SIG



The galaxy is pretty faint in visual scopes due to its large size and subsequent low surface brightness. It comes alive nicely for astrophotography. M101 is 21 million light years distant, with a diameter of about 170K light years. It's a massive galaxy, with an estimated 1 Trillion stars. Dwarf NGC 5477 is near the right center edge. It's an irregular at 20 million light years distance. Many fainter, much further galaxies are in the field.

M101 Galaxy in Ursa Major by Doug Summers. Full Size: <u>https://www.astrobin.com/full/hmy3p9/0/</u> CAC - March and April this year. 3.8 hours @ f/2.2 Celestron RASA 11; Camera: ZWO ASI183MC Pro; Filter: Hoya UV-IR Block; Software: PixInsight, CCD Inspector, Kstars/Ekos



M 83 lies pretty far south for N. American and most European observatories to do it justice. This image from Chile shows much of the color and detail that this relatively nearby (4.5 Mpc) spiral galaxy offers. It is a "grand design" spiral galaxy. "Grand design" means that it has distinct spiral arms extending for a large angular distance around the galaxy and discernable over much of its radius. In addition to the spiral arms, M 83 has a weakly expressed bar but no inner ring.

M83 Galaxy in Hydra by Alex Woronow. Full size image: <u>https://www.astrobin.com/bdh2qe/0/</u> Camera: SBIG STXL11002 with AOX and FW8G (0.63 arsec/pxl); Observatory: Heaven's Mirror, Chile EXPOSURES: R: 11 x 1200 sec., B: 7 x 1200, G: 6 x 1200, L: 18 x 1200. Total: 14 hours; PixInsight, ACDSee, SWT

Observing Sites

Effective May 1, 2021, CAC & TIMPA will be open at full capacity (all pads are open).

The COVID Rules are posted on the TAAA Website (<u>http://tucsonastronomy.org</u>) under the respective Observing Site (TAAA Resources, Observing Sites) and contain additional information.

TIMPA by Ralph Means

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

Location: The TIMPA observing site is located a few miles beyond the Desert Museum. TIMPA Director: <u>Ralph Means</u>



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 (see below). Reservations are on a first come – first serve basis. You need to reserve for both nights if observing both nights. <u>CAC on the Web</u>

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 webpage. Restrooms will be open. The RMO will be closed and NO access to the refrigerator in May (June status will be evaluated by the board in May).

We are implementing a <u>reservation form</u> on the website for all CAC reservations. Click <u>here</u> or click on the TAAA Web Site (<u>https://tucsonastronomy.org</u>), then the TAAA Resources tab, CHIRICAHUA ASTRONOMY COMPLEX (CAC) tab, CAC DARK SITE RESERVATIONS tab, and complete the form to make a reservation. I request you start using it to make your reservation. After the initial reservation then we can coordinate any changes via email.

CAC Director: Jim Knoll



Committee Reports

Nominations and Volunteer Resource Committee

by David Rossetter

The annual TAAA leadership vote is coming up. Online voting opens on May 2 and closes at 7:00pm during the May 7 General Membership Meeting. Results will be announced during the Members-Only portion of the meeting (after the public presentation).

You will be receiving a ballot from OpaVote.com on May 2nd with a link to vote. Be sure your email client is setup to receive an email from them. If you do not see it, check your spam filter. If you have any issues, email nvrc@tucsonastronomy.org and we'll try and fix the problem. The email will have full instructions how to vote.

Please review the detailed instructions in the NVRC email on April 12th. If you cannot locate it, you can review the email by logging on to MemberPlanet (the password protected area accessed from the MEMBERS ONLY tab on the <u>TAAA web site</u>. And here is the full list of <u>candidate biographies</u>.

After the vote, the NVRC will be focusing on finding a new Membership Manager. Since most of the tasks are now online, a new Membership Manager will be working with the MemberPlanet Manager and the Treasurer to redefine the job. Please let us know if you might be interested.

Finally, we are saying goodbye to Ben Bailey from the NVRC. After three years as the TAAA President and two years on the NVRC, Ben deserves some time off to do some observing! What a pleasure it has been to serve with him.

nvrc@tucsonastronomy.org

David Rossetter – Chair Ben Bailey John Christensen Ken Bertschy

Notes From The Editors

Your TAAA Bulletin Co-Editor met with the Publications Working Group this week. The general thrust of the conversation was to expand the scope of this publication. You see some of those ideas in this issue of the Bulletin. The AISIG report has expanded to include some of their images. We are publishing David Levy's monthly column he writes for the Vail Voice. And we are going to include Tributes to members who have passed on.

Look for a lot more next month. Please let us know what you think and share more ideas you might have. And we'd like to include contributions from you!

David Rossetter - Co-Editor

Board establishes the TAAA Endowment

In April, the TAAA Board appointed a committee of Paul Koss, Mike McDowell and Ed Foley to look at the feasibility of establishing an account to support an endowment fund. An endowment would be a fund to accept donations and bequests, whose purpose would be to generate income and grow its principle to support TAAA's ongoing financial needs into the future. With the TAAA's growing membership programs and fixed investments, a steady source of financial support can be an important help in the future. The committee met with the Community Foundation of Southern Arizona and a financial advisor to discuss the typical operation of such an account. Following the committee's investigations in March and April, it recommended the TAAA board open a brokerage account and establish an investment committee to monitor the account. The account should be able to accept donations of cash or stocks by May.

Tucson Stargazing on Your Own

TAAA quite often is contacted by visitors to Tucson, interested in seeing the city and experiencing the good stargazing they have heard about. We have generally responded with generic ideas about where to go and what to do around town. Over the past few months, we have been collecting ideas from members on the TAAAForum for more specific recommendations. We assembled those ideas into a page on our website - http://tucsonastronomy.org/tucson-stargazing/

Now, when we receive an inquiry, or when a visitor inevitably discovers our popular web site, they may easily find the answer to their question - where to go? If instead, we do receive an inquiry, we can send the visitor a link that will lead them to some area resources.

If you have any additions to stargazing locations you think we could add, please notify Ed Foley at webmaster@ tucsonastronomy.org.

Dark Skies Survey

This is a request from a researcher at Virginia Tech who is conducting a survey regarding Adaptive Street Lighting in urban environments. Their research team has no source of information from Tucson. The Principle Investigator asked for help in gathering survey data (an on-line action 15 minute task for any member desiring to participate) and he has requested TAAA member support.

Raj and his coworkers especially would like feedback about the Tucson street lighting system from folks here. They have had no survey responses from Tucson yet, and would appreciate help TAAA members.

Here is the link to the survey:

https://virginiatech.qualtrics.com/jfe/form/SV_4NqPO6YXo4TbsDc

by Doug Smith What's Up list for May 2021 – June 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 May and June for the more common observing programs.

Constellation Hunter Program - Northern Sky

The following constellations are well placed for observing for May and June: Bootes, Canes Venatici, Coma Berenices, Corona Borealis, Draco, Leo, Leo Minor, Sextans, Ursa Major, Ursa Minor

Messier Observing Program

The following Messier Objects are well placed for observation during May and June (listed in ascending RA): Its galaxy time! M108, M97, M65, M66, M109, M98, M99, M106, M61, M100, M40, M84, M85, M86, M49, M87, M88, M89, M91, M90, M58, M68, M104, M59, M60, M94, M64, M53, M63, M51, M83, M3, M83

Lunar and Binocular Lunar Observing Program

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

New Moon: May 12, June 10 40 Hours waxing: May 14, June 12 72 hours waxing: May 15, June 13 4 days old: May 16, June 14 7 days old: May 20, June 17 10 days old: May 23, June 20 Full (14 days old): May 27, June 24 Gibbous: May 4, June 2 72 hours waning: May 9, June 6 40 hours waning: May 10, June 7

Solar System Observing Program

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

Mercury is an early evening object for all of May, reaching greatest elongation on May 16. Goes behind the Sun becoming an early morning object in the last half of June.

Venus is an evening object during May and Jun e.

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

Mars is getting very low in the evening sky during May and June and setting earlier each day..

Uranus is an early morning object in May and June.

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

Urban Observing Program

The following deep sky objects are well placed for observing during May and June: Mel 111, M84, M86, M87, M104, M94, M64, M3

The following Double Stars are well placed for observation during May and June: Zeta Ursa Major

Lecture Series Offered by Whipple Observatory

51st annual "<u>New Vistas in Astronomy</u>" 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.

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

<u>May 12</u>: 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 <u>YouTube channel</u> for later viewing.

International Dark-Sky Association

From Ruskin Hartley, Executive Director of the International Dark-Sky Association (IDA): One of my favorites weeks of the year is <u>International Dark Sky Week</u>. Since 2003, people have come together to celebrate the beauty of a naturally dark night and raise awareness of light pollution as a pressing global issue with simple solutions.

I am happy to share some highlights from this year's celebration, held from April 5 - 12.

- We reached 5 million people in 69 countries through social media channels - a ten-fold increase over last year!

- IDA advocates and supporters hosted 113 events on six continents, including celebrations in Ethiopia, Bahrain, Ireland, and the United States.

- Our new graphics on light pollution were the most shared!

- There were at least 50 articles published worldwide, including on NBC News, Forbes, and The UK Daily Mail.

- Nashville, Miami Dade, and the State of Utah passed resolutions supporting dark sky week.

- One of our advocates, out together a fantastic video for the week featuring voices from around the world.

- All videos of the International Dark Sky Week 2021 celebration.

We're happy to share the detailed <u>Impact Report</u> here to give you an inside perspective of the reach.

Smithsonian National Air and Space Museum

Earth Day and Light Pollution (recorded): <u>Air and Space Live Chat</u>

Trivia Answers

by Mae Smith

1. What is Astronomy Day? Astronomy Day is now an International event that occurs twice a year. Astronomy Day was started in 1973 as an annual event in the United States by Doug Berger from California. It was designed to encourage interaction between the general public and astronomy enthusiasts. It originally was designed to occur only prior to the first quarter moon in May on a Saturday.

2. When was Astronomy Day in 1991 and what did TAAA do?

It appears that Astronomy day was May 11, 1991 and TAAA held a star party at Empire Ranch. At that time Empire Ranch was a large darker location that TAAA often used in addition to the TIMPA site we were renting and hoping to develop. Although Empire Ranch was quite dark, it had no facilities of any kind, including no restrooms and no water but it did have an interesting abandoned airplane runway. This event would have been a member star party event rather than a public event.

However, TAAA did have a public event in 1991 on May 17th and May 20th at the Sabino Canyon Parking Lot as part of Whipple Observatory's Spring Seminar program. The Smithsonian Institution and the Whipple Observatory organized the Seminar consisting of a week long program including astronomy lectures by prominent astronomers and tours of local astronomy sites. TAAA provided the Introductory and the grand finale observational events for the visiting attendees.

3. When was Astronomy Day in 2001 and what did TAAA do?

The large TAAA public event of the spring in 2001 was in March. It was the Telescopes for Telethon benefit event organized by David and Wendee Levy at Sabino Canyon. There were numerous TAAA volunteers and the public event lasted from 2:00pm until about midnight. This event earned \$1900. in donations for the Muscular Dystrophy Association. Starizona, Sky Works, Stellar vision, the Flandrau Planetarium, the Planetary Sciences Institute and Coronado Instruments all supported the event. A hit of the evening was George Barbour's sunspot filters and what was described as his "tax return collection of new eyepieces", and Andy Cooper's purple telescope. The evening ended with a dazzling huge red aurora in the sky. Volunteers for the event were then treated to a dinner at the Levy home in May.

4. When was Astronomy Day in 2011 and what did TAAA do?

Astronomy Day was May 7, 2011. On that day TAAA and Flandreau Science Center celebrated Astronomy Day in a joint event on the University of Arizona Mall. Telescopes were set up for public solar viewing in the afternoon and for night sky viewing in the evening. There were also hands-on activities using Night Sky Network Toolkits and people could name a star. This was a "Sharing the Sky" event. "Sharing the Sky" was a nonprofit organization set up by David and Wendee Levy. It collected donations at the event for the Muscular Dystrophy Association and the Levys hosted raffles for the public. Again, TAAA volunteers for the event were at a later date treated to an evening at Jarnac Observatory and dinner at the Levy home.

5. When is Astronomy Day in 2021 and what did TAAA do? TAAA continued to host Astronomy Day events in May for several years. However, in recent years we decided that May was too hot in Tucson for hours of an event in the park, and we began hosting what we label as an "Astronomy Festival" event in the park in April as our TAAA version of Astronomy Day. So, while the official date of Astronomy Day, spring 2021, is May 15th, TAAA held its equivalent activity (the TAAA Astronomy Festival) virtually on April 17th. There were virtual activities on YouTube and Facebook from 3:00 to 7:30pm on Saturday April 17th. These are still accessible on Facebook, YouTube and the TAAA website at tucsonastronomy.org. There were a wide-range of activities including Night Sky Network educational activities for children, a video on dark skies provided by IDA, information on cultural aspects of astronomy and some thoughts about telescopes, as some great night-sky viewing star party activities and specific information on the sun, moon, galaxies, constellations, etc.

If you wish to explore any of this further or look into some other activities of TAAA at the time of these events, you may find the following links interesting:

May 2011 Newsletter May 2001 Newsletter May 1991 Newsletter

Skyward

By David H Levy

June, 2021

A long time ago, while I was writing my biography of Clyde W Tombaugh, discoverer of Pluto, I learned from him that he had discovered other objects during his long search at the Lowell Observatory in Flagstaff, Arizona. He found many asteroids during his time at Lowell Observatory, at least one comet, and, surprisingly enough, one nova. In February 1986, I visited Flagstaff in an effort to locate the nova that he found. It was a painstaking, tedious task but I loved it anyway. Because Clyde had been so careful recording his observations from each photographic plate onto the envelopes surrounding that plate, I had only to read through all the notes from each envelope. On one of the envelopes covering the year 1931, I saw the nova on a plate dated March 23 of that year. He remarked that must be "quite an interesting star to brighten from fainter than fifteenth magnitude in less than a day."

I later found nine other observations of this star while going through old plates at the Harvard College Observatory, and then I reported them all to Brian Marsden, then director of the Central Bureau for Astronomical Telegrams. He said, "I will announce it, but not yet."

"Why not?" I asked. "Because you are an amateur astronomer."

Them's fighting words. But before I had a chance to use them, he said, "If you were a professional astronomer, you would never look at the field again, and that would be the end of it. But as an amateur astronomer, you have a lovely 40-centimeter (16-inch) telescope with which you can observe the field every night. When the star erupts again, you will catch it, and then I will announce it as a current item!"

Six months later, on March 23, 1990, I saw the star in outburst with that telescope. It was 59 years to the day after Clyde's discovery, and I was thrilled to let the discoverer know of it. The observation and history were announced in a subsequent announcement card. Since then I have seen the star in outburst over and over again, and one of those sightings was on another March 23, which by this time had assumed more than one new significance: it is also the discovery date of our most famous comet, Shoemaker-Levy 9. It is also our wedding anniversary.

TV Corvi is now my favourite variable star. On each clear night I check the field. One time I caught the star so early in its brightening that I was able to create a movie of the event. When there is an always welcome outburst, it is fun to say hello to my old friend, and I really have a feeling that the star answers me, from the depths of space, with a cosmic "hi there!" right back.



This is the civic building in Streator, Illinois, where Clyde Tombaugh wsas born in 1906. Photo by doveed.

Dr. David Levy is a long-time member and former President of the TAAA. He is well know astronomy writer and discoverer of comets. He writes this monthly "Skyward" column for the Vail Voice and has generously agreed to allow us to publish it here.

In Tribute

Derald Dean Nye

Long time TAAA member Derald Nye has passed away. He rarely missed a TAAA meeting except when he was

traveling to a solar eclipse. Derald Astronomical Society and served as wanting to share his love of the outreach events including the Grand tributes to this man.

From his family (excerpts from the died peacefully on March 26, 2021 farm in NW Kansas. He served two 1957 and graduated from Kansas in Electrical Engineering. He then 1961 until his retirement in 1991 the Saturn 1B & V instruments and finally in Tucson, AZ. Derald high school and ground his first to build a number of telescopes and his backyard.



was a long-time member of the our ALCOR for several years. Forever night sky, he supported many of our Canyon Star Party. What follows are

Ad Astra

obituary): Born March 2, 1935 he in Tucson, AZ. He was born on a years in the U.S. Army from 1955 to State University in 1961 with a B.S. worked for IBM corporation from working at Cape Kennedy, FL on and in Owego, NY, Longmont, CO became interested in astronomy in telescope mirror in 1964. He went on even built a two-story observatory in

Together Derald and Denise traveled to all of the continents and over 90 countries and island groups, including 28 trips to view total and annular solar eclipses. They were jointly honored when the International Astronomical Union approved the name of asteroid number 3685, as DERDENYE for them. In total, Derald went on 42 solar eclipse trips, including ones from airplanes following the eclipse path, where he often collected data for a long-term solar radius study by the International Occultation Timing Association (IOTA).

Derald was active in a number of astronomical Societies including the Astronomical League where he was given the Leslie C. Peltier Award in 2010 for astronomical observations of lasting significance by an amateur astronomer, the Association of Lunar and Planetary Observers where he was given the Walter H. Haas Observer's Award in 2017 for excellence in observational solar system astronomy and the IOTA which bestowed on him the David E. Laird Award in 2020 for significant contributions to occultation science.

From Dean Ketelsen (excerpts): He was a great friend and volunteer with the Tucson Amateur Astronomy Association, making countless appearances at school star parties to show kids the sky, and at decades worth of appearances at the Grand Canyon Star Party, which I started organizing in 1991. He was at that first one, and many others, mostly setting up his telescope during the day and showing amazed passers-by bright planets (Venus, Mercury, Jupiter, and occasionally Saturn) during the day.

From Rik Hill (excerpts): He had been suffering from Parkinson's Disease for years now. His home in Corona De Tucson (on Observatory Drive) was a landmark with the 2-story observatory. He was editor of the Minor Planet Bulletin from 1973 until 2019. Denise, his wife, passed in 2006.