TAAA Desert Skies Bulletin

Observing Our Desert Skies Since 1954

August 2024

www.tucsonastronomy.org

Membership Meeting

August 2, 2024

TAAA's next general member meeting will be held on **Friday, August 2, 2024**. The Main Presentation will start at 6:30 P.M. This will be a hybrid meeting (both in person and on social media). TAAA members will receive a Zoom link should they wish to attend remotely. The public may attend in person or streaming at the TAAA Facebook page.

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Presentation 1: **Observing The Fall Sky**

Mary Turner presents her popular seasonal talk about what to see in the summer night sky, as well as fascinating myths and facts about each object. Learn about bright planets, meteor showers, and all else accessible, to the naked eye, binoculars, and/or telescopes.

Biography: Mary Turner received her Ph.D. in Optical Sciences at the University of Arizona (UA). She is currently the Technical Fellow in Optical Design for Edmund Optics, where she designs custom optical systems for a wide variety of applications, including camera systems, machine vision applications, free-space communications and other laser systems. Additionally. Dr. Turner is a lecturer for the University of California-Irvine, teaching courses in optical design. She also lectures at UA in various aspects of optical design and has authored chapters in several technical references relating to the field of optical design.

Presentation 2: **A History of the Grand Canyon Star Party**

TAAA member Jim Knoll will review the history of the Grand Canyon Star Party, from its humble beginning by a dedicated member of the Tucson Amateur Astronomy Association (TAAA) to the premiere outreach event it is today. Grand Canyon National Park is a perfect location as a Dark Sky Park at 7,000 feet with incredible views of the Milky Way and the rest of our Universe. The Star Party is co-hosted by TAAA and the National Park Service. It is held annually in June, near the New Moon, and is free and open to everyone in the Park. We typically set up between 50 and 60 telescopes and provide daytime and nighttime observing over 8 days and nights, with around 125 volunteers. GCSP draws over 15,000 visitors yearly. The 2024 Star Party was the 34th in the series. The 35th Grand Canyon Star Party will be held June 21-28, 2025. Additional Information

Biography: Jim Knoll joined the Tucson Amateur Astronomy Association in 2004. Since that time, he has been involved in many TAAA activities, particularly outreach events. He has been the School Program Coordinator, and is currently the Coordinator for Tucson Stargazing Adventures (paid star parties). Jim is also the Chiricahua Astronomy Complex Director, the Library Telescope Coordinator, and most recently assumed the role of Coordinator for the annual Grand Canyon Star Party (GCSP). As GCSP Coordinator, he oversees a planning team of several TAAA members to orchestrate the yearly event in conjunction with the National Park Service.

Over 1,200 visitors a night at GCSP, 2018
Credit: Dean Ketelsen

Notes From The President

July 2024

by Mae Smith

I am writing this dripping of rain water from the huge rain storm that I drove across town in to reach my office. I am just returning from another Plan Tucson meeting. These meetings are dedicated to discussing and receiving public input on the ten-year 2025 development plan for the City of Tucson currently in process. I went to the meeting tonight to particularly discuss the fact that while astronomy had been previously included specifically in prior versions of the plan, the word "astronomy" does not appear in the current version of the plan....not even once. The system works so that a current version of the plan goes through public review and is changed according to public input. Even though a few of us suggested input into the current version that directly referred to "astronomy", apparently there were too few of us making such input for the word or inclusion of the concept of astronomy to be included in the current plan. The present version is posted for the purpose of public review and for the public to post additional input on this website.

Plan Tucson Updated Draft Goals and Policies

The Plan Tucson Team reviewed all the policies that were drafted throughout working groups along with the feedback to identify redundancy and refine the 327 policies created through Working Groups into 180 policies.
www.plantucson.org

It is important to remember that what is in the City Plan is what will influence decisions by the City of Tucson for **10** years. Specific supportive statements in the City Plan can make a huge difference in funding and in administrative support available. We all need to put in perspective that matching funds for grant dollars that University of Arizona Astronomy (and related sciences) faculty regularly apply for are currently subject to the severe constraints imposed by University of Arizona current budget. So, UA faculty may have a more difficult time in obtaining grants in the next few years.

The City of Tucson this week hosted a meeting at the Mayor's Office this week to obtain input on the City plan and this week and next week meetings at each Ward are also occurring. If you would like to obtain physical copies of the work so far or attend a meeting the Plan Tucson website above provides information about times and locations.

Some of us have also been advocating for the addition related to dark skies or light pollution to be included in the Tucson City Plan. Now is, of course, a special time for us to pay attention to such advocacy to honor David Crawford. (See Below.)

Some of you have seen the email I sent to TAAA members recently regarding the death of David Crawford. As many of you know. David Crawford and TAAA member Tim Hunter co-founded the International Dark Sky Association in Tucson in the 1980's. That organization has assisted in reducing light pollution on six continents and its influence keeps growing. It is only appropriate for the City of Tucson to honor the vast achievements of these two Tucsonans by including appropriate lighting as part of the Tucson City Plan.

Mae Smith, TAAA President
president@tucsonastronomy.org (520 850-7137)

Other Elected Leader Contact Information:

Vice-President: Ed Foley
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David Rossetter, mal2@tucsonastronomy.org
John Kalas, mal3@tucsonastronomy.org

TAAA Board: taaabod@tucsonastronomy.org

The TAAA Board of Directors meets the second Wednesday of every month at 6:30pm. Members are welcome to attend Board meetings. If you would like to attend, you may email Mae Smith to receive a Zoom link for that meeting. Please send your email to Mae the Monday prior to the meeting (by 5:00pm) and you will receive an email with the link on either Tuesday evening or Wednesday. ALL MEMBERS ARE WELCOME.

Desert Skies Bulletin
Editor - David Rossetter
Ken Bertschy - Graphics
Terri Lappin & Jim Knoll - Proofreading
Gregg Ruppel -Image Editor

TAAA Ladies' Night Out

by Susan O'Connor

Ladies' Night Out is a social interest group for women members of the club. The group meets once a month at a restaurant for fellowship and conversation. This month's meeting is:

Thursday, August 15, 6:30pm

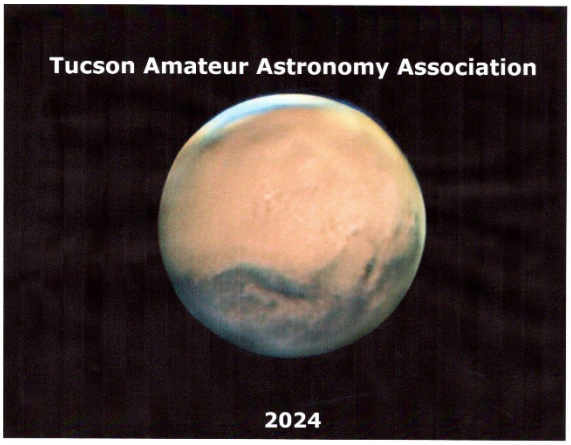
Bistro 44

6762 E Tanque Verde, Suite 2

SW corner of E Tanque Verde & N Camino Principle

Preview the menu at: https://www.bistro44tucson.com/

RSVP Susan
520-780-0136



2025 TAAA Wall Calendar

We are looking for your images!

We are especially interested in images from the eclipse; both of the eclipse itself and of spectators who were with you during the event. Also of Comet 12P/Pons-Brooks. Any other images related to astronomy or club events are always welcome.

Please send your calendar images to: Susan OConnor.

National Park Service Recognizes Dean Ketelsen with the National Excellence in Volunteerism Award!

On behalf of Grand Canyon National Park, I want to congratulate you on Dean winning the National Excellence in Volunteerism Award! Of the several Regional Award winners, only one person wins the National Award each year—and we are honored it is Dean! I am so grateful that you were all able to attend the Star Party, to witness the event he created, and to be present for his Regional Award. - Ranger Radar Lane

Above are members of Dean's family that attended the GCSP 2024 along with Grand Canyon Park Service Representatives of NPS including GCSP Ranger Radar Lane, GCNP Superintendent Ed Keable (second from right), and NPS Acting Chief of Interpretation A J Lapre (far right), along with Mae Smith, TAAA President (holding award).

Winter Seasonal Astronomy Interpreter Job at Organ Pipe

The Organ Pipe Cactus National Monument is looking to hire a seasonal Astronomy Park Ranger to coordinate an astronomer-in-residence program we are starting up this year. The job will run from mid-October to mid-April. The opening was announced by Jessica Pope, the Chief of Interpretation at Organ Pipe Cactus National Monument. If interested, check out this link to the announcement.

Astronomical League Workshop

Open for Enrollment

Place: Woods Memorial Library, 3455 N. First Ave. Tucson
Date: Saturday August 24, 2024 **Time**: 10 AM until 1 PM

Synopsis: This workshop is designed for anyone who may be interested in pursuing one of the Astronomical League observing programs for the first time or anyone interested in learning about these observing programs. The workshop will cover how the various observing programs work, program requirements, selection of an appropriate program, recommended equipment, resources, logging requirements, and much more.

If interested: Contact TAAA Astronomical League Correspondent (ALCOR)
Douglas Smith: 520-396-3233, Email or sign up using the signup page on the website. There will also be a signup sheet available at the July and August General Member meetings.

Constellation Locating and Identification Workshop

Open for Enrollment

Place: TIMPA
Date: Thursday, September 26, 2024; **Time**: 6:00 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. It will teach how to locate and identify constellations. The students will be taught how to locate and identify the constellations without having to memorize the night sky. Each student will use the supplied equipment to locate several constellations. Students will learn how to use a planisphere and star atlas to locate constellations without memorizing the sky. This program provides the methodology for the observing requirements of the Astronomical Leagues Constellation Observing Program (Northern and Southern).

If interested: Contact TAAA Astronomical League Correspondent (ALCOR)
Douglas Smith: 520-396-3233, Email

PLEASE NOTE: due to equipment limitations there is a strict limit of 20 students for this workshop.

Observing Perseid Meteor Shower from CAC

The Perseids peak August 12th. It should be an active shower with no moon interference after midnight. Come join us at CAC either Sunday evening/Monday morning August 11-12 or Monday evening/Tuesday morning August 12-13th. Obviously weather (Monsoon) permitting. Please make a reservation on the CAC reservations page to either just observe or spend the night in one of the rooms or in your RV/car/tent. Reservations will help us let you know what the weather is doing so you can decide if you still want to come out. Jim Knoll, CAC Director, will be on-site and have it open those evenings. Click the CAC Reservations link to make a reservation.

Observing Sites

TIMPA

by TIMPA Planning Group

TIMPA (Tucson International Modelplex Park Association), TAAA's dark sky site west of the Tucson Mountains. Location: The TIMPA observing site is located a few miles beyond the Desert Museum (3250 N. Reservation Road, Tucson, AZ 85743).

TIMPA Star Party Dates this month **Tentative - Monsoon**:
August 2-3, August 30-31

The TIMPA Planning Group will be offering assistance with telescope usage and observing during the monthly TIMPA Star Parties. You are invited to bring your equipment and questions to TIMPA on Star Party dates for assistance. Be sure to register using the link below.

The TIMPA site is only partially improved. There are no inside buildings provided other than restrooms. TAAA provides very limited 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.

Reservations for the TIMPA Site are made on the TAAA website at TIMPA DARK SITE RESERVATIONS.

Chiricahua Astronomy Complex

by Jim Knoll

Upcoming CAC Weekend Dates (Fri/Sat):

August 2-3 (New Moon 4), August 30-31 (New Moon Sep 2)

Over Monsoon, the site will be open for the above member nights, but confirm when making a reservation if you are not checked out to open and close the site.

Chiricahua Astronomy Complex (CAC) is the club's dark sky 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 Web page 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. Those qualified to open & close the site can use it anytime but still need to reserve through the CAC Reservations process.

Observing Sites Star Party Dates 2024

TIMPA
August 2-3* August 30-31*
* **Tentative – Monsoon**
Sept. 27-28 November 1-2
Nov. 29-30 December 27-28

CAC
August 2-3 (New Moon 4) *
August 11-13 **Perseids from CAC**
(see article previous page)
August 30-31 (New Moon Sep 2) *
September 21 – **Evening Under the Stars – Public Event**
September 27-28 (New Moon Oct 2)
November 1-2 (New Moon 1)
November 29-30 (New Moon 30)
December 27-28 (New Moon 30)

TAAA Astronomy Equipment For Sale

TAAA has an assortment of astronomy related equipment for sale. This equipment is available for members only at this time.

Celestron 8" XLT with NexStar. Comes with a couple of eyepieces, barlow, red dot finder, instruction manuals.
$1000

Skywatcher 10" Dobsonian. Comes with rack and pinion focuser (2" or 1.25"), 8x50 finder and 10" full aperture white light solar filter, instruction manual.
$600

Meade ETX60 Refractor with AutostarExtra keypad, instruction manual. **$75**

STEAL OF THE MONTH!
12" Dobsonian - NO IMAGE.
Very large, Homemade. Crosshair finder.
$500

We also have an assortment of other items available at this time including: Finder rings, focusers, telescope rings of various sizes, mirror blanks of many sizes, a 6 inch Newtonian mirror set mounted in cells, several large mirrors and more.

To make inquiries about what is available or to express a desire to purchase one of items please contact: Douglas Smith; 520-396-3233

TAAA Equipment Loaner Program

The TAAA has a terrific Equipment Loaner Program. This gives you access to fine telescopes incuding computerized Schmitt Cassegrains from Meade and Celestron, Dobsonians from Orion, mounts, tripods, and cases full of fine eyepieces. Check out the full list with descriptions and photos.

This equipment is for TAAA members to checkout and use. Email Ralph Means for information or to schedule time for pick up.

Special Interest Groups

Starry Messengers Special Interest Group

Opening Minds to the Universe

Starry Messengers SIG is taking the summer off. **Next meeting will be September 9th.**

Astronomy Fundamentals SIG

by Connor Justice

Come join us for a presentation from the fundamentals of amateur astronomy. Learn your way around the night sky to add to your observing enjoyment. Meetings are on the second Thursday of each month.

The next AFSIG meeting is on **Thursday, August 15, 6:30pm to 8:30pm.** Topics to be determined.

Contact Connor Justice for Zoom link and more information.

Access videos of previous meetings in the TAAA's YouTube Channel AFSIG on the Web

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting will be **Monday, August19 at 7:00 pm** via ZOOM.

Topics:

Beginners' Corner - Ask A Question

ZWO SeeStar S50 Review - Allen Force

Image Sharing, Discussion

Email Gregg Ruppel for the ZOOM link or any other information. 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 here.

Look for previous AISIG meetings on the TAAA YouTube Channel.

Check out AISIG's new Web Pages! We've refreshed our landing page with current meeting info, fresh images and links for our Members Gallery, and are rolling out a new mentoring program.

Highlights from the Astro-Imaging SIG

Monsoon Challenge

This year's Monsoon Challenge had two targets, the galaxy M87 in Virgo and the open cluster NGC 6883 in Cygnus. AISIG participants could image one or both.

Mike Mulcahy - **M87** C8, f/10, RGB

Jeff Rothstein

NGC 6883

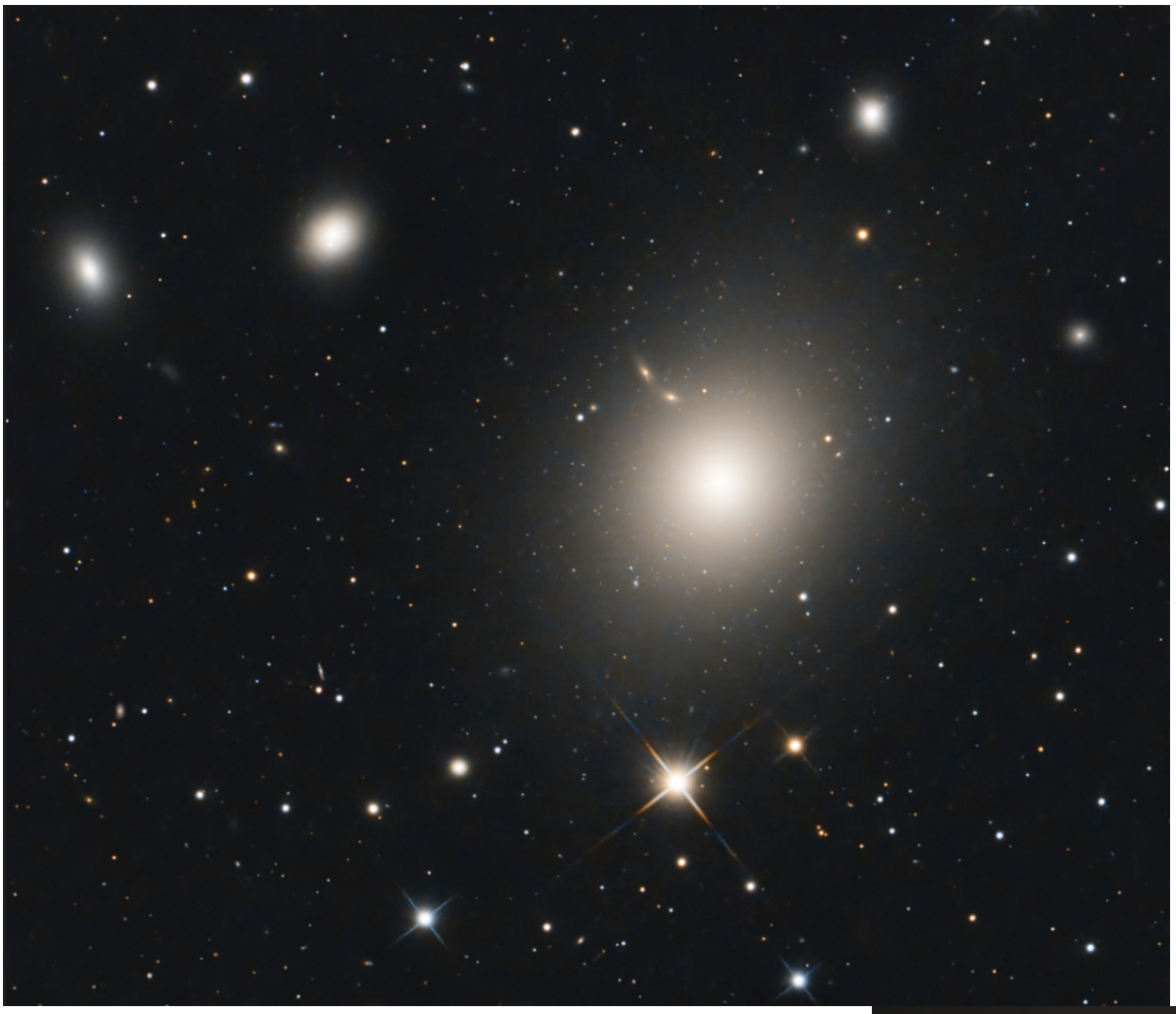
5:45:00 of integration time over two nights at f/6.3, taken in LRGB with the ASI 183MM Pro. Astrobin

Randy Smith

NGC 6883

Astrobin

David Stearn - NGC 6883



M87

RC 8” f/8+ ZWO 2600mc pro, off axis guided. 3 min subs. Taken 5-31 and 6-1. No filters. 3.55 hrs total.

M87 Jet

Tom Eby

NGC 6883

RC8" f/8 78 min taken 7-7-2024. RGB No filter.

Steve Cohen

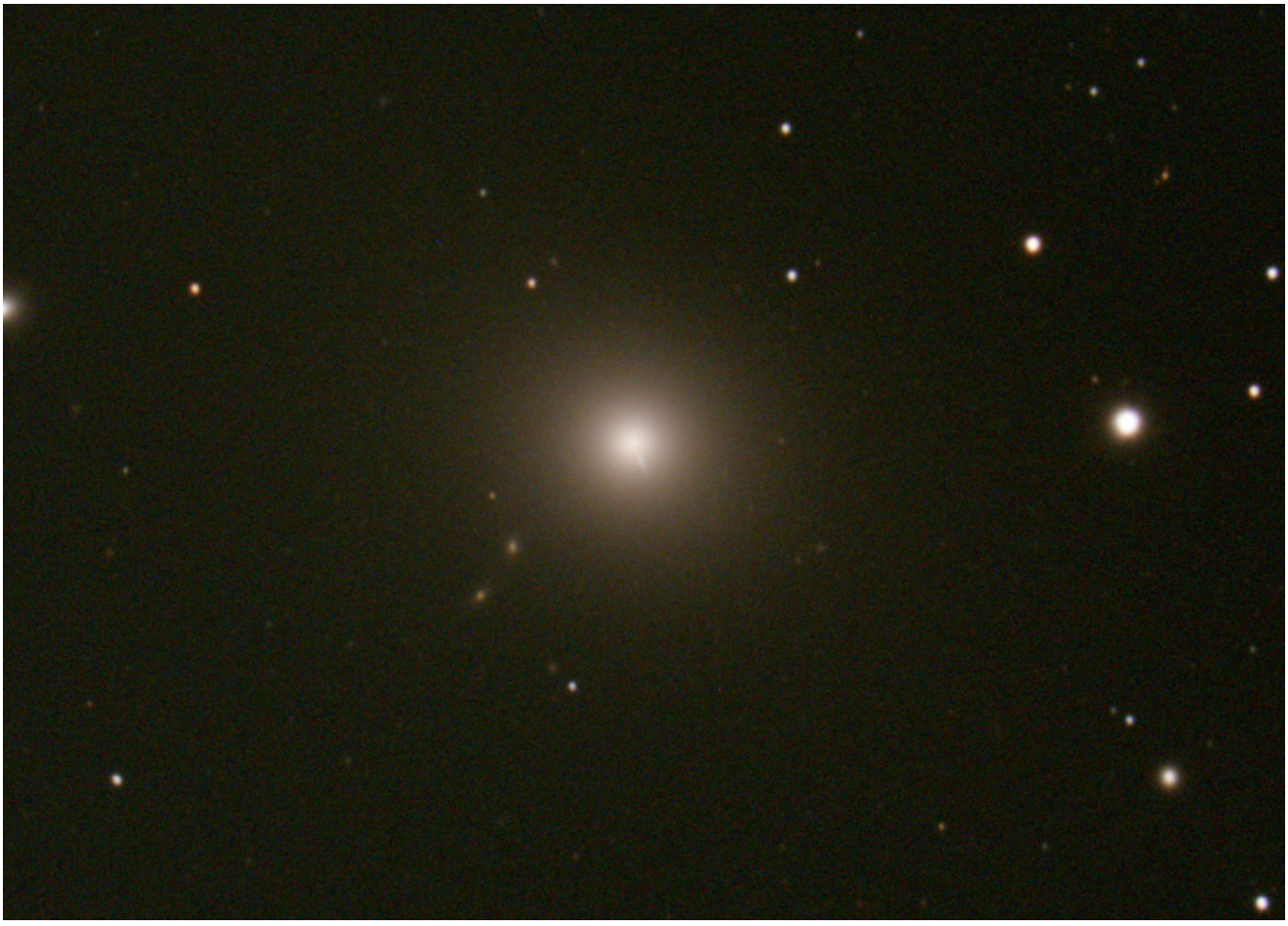
NGC 6883

Celestron C8 on an AVX mount
f/10 focal length 2032, with the
ZWO ASI533 MC camera and ZWO
autofocuser. No filters.
64 18-second images.

Gene Lauria

M87

21min with 3 min subexposures
of M87 taken with my C14 &
Starizona SCT corrector. The focal
length is about 2365 mm.



M87 - Meade 16" ACF F/10, ASI 6200mm Pro Mono camera, 34x 5 min Blue (2h 50m), 40x 5 min Green (3h 20m), 20x 5 min Red (1h 40m)

Ladd Lindsay

NGC 6883 StellarVue XVST 130mm Refractor w/ Focal reducer (680mm), ASI 2600mm Pro Mono camera, 27x 3 min Blue (1h 21m), 52x 3 min Green (2h 36m), 58x 3 min Red (2h 54m),54x 10 min Ha (9h), 58x 10 min OIII (9h 40m)

M87: Exposures: 50 x 180 sec. Further cropped to ensure sufficient enlargement to bring out jet.

Paul Lorenz

NGC 6683 - Astro-Tech AT152 EDT Triplet @ f/6.4, ZWO ASI2600 MC DUO, Exposures: 50 x 90 sec.

M87 Full Detail

Gregg Ruppel

NGC 6883 Full Detail

by Doug Smith

What's Up list for August 2024 – September 2024

Fellow amateur astronomers, many of the Astronomical League observing programs can be done from our backyards. The following is a list of objects visible in August and September for the more common observing programs.

Constellation Hunter Program – Northern Sky
The following Northern Constellations are well placed during August and September: Aquila, Cygnus, Delphinus, Equuleus, Hercules, Lyra, Sagitta, Serpens Caput, Serpens Cauda, and Vulpecula.

Messier Observing Program - The following Messier objects are well placed for viewing during August and September (listed in ascending RA): Sagittarius is in prime location! M62, M19, M92, M9, M14, M6, M7, M23, M20, M8, M21, M24, M16, M18, M17, M28, M69, M25, M22, M70, M26, M11, M57, M54, M56, M55, M71, M27

Lunar and Binocular Observing Program
The following is a list of dates for lunar phases in August and September:

New Moon: August 4, September 3
40 Hours waxing: August 6, September 5
72 hours waxing: August 7, September 6
4 days old: August 8, September 7
7 days old: August 12, September 11
10 days old: August 15, September 13
Full (14 days old): August 19, September 18
Gibbous: August 26, September 24
72 hours waning: August 1, September 29
40 hours waning: Aug 2, Sep 1, Sep 30

Solar System Observing Program
The following planets are visible during August and September:

Mercury is an evening object during the first 10 days of August. The remainder of August and September it is an early morning object, greatest elongation occurring on September 5.
Venus is an early evening object during August and September, setting a little later each night. By the end of September it sets almost 1.5 hours after the Sun.
Mars is a late evening object during August and September. It rises a little after midnight on August 1 and around 11 PM on September 30.
Jupiter is rising earlier each night. It rises around 1 AM on August 1 and around 9:30 PM on September 30.
Saturn is now well placed for evening observation. On August 1 it rises around 9 PM and on September 30 it rises before sunset and transits around 10:30 PM.
Uranus is an evening object during August and September. It rises around 11:30 PM on August 1, and around 8 PM on September 30.
Neptune is a late evening object. On August 1 it rises around 9:30 PM and on September 30 it rises before sunset, transiting around 11:30 PM.

Urban Observing Program

The following **deep sky objects** are well placed for observing during August and September: M62, M92, M6, IC 4665, M7, NGC 6520, M8, M17, NGC 6633, M22, IC 4756, M11, NGC 6709, M57, Cr 399, NGC 6818, NGC 6826, and M27.

These **Double Stars** are well placed during August and September: Epsilon Lyra & Beta Cygnus.

DEPARTMENT OF ASTRONOMY AND STEWARD OBSERVATORY

Public Evening Lecture Series Fall 2024

Public Evening Lectures will **begin at 7:30 p.m. in Steward Observatory Room N210.**
All of the lectures and the use of the telescope are free of charge and open to the general public.
For more information, check out the Web Page.
You can watch each lecture live on ZOOM. To stream recordings of previous lectures, click here.

Sep. 13	Dr. Wen-Fai Fong Northwestern University	**Marc Aaronson Prize Lecture**
Sep. 23	Dr. Kevin Hainline Steward Observatory	*JWST: The First Two Years of Discoveries from the Dawn of Time*
Oct. 7	Prof. Andrew Woods UA College of Law	TBA
Oct. 21	Dr. Vasileios Paschalidis Steward Observatory	*Paradoxes & Conundrums of Relativity*
Nov. 4	Christa DeCoursey Steward Observatory	*Discovering the Most Distant Supernovae Thus Far with JWST*
Nov. 18	Dr. Alfred McEwen Regents Professor Lunar & Planetary Lab	*Jupiter's Insanely Volcanically Active Moon Io*
Dec. 2	Dr. Dominika Itrich Steward Observatory	TBA

COLLEGE OF SCIENCE LUNAR & PLANETARY LABORATORY

LPL Evening Lecture Series

All Lectures are at the Kuiper Space Sciences Building, Room 308 and Zoom from 7:00pm to 8:00pm. Check out the LPL Evening Lecture Series Page.

Sep. 18	Dr. Jessica Barnes	
Oct 16	Dr. Jeffrey Andrews-Hanna	
Nov 20	Dr. Angela Marusiak	*What's shaking on the Moon?: What we can learn from earthquakes on the Moon.*

Skyward

By Dr. David H. Levy

July 2024

Area 377

For the first time in this series of articles, I am writing about the same subject, Comet Olbers, twice in a row. This time I observed the comet using an unusual small telescope, a 4-inch reflector named Cole. Joshua Cole is the central character in one of my Dad's favorite childhood novels, Cole of Spyglass Mountain. At the end of this beautiful story, Cole is informed that his discovery of life on Mars has been confirmed, and the book's closing thought is this: "First to Report Discovery: Cole of Spyglass Mountain, famous in a night."

On Sunday, evening, 7 July 2024, I joined my colleagues Tim Hunter and James McGaha at Tim's Grasslands Observatory. While they prepared for an evening of astrophotography, I set Cole up outside and began an hour of comet hunting in the northwest. At first the comet seemed elusive. But as I searched, I noticed a familiar 10-square degree patch of sky. This was area 377, and right away it brought me back to my teenage years, when I began observing with friends at the Montreal Centre of the Royal Astronomical Society of Canada. Among their many observing programs was an organized comet and nova search. The sky was divided into 438 discrete areas, and I was assigned two: Area 40, which included Vega and its constellation of Lyra, and 377, south of the Big Dipper's bowl. For years I faithfully checked these areas until the program, like some of the comets it never found, faded away more than half a century ago.

Tonight was different. By sighting along some of the star patterns in area 377 I found a spot. Slowly I moved Cole through this region of stars. And then, just like that! There it was, Comet Olbers, a little east of Area 377, brighter than it was last month, and sporting a nice 1-degree long tail. Tim and James were able to spot it using Cole, and later through binoculars.

Comets mark the passage of our lives. My great-grandson Beau will be nearing the middle of his life when Halley returns, and his grandchildren may pause to take a look at Olbers's comet when it next visits at the end of this century. But whether they see these celestial apparitions or not, may they at least have the will to pause in their lives, and reflect upon the great cosmic clock that chimes not on the hour but at any minute when something new, different, and mesmerizing pays a visit to the planet that is our home.

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