



NORTHERN LIGHTS



NORTH CENTRAL REGION OF THE ASTRONOMICAL LEAGUE

Winter 2024 - Volume 8, Number 3

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NCRAL CHAIR’S MESSAGE

Welcome to another edition of the *Northern Lights* newsletter. As I write this introduction to the winter newsletter, there are only a few days left in December. This newsletter may not be arriving in time for Christmas, but nevertheless, let me wish you all a Merry Christmas and Happy New Year!

As we celebrate the holidays with friends and family, we will undoubtedly also think about everything we have experienced this past year. 2023 has been a great year. *Northern Lights* has documented many of the significant activities within the North Central Region of the AL.

As we look toward 2024, now is the time to reflect on all that has happened, astronomically speaking, in 2023. Now is the time to remember and to appreciate the contributions of our clubs and club members all around the Region. Now is the time to recognize those contributions.

NCRAL has several awards and grant programs. Currently there are two award and two grant

programs: the Region Award, the Newsletter Editor Award, the Membership Recruitment Mini Grant, and the Affiliate Recruitment Grant.

The Region Award is NCRAL’s most prestigious award. It is given annually to a member of the NCRAL that demonstrates extraordinary skill, generosity, and devotion to promoting amateur astronomy and support of the NCRAL events and goals. Do you have a deserving person in your club who has demonstrated unwavering commitment to your club and amateur astronomy? If so, I urge you to consider nominating them for this coveted award.

I would also like to draw your attention to the NCRAL Newsletter Editor Award. This award is given in acknowledgement of excellence in content and presentation for a club-level newsletter. Newsletter editors do tremendous service for their clubs by recording club activities and promoting their clubs generally. This award recognizes this critical service to an NCRAL affiliate that often goes unrecognized and unrewarded.

The following link takes you to the NCRAL awards and mini-grants guidelines and applications:

<https://ncral.wordpress.com/awards/>

Simply fill out the respective form and return it to our award chairman, Bill Davidson, rochesterskies@outlook.com

Of course, as long as we are talking about awards, the Astronomical League has an extensive awards program for recognizing member’s contributions. Please take a few moments and look these over. Perhaps you have someone in your club who deserves to be nominated for one of these awards? Follow the link below to the AL’s awards:

<https://www.astroleague.org/astronomical-league-awards/>

Thanks, and keep looking up!

Alan Sheidler
NCRAL Chair

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QUARTERLY NORTH CENTRAL REGION FINANCIAL STATEMENT

By Roy E. Gustafson, Secretary-Treasurer

The current quarterly financial statement is not included in this issue of *Northern Lights* because our Secretary-Treasurer has had an “interesting time” (in his own words.) Roy reports, “For those that aren’t aware of my situation, I fell off [my] roof last Wednesday breaking my hip and my femur and losing two pints of blood. Surgery and a hospital stay wasn’t on my Christmas list this year and then, yesterday, I had to go back in to have a redressing because I leaked out a lot of blood the night before. I think I spoiled Christmas!! Anyway, after all of that I was wondering if we could just put a note in the newsletter that my report was unavailable and will be brought up to date in the next newsletter?” Yes, Roy, we’ve done just that. We also extend to you our condolences and best wishes for a full and rapid recovery!

A NOTE FROM GERRY KOCKEN ABOUT NCRAL 2024

NCRAL Members,

We are in the process of gathering the speakers’ bios for NCRAL 2024. We are planning on getting registration up in late January. People can currently register for rooms at the Kress Inn, located in DePere, Wisconsin. Mention the NCRAL Convention when you do so. Room rates are \$104.00 per night. The phone number is (920) 403-5100. Rooms include a nice continental breakfast in the mornings. The convention will be held at the Bemis Center located on the St. Norbert’s College Campus right across the street from the hotel. Friday night will include a *Swap and Sell* meet in the Bemis Center. Also, a display area will be for anything unusual in astronomical equipment, books or other items that may be of interest. I will be bringing some unusual telescopes, and other rare items of interest for example. The cost of the convention will be set at \$120.00 per person which will include the banquet dinner. I’ll keep you posted as things get finalized.

Gerry Kocken

SCHEDULE OF EVENTS FOR NCRAL 2024

FRIDAY, MAY 17TH

3:00 – 9:00 PM - REGISTRATION OPEN
3:00 – 8:00 PM - PARMENTIER OBSERVATORY TOUR
4:00 – 8:00 PM - DISPLAY AREA OPEN
6:00 – 8:00 PM - SOCIAL HOUR
6:00 – 8:00 PM - SWAP MEET
IF SKY IS CLEAR, VIEWING CAN BE DONE AT OBSERVATORY
(SUN SETS AT 8:19)

SATURDAY, MAY 18TH

8:00 AM - REGISTRATION OPENS
8:00 AM - DISPLAY AREA OPENS
8:30 – 8:50 AM - OPENING REMARKS
8:50 AM – 9:40 AM - JERRY SCHAEFER, “3-D PRINTING
INTRODUCTION AND WHAT IT CAN DO FOR YOU”
9:40 AM – 10:00 BREAK
9:55 – DOOR PRIZES
10:00 – 10:50 AM - RICHARD JACOBSEN, “30 INCHES, NO
LADDER, NO TRAILER”
10:50 AM – 11:40 - DICK FRANCINI, “ASTRO SKETCHING: NOT
AS INTIMIDATING TO DO AS YOU MIGHT THINK”

11:45 AM – GROUP PHOTO
12:00 PM – LUNCH (on your own)
1:30 PM – 2:15PM - ALISON KLESMAN, “MULTI-
WAVELENGTH”
2:15 – 2:40 PM - BREAK
2:35 - DOOR PRIZES
2:40 PM – 3:30 - RODRIGO ROESCH, “DEEP SKY IMAGING
WITH CMOS SENSOR”
2:30 PM - DEADLINE FOR TRIVIA CONTEST AND
ASTROPHOTO BALLOTS
3:00 PM - REGISTRATION CLOSES
3:30 PM - NCRAL COUNCIL/BUSINESS MEETING
4:35 PM - DOOR PRIZES/ANNOUNCEMENTS
4:40 PM - AFTERNOON SESSION ENDS
6:30 PM - SOCIAL HOUR
7:30 PM - BANQUET DINNER
8:30 PM – 9:30 - BOB KING (BANQUET SPEAKER), “WHAT
CAUSES THE AURORA’S DIFFERENT COLORS AND WHY
ARE THEY SO DIFFICULT TO SEE?”
9:30 PM AWARDS AND DOOR PRIZES
10:00 PM CONVENTION CLOSING

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TRIP REPORT ON DES MOINES ASTRONOMICAL SOCIETY, OCTOBER 7, 2023

by Alan Sheidler, NCRAL Chair

As part of my continuing effort to learn more about astronomical societies in the Region, I visited the Des Moines Astronomical Society (DMAS) during their business meeting and public observing session held on October 7 at Ashton Observatory, approximately 25 miles northeast of Des Moines, Iowa.

DMAS was founded in 1970 to foster interest in and provide education about astronomy in the local community. The Ashton Observatory's original twin-dome building was built in 1983 as a collaborative effort between Jasper County and DMAS. 2002, a large meeting/classroom was added to the twin dome structure.

for special events such as weddings. They told me they have 1-2 such events nearly every week.

The twin domes house two permanently mounted telescopes: a 16" Newtonian and a 14" Meade LX200 on a computer-controlled equatorial mount. A third, smaller dome, located just south of the twin domes, currently houses a 6" SCT. All three observatories were in operation for the public observing session during my visit, and the weather cooperated well enough to provide views of Saturn, Mizar, and other objects for the visitors. The club is also developing a radio telescope that they plan to use to map the Milky Way at the hydrogen 21cm line (1420 MHz radio frequency).



Ashton Observatory comprises the twin-dome observatory (top) and the smaller dome (bottom). This observatory is located at Ashton-Wildwood Park, Mingo, Iowa.

This meeting room was destroyed by a recent derecho but rebuilt last year. The facility offers spacious seating and has recently hosted public lectures for groups as large as 67. DMAS provides public observing sessions every Saturday (weather permitting). They also rent the facility to the public



Approximately 25 DMAS members attended the business meeting and 40th Anniversary Celebration of the building of the twin-dome observatory. In 2002, this large classroom was constructed to accommodate larger groups. A derecho damaged this building, but it was completely rebuilt in 2022.

The plans for this evening were to have a short business meeting at 6:30, followed by a 40th-anniversary celebration for club members at 7:00, and then have a public observing

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session beginning at 7:30 or so. There were approximately 15 members in attendance at the business meeting, and perhaps double that number there for the celebration.



DMAS president Norm Van Klompenburg with the 14" LX200 in the west dome of the Ashton Observatory.

There were several visitors for observing as well; I would guess 50-60 people were present, including visitors and club members present for viewing at the observatory. I would say this was a highly successful event.

There are approximately 60 DMAS members altogether. They appear to have excellent financial support and a great relationship with Jasper County, enabling them to have an excellent dark sky site at Ashton-Wildwood Park, Mingo, Iowa. The Maytag family has been a strong supporter of DMAS over the years.

DMAS has hosted NCRAL conventions and hosted ALCON 2008. The members are very knowledgeable and conversant with the observatory telescopes and equipment. They publish a newsletter called the *Starlight Journal*. They have a website and Facebook presence and appear to be getting the word out to the public about their programs. They seem to be very active and engaged with the public.

The Des Moines area has a large population base and has universities and John Deere facilities nearby. There is an enormous opportunity for public engagement. I see a great future for this club and astronomy in the Des Moines area.

Alan

RETRACING STEPS

by Chuck Allen, Vice-President and past-President, Astronomical League

Some 58 years ago, I took a train from Louisville and attended the 1965 Astronomical League national convention in Milwaukee, my first ALCon. It was held at the Hotel Schroeder and was accompanied by a tumultuous beer parade! I was 17 at the time. With me was 18-year-old Richard Gott, my oldest friend in the universe (since age 11), a high school classmate, and a fellow officer of the Louisville Junior Astronomical Society. Richard is now professor emeritus of astrophysics at Princeton University and an author of at least seven books, some with Neil Tyson. We talk on the phone nearly every night.

The Milwaukee Astronomical Society ("MAS") performed a spectacular job as convention host. Observations through the 40-inch at Yerkes Observatory were arranged, and more than a quarter of the attendees were of high school and college age (a product of the nascent Space and Atomic Ages), so new friendships were forged.

The MAS is one of the most successful and longstanding astronomy organizations in the country and is a critical founding member of the League. The first meaningful attempt to organize amateur astronomy societies into what would become Astronomical League took place in 1935 when Edward Halbach and Luverne Armfield of the MAS cobbled together a dozen midwestern clubs called the American Amateur

Astronomical Association and linked its constituents with a common newsletter. At AAVSO meetings during that period, Halbach met the famous Dr. Harlow Shapley, Director of Harvard College Observatory and famed participant in the Shapley-Curtis "Great Debate" about the nature of the spiral nebulae on April 26, 1920. Recognizing the significant role played by amateur astronomers in public education and astronomical discovery, Shapley avidly supported the Milwaukee group's effort to create a national amateur organization.

In 1939, the Amateur Astronomers Association of New York organized a three-week exhibition at the 1939 New York World's Fair. That event was the brainchild of Charles A. Federer, Jr., Secretary of the AAANY and volunteer editor of *The Sky* magazine, a joint publication of the AAANY and the Hayden Planetarium where Federer often lectured. At this meeting, Federer and Shapley led a discussion on the formation of a national body of amateur astronomers. Because of Shapley's connections with both groups, Armfield, Halbach, and Federer led a joint gathering in Pittsburgh in 1940 to create a "League" of amateur astronomers. Their efforts were finalized at a meeting in 1941 but the project was soon shelved because of Pearl Harbor and World War II. At war's end, though, the two groups gathered again, and the League sprang into being in

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1946. Ed Halbach of the MAS became the first elected president of the League (1947-48), succeeding interim president Shapley.



MAS Open House

I had the privilege of returning to the MAS on October 14, 2023, to participate in a public open house centered on the annular eclipse (partial in Milwaukee). I was also scheduled to speak that evening. Both events were held at the club's extensive observatory southeast of Waukesha. My host was a young and incredibly enthusiastic amateur astronomer named Matt Ryno, a man of 38 who could easily pass for early 20s. He is literally the club's factotum—Secretary, Membership Chair, Open House Chair, Publicity Chair, Board Member, media contact, *Focal Point* newsletter editor, observatory keyholder and trainer, and Solar System Ambassador.

The eclipse was mostly clouded out that morning, but many members of the public watched the annual eclipse on live stream telecasts from Texas and New Mexico.



Quonset Hut

That evening I spoke to a very enthusiastic group of about 40 people in a well-equipped 70-foot-long Quonset-style auditorium attached to one of the club's observatories. The topic was Universe Scale and involved many models and props that I use to make points about distances in the universe. Among the props is a surprisingly heavy one-inch cube of tungsten that contains one septillion atoms—considerably more atoms than there are stars in the entire observable universe. And like the universe, the dense cube is mostly empty space (99.9999999999996 percent empty to be exact). I also brought along a foot-wide bowl containing one million beads, a gift from Richard Gott and his late mother, Marjorie. I use the bowl to make a point about the distance to the Andromeda Galaxy, namely that, if each bead represented a mile, you'd need bowls of beads side by side in a line extending from Milwaukee to the planet Neptune to have enough miles to reach M-31. The talk culminated with discussions of the vast distances to quasars that are readily visible in 10 to 20-inch amateur instruments (some with light travel distances of 9 to 12 billion light years), the nature and distance of cosmic horizons imposed by the speed of light, the age of the universe, and the accelerating expansion of the universe, and, finally, the likely open and infinite size of the entire universe which, if closed and not infinite, has to be an absolute minimum of 15 million times larger in volume than the volume of the observable universe out to a radius of 46 billion light years.

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Collection of Elements with Author

As a side-light, I brought along an extensive multi-case element collection containing true samples of 96 elements on the periodic table including all naturally occurring ones. Many in the audience had questions that went on for well over an hour after the talk, especially young people like recent League

imaging award winner Dhruva Kalyani and another student, Jericho Kuehl, who was looking for an astronomy textbook recommendation. (I later sent him one.) Another young MAS superstar and multiple League award winner, William Gottemoller, could not attend as he was busy with his first-year studies at Harvard, but I had the privilege of meeting William and his father in Albuquerque in 2022. Lucky is the club that can attract such youthful talent.



Author giving presentation to MAS

After the program, Matt took me on a tour of the club's many observatory facilities which include visual,

photographic, solar, and radio telescopes. Most fascinating, perhaps, was a little 4-inch electronic EV Scope 2 that was set up outside with a connected tablet atop a music stand.



4-inch electronic EV Scope 2

Matt asked me what I wanted to see. Making a choice that I felt would severely test the little instrument, I chose Maffei 1, a galaxy in Cassiopeia that is so faint and heavily reddened by the plane of the Milky Way that it eluded discovery until 1967. Light pollution is certainly a factor at the observatory with the proximity of Waukesha and Milwaukee (the Sky Quality Meter read a rather sketchy 19.4), so I did not expect Maffei 1 to show up well if at all. For about 30 seconds, the tablet did not even reveal the little trapezium of foreground stars in which the galaxy is found. Then, suddenly, the screen went black, the number of stars quadrupled, and Maffei 1 appeared in full bloom in a little warped box of stars. I was stunned.



Maffei 1 imaged with 4-inch EV Scope 2

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M27 - Dumbbell Nebula in Vulpecula – imaged with EV Scope 2

He later dialed up M27 which produced an image of substantial size and revealed incredible red and green features—simply beautiful.

My thanks go to Matt and to the other MAS officers, Jill Roberts, Lee Keith, Russ Blankenberg, and Sue Timlin for their hospitality and for a day that produced the same excitement I enjoyed there as a teen so many years ago.

Chuck

BUILD CLUB MEMBERSHIP WITH AN *INTRODUCTION TO AMATEUR ASTRONOMY COURSE* by Carl Wenning, Twin City Amateur Astronomers

We often hear comments about the “graying” of amateur astronomy. It’s true – in many locations. Some clubs are at risk of dying, just as much as is amateur astronomy¹. Because of so many cultural and social changes in recent years – including the growth and use of social media – many people seem to have forgotten what it means to have a hobby². Neither do they seem to be aware of the many benefits of having a hobby³. I addressed these topics in my TCAA Guide [Astronomy as a Hobby](#), available as a free download from the website of my club, the Twin City Amateur Astronomers of Central Illinois.

After thinking about what it would take to help my astronomy club overcome this “graying” problem, I wrote two additional TCAA Guides: [The Art of Sky Interpretation](#) and [Introduction to Amateur Astronomy](#), also freely available on the TCAA website. After a bit more consideration, I decided to offer, with the consent and assistance of my club, a three-session course for the general public based on the last publication and my prior experiences with adult education. I called the course *Introduction to Amateur Astronomy* (IAA) after the last publication, which only seemed reasonable.

The first IAA course was offered in the autumn of 2019 following a summer of promotion during our public viewing sessions, which were reasonably well attended by 40-60

individuals (including club members) each month, April through October. This first course had about 30 attendees, but the follow-up components of the course were abruptly ended during January 2020 due to the COVID-19 pandemic. After a hiatus of about three years, I again decided to teach this course starting in the summer of 2023, having learned from the mistakes associated with offering the course the first time. The second go around was much more successful than the first in terms of recruiting and retaining new members.

Due to the second course, our dues-paying membership increased by about 20 members representing seven households. Many of those households were multigenerational. More importantly, most of these families are now sticking around after the course – having become active in our club.

There are several reasons our course has become an effective recruiter and motivator⁴ of new members: (1) we provide participants with the sort of instruction that new members crave⁵, (2) we provide excellent, no-cost resources by way of our TCAA Guides⁶ and telescopes, (3) we work to socialize new members so that they feel welcome and part of the group⁷, (4) we teach this course during the summer, allowing for time during the latter part of the year when it’s still warm enough for new members to get out and observe,

¹ Wenning, C., The State of Our Astronomy Clubs: Healthy or At-Risk? *Northern Lights*, Vol. 5, No. 2, pp. 11-14, [Autumn 2020](#).

² Wenning, C., A Word about Hobbies, *Northern Lights*, Vol. 1, No. 4, p. 8, [Spring 2017](#).

³ Wenning, C. *The Joys of Amateur Astronomy*, *Northern Lights*, Vol. 5, No. 1, pp. 10-13, [Summer 2020](#).

⁴ Sheidler, A., What Motivates Members of Your Astronomy Club?, *Northern Lights*, Vol. 5, No. 2, pp. 15-16, [Autumn, 2020](#).

⁵ Wenning, C., *What do Members Want from an Astronomy Club?* *Northern Lights*, Vol. 4, No. 3, pp. 5-6, [Winter 2020](#).

⁶ TCAA Guides, <https://www.tcaa.club/guides>

⁷ The Results are In: Involvement with Your Astronomy Club. *Northern Lights*, Vol. 2, No. 3, pp 9-10, [Winter 2018](#).

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(5) we hold classes later in the afternoon in town and immediately follow up with observing at a rural dark sky site, (6) we promote follow-up participation in our private and public viewing sessions, and (7) we train them on the use of our observatory equipment, grant them with access, and give them constant encouragement.

Gone are the days when we take new member dues and hope that that's enough to get them to stick around to become amateur astronomers! Ample experience we have all had shows that this simply doesn't work. What is needed to make the change is a good set of offerings and effective club leadership.⁸



Some 2023 IAA students with co-leader Tom Willmitch (center).

Our IAA course is broken down into three two-hour sessions. The first class deals with constellations, stellar and lunar motions, star maps, cellphone and tablet apps, direction finding, stellar magnitudes, and celestial coordinate systems. The second class deals with the celestial sphere, what to observe and how to find it, Astronomical League observing programs, introduction to binoculars and telescopes, how telescopes work, eyepiece field orientation, and recording observations. The third class deals with telescope types, eyepieces, powers of the telescope, finders, and mounts. Information about amateur astronomy in general and the Twin City Amateur Astronomers is liberally included in each lesson.

Each class session is taught under the dome of the Illinois State University Planetarium with the assistance of planetarium director Tom Willmitch who is also the president of our club. Classes typically begin with a PowerPoint. There is then a 20-minute break with refreshments (e.g., punch and cookies) and conversations with established members to

ensure appropriate socialization of newcomers. Many of the conversations are started by and carried on with the assistance of several outgoing club members who attend the planetarium – some to learn, others to assist, but all so socialize new members. (Socialization is the key to retention.) The class then continues with a live planetarium presentation, demonstrating new concepts presented in the PowerPoints. Time is also given for constellation study using sky maps as a follow-up to homework exercises. Following each 3-5 PM session, the class reassembles after sunset at Sugar Grove Nature Center, where we have two rural observatories. Following the conclusion of the course, we train small groups of individuals on using a CPC 11" under a 10-foot Ashe dome. Passing an informal test later, they are awarded a key to the observatory, providing unfettered access.



NCRAL Chair Alan Sheidler and author Carl Wenning with TCAA 20".

After the conclusion of the course, additional efforts are made to get more enthusiastic class members out under the stars using the club's 20-inch telescope at Waynesville Observatory. Training is provided with our PlaneWave that is mounted on an extremely user-friendly Astro-Physics 1600 mount. Operations with the 20" are augmented with the club's NVT image intensifier much to the great satisfaction of everyone. Overall, this program has proven quite successful in recruiting and retaining new members for the TCAA.

We charge a substantial "materials and membership fee," which adds subtle psychology to the course (nothing worth anything is free) and makes attendees members of the club if they are not already. Because we have a pro-rated dues-paying system that re-sets each February, a six-month membership is included at a reduced cost, making the course

⁸ Wenning, C., Club Leadership for Our Time, *Northern Lights*, Vol. 5, No. 3, pp 8-9, [Winter 2021](#).

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fee quite manageable. The course is offered free of charge to current members, but they are assessed a materials fee to help cover the cost of printing, refreshments, and planetarium access, for which we pay a token amount.

I encourage all NCRAL affiliate leaders to teach an *Introduction to Amateur Astronomy* course using the resources of the Twin City Amateur Astronomers. The TCAA freely shares its TCAA Guides and will gladly provide the three PowerPoint presentations and homework exercises we have created that go along with the course.

Should you have any questions about setting up and teaching an *Introduction to Amateur Astronomy* course or wish to obtain our PowerPoints (which you are free to edit to your liking), please email me through this address: carlwenning@gmail.com.

Carl

SPEAKERS BUREAU

The leadership of the North Central Region proudly announces the beginning of this new service. The brainchild of NCRAL Chair Alan Sheidler, the NCRAL Speakers Bureau will facilitate the acquisition of professional speakers for meetings and other events for our Region's affiliates. Many individuals have indicated a willingness to serve as speakers. Most speakers are available for presentations over Zoom, though some might also be willing to attend club meetings and other events. To arrange for a speaker, please contact the speaker directly through our [NCRAL Speakers Bureau listing](#). Speak with them frankly about arrangements, including accommodations, meals, travel expenses, and honorarium, if any.

ASTROBITS

Here are some news notes that readers might find of interest or helpful. Items appear here as bullet points because they are too short to merit full-blown articles. If readers have something to share and want it to appear here, email this newsletter's editor at carlwenning@gmail.com.

- ★ All NCRAL Presidents and ALCors are – since mid-September – receiving the **NCRAL blotter** monthly news bulletin that originates with the NCRAL leadership. It's filled with timely reminders and the latest information for affiliate membership that is too urgent to wait for the quarterly **Northern Lights** newsletter. If you are a President or ALCor (or newsletter editor for your affiliate) and are not receiving this emailed publication, please email carlwenning@gmail.com and Carl will add you to the distribution list. Issues of the **blotter** will be posted on the NCRAL website after they are distributed to the affiliate leaders.
- ★ NCRAL's Regional leaders are meeting quarterly to discuss matters of importance and make plans for future events. During their most recent meeting on November 30th, they discussed proposed amendments for the Region's bylaws to bring them into compliance with the AL's newly-adopted bylaws, and to clarify various aspects. The proposed revised bylaws will be disseminated via an announcement in the Spring 2024 issue of **Northern Lights**. The revisions will be discussed briefly during the NCRAL 2024 business meeting, but the vote on amendments will take place by ballot after that meeting at the affiliate level in compliance with the current bylaws.
- ★ Also as a result of the November NCRAL leadership meeting, several clarifying statements about financial matters were included in the Region's **Convention Planning Guidelines**. These clarifying statements are highlighted in yellow in the latest issue of the **Guidelines** found on the NCRAL website.
- ★ If you are not receiving hard copy of the AL's **Reflector** magazine, you may download the latest issue now through the League's website at <https://www.astroleague.org/reflector/>

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NOTEWORTHY!

The following NCRAL members have completed the following Astronomical League observing and award programs in recent months and have been recognized in the most recent issue of *Reflector*. Congratulations to all!

Galileo Observing Program:

John Zimitsch, Minnesota Astronomical Society
Dick Francini, Neville Public Museum Astronomical Society

Lunar Observing Program:

Claire Weaverling, Minnesota Astronomical Society

Messier Observing Program:

Alec Sheedlo, Regular, Northwest Suburban Astronomers

Multiple Star Observing Program:

Dick Francini, Neville Public Museum Astronomical Society

Outreach Award:

Larry Cain, Minnesota Astronomical Society

Southern Skies Binocular Observing Program:

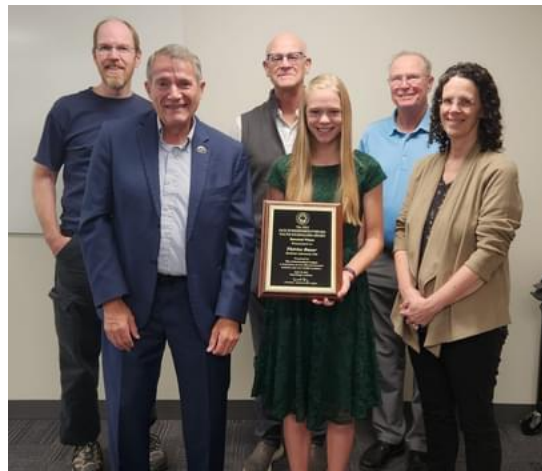
Jonathan Poppele, Minnesota Astronomical Society

Note: Details about all of these observing programs and awards can be found on the Astronomical League's website at <https://www.astroleague.org/observing.html>

RAS MEMBERS HONORED WITH RECENT A.L. AWARDS



John Martin of the Rochester Astronomy Club was presented the G.R. (Bob) Wright Service Award recently. The Award honors current or past League volunteers for service to the Astronomical League. Carroll Iorg, AL President, mentioned all the work John did redesigning the Astronomical League website and having it up in running well before expected.



Thérèse Bauer, also of the Rochester Astronomy Club, received the Horkheimer/O'Meara Journalism Award. The Award is open to League members between ages 8 and 14 who are engaged in science-related writing. The winner receives a plaque and a \$1,000. cash prize. Second and third place finishers receive \$500 and \$250 cash prizes.

NCRAL SEASONAL MINI MESSIER MARATHON AWARDS: AUTUMN

- *Megan Warren*, Popular Astronomy Club, Assisted?, # (TBA)

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The editor of *Northern Lights* has created a listing of articles he considers of considerable interest and lasting value. This listing will increase both the ease of finding and the likelihood that these articles will be read and re-read. Please review these article titles and see what you have missed since the current series of newsletters was established in 2016. This information (recently revised and updated to include the latest articles) can now be found on the NCRAL website's newsletter archive page: <https://ncral.wordpress.com/newsletter-archive/>

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A.L. OBSERVING PROGRAMS

by Alan Sheidler, NCRAL Chair



Moon & Venus, November 9, 2021. Nikon D7500, FL=250mm, f/6.3, 1/6 sec, ISO 6400

As you may know, I am a real fan of the Astronomical League observing programs. If you are looking for a way to give your observing programs purpose, why not take a look at doing one of them? The A.L. has an observing program for everyone. No matter what type of object you are interested in observing or whether you are advanced or a beginner, the AL has you covered. The following link takes you to an alphabetical listing of the observing program offerings. Take a moment and check out the Astronomical League programs: <https://www.astroleague.org/alphabeticobserving/>

This Fall I am happy to report that I finished the Open Cluster Observing Program. Using a DSLR attached to 10", 11" or 12" Schmidt Cassegrain telescopes available for use by members of the Popular Astronomy Club, I imaged a total of 140 open clusters.



Two open clusters: M38 and NGC 1907: 10" LX200 Wide Field SCT, FL=1600mm, Nikon D7500, 20 sec, ISO 6400

Looking at an open cluster through a telescope can be impressive, awe inspiring and enjoyable. The AL open cluster list is populated by an extensive list of beautiful objects. So, if you seek impressive and beautiful objects to observe, you need go no further than the open cluster observing program.

As pointed out in the introduction to the Open Cluster Observing Program, open clusters are of tremendous importance to the science of astronomy. Those of you seeking to learn more about the evolution and physics of open clusters, this program is also for you. The program is also not just observation or imaging but encourages the observer to classify the objects based on the Trumpler classification system.

In addition to planning observing sessions, targeting and imaging objects through the telescope, I also spent many hours scrutinizing my photographs and comparing them to astronomy programs (Stellarium and Starry Night) to verify I had indeed captured the desired cluster.

Moreover, it took some doing, but for my effort I was awarded the "Advanced Imaging Open Cluster Program Certificate" (certificate number 119-I) on October 29th, 2023.



16 Cygni and NGC 6826: CPC 1100 HD, f/7.0 (w/Focal Reducer), FL=1956mm, D7500, 13 sec, ISO 6400

Currently I am working on the Two in the View Observing Program. This program is interesting in that it has a variety of different objects (open clusters, globular clusters, double stars, planetary nebulae, galaxies and solar system objects). But the main objective is to see or image two or more objects within the same field of view. One challenge with this program is the fact that a widely varying fields of view are required to capture the objects. Some objects are separated by 30-40 minutes of arc or more in some cases. Others are rather closely spaced and require some magnification. This

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forces one to use the appropriate telescope, eyepiece, or camera to be able to visualize the objects. It's a great program to learn about optics and to create some interesting and beautiful views.

<https://www.astroleague.org/two-in-the-view-observing-program/>

Keep looking up!

AL



M31, M32, and M110 is a great example of Two in the View (or three in the view in this case). Nikon D7500, 400mm, f/6.3, 30 sec, ISO 3200

The *Two in the View* program is a fine example of another great AL observing program. The following link will take you to the requirements for earning an award for this program. Go for it!



NGC 7339 and 7332: 10" LX200 f/10, 0.63 Focal Reducer (FL=1575mm), D7500, 30 sec, ISO 6

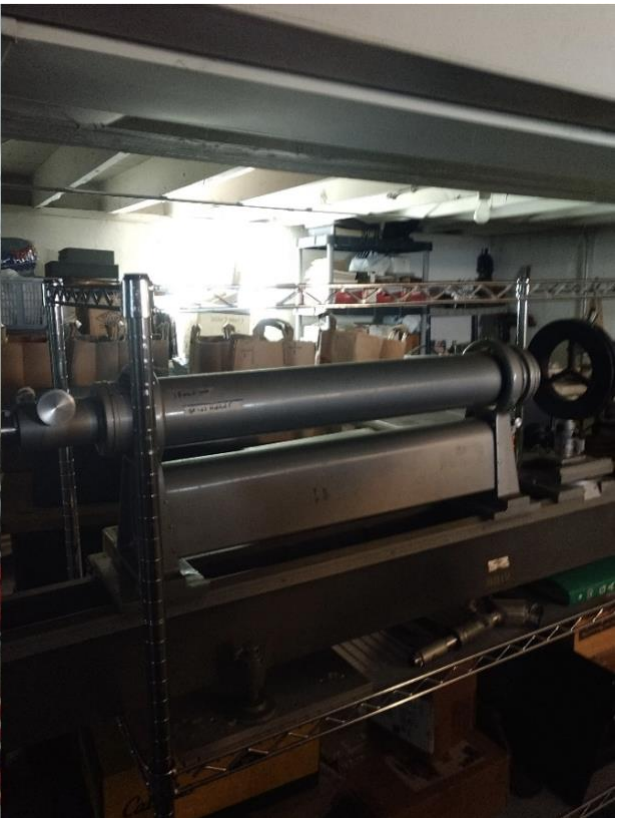
TELESCOPE-MAKING EQUIPMENT SEEKS GOOD HOME

Here is the message from Karl D'Arcy (k.drcinmo@gmail.com). Contact him directly if you are interested in this equipment.

My Uncle Jim would like to donate some equipment he used to make telescopes. Jim was a member of Chicago Optical Society and Telescope Support for the Alder Planetarium for many years. Jim made and polished up to 16" lenses. Jim is 75 years old now and survived throat cancer due the latest cancer technology at the U. of Chicago. I have to arrange to have the equipment moved from his basement in Hammond, IN. I will deliver, from NW Indiana, the equipment to a good home or organization. See the photos of the equipment below.



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WINTER'S SKY FORECAST

~ by Jeffrey L. Hunt ~

The **sun** reaches its most-southerly point on the ecliptic on December 21st at 9:27 p.m. CST, signaling the beginning of astronomical winter in the northern hemisphere, bringing daylight to nine hours, eight minutes at Chicago's latitude. The earliest sunset (4:20 p.m.), in Chicago, occurred December 2-15. The earliest sunrise (7:18 a.m.) occurs December 28 – January 10.

The season is 88 days, 23 hours, and 39 minutes long. The season's mid-point occurs February 4 at 9:16 a.m. Daylight exceeds darkness, the time between the end of evening twilight and the beginning of morning twilight, six days later. From the solstice to this date, daylight increases 76 minutes. When clocks switch to Daylight Saving Time (March 10), daylight's length is nearly 20 minutes short of 12 hours.

Earth is at perihelion, closest to the sun, 0.9833 Astronomical Unit, at 6:39 p.m. on January 2nd.

Moon	New	1 st Qtr	Full	3 rd Qtr
Dec		19	26	
Jan	11	17	25	3
Feb	9	16	24	2
Mar	10	16	25	3

As a prelude to the April 8th eclipse, a penumbral lunar eclipse occurs beginning at 11:51 p.m. CDT on March 24th. Maximum eclipse follows at 2:12 a.m. (March 25) and the eclipse ends at 4:34 a.m. The penumbral magnitude is 0.982.

Morning Sky

At the beginning of the season, Vega, Deneb, Arcturus, and Spica are in the eastern sky, while Venus is with Libra, about 20° up in the southeast an hour before daybreak. Leo is in the southwest, tipped toward the western horizon. Procyon, Pollux, Castor and Capella are in the west. The sidereal backdrop looks like a late spring evening.

By January 1, 2024, Venus rises less than three hours before the sun when it passes north of Graffias (β Sco, $m = 2.5$) and Antares on the 7th. Venus, Moon, and Antares tightly fit into the same binocular field the next morning. This triplet is not this close again until October 13, 2045, when they fit into a circle 3.9° in diameter.

Watch Scorpius climb into the eastern sky. During November, the constellation's classic claws, Zubenelgenubi and Zubenelgenubi, reach across the east-southeast horizon, followed by the head. Antares makes its first appearance around Christmas. The last star to appear, Sargas (θ Sco, $m = 1.8$), finally appears at nearly mid-March, when the pattern nears the meridian. The same effect occurs during spring

evenings, but the last star does not appear until after summer begins.

This morning, January 8th, the moon occults Antares, beginning 50 minutes after sunrise and reappears at 9:22 a.m. Through a telescope and a very clear January sky, reemergence might be visible. On March 3rd, the moon is near Antares again, although no conjunction for the NCRAL region. Observers from the Southeast as well as Mexico see an occultation.

After an evening apparition, Mercury returns to the morning sky early in the year. For four mornings (January 16th - January 19th), Mercury is about 11° to the lower left of Venus. As Mercury departs, it passes Mars, as the Red Planet climbs into the morning sky after solar conjunction during November 2023.

During January, Venus loses over an hour of rising time compared to the sun heading eastward, passing into Sagittarius. Watch it pass Kaus Borealis (λ Sgr, $m = 2.8$), at the top of the Teapot's lid, on the 28th. Five days later it passes Nunki (σ Sgr, $m = 2.0$), in the pot's handle.

Venus is rapidly losing rising time. By February 6th, it rises at the beginning of morning twilight. With a poorly inclined ecliptic at the eastern horizon, the moon passes over 7° below Venus on the 7th. Near month's end, Venus rises at Nautical Twilight when the sun is 12° below the horizon, passing Mars on the 22nd.

During March, Venus loses nearly 30 minutes of rising time compared to sunrise. At 30 minutes before sunup on the 7th, Venus ($m = -3.9$), Mars ($m = 1.2$), and the crescent moon (12% illuminated) span near 19° along the east-southeast horizon. Use a binocular, especially to spot dim Mars and Venus at a low altitude.

Evening Sky

The bright Orion region of the sky becomes visible as the season opens. Castor rises at sunset on December 31st, followed by Betelgeuse two days later. Rigel rises at sundown on January 4th, followed by Pollux on the 8th; Procyon on the 24th; and Sirius on the 29th. An hour after sunset, seven of the nine brightest stars visible from the mid-northern latitudes are visible. They are as follows: Sirius, Vega, Capella, Rigel, Procyon, Betelgeuse, and Aldebaran. Missing are Arcturus, Altair, and Spica.

Regulus, fifteenth brightest in our night sky, is the next first magnitude star to rise at sunset on February 17th.

The moon moves through the evening sky during mid-January. It is in the same binocular field with Neptune on the night of the 15th and with Uranus four nights later, although

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the bright moon interferes with the view. Try Neptune again when the moon passes by on February 11th, although the planet is less than 20° above the west-southwest horizon when the sky becomes dark.

Jupiter clearly outshines all other starlike bodies in the evening sky, starting the New Year high in the southeast after sunset. It is slowly moving eastward in Aries, to the lower right of Hamal (α Ari, $m = 2.0$). It approaches an imaginary line from this star to Menkar (α Cet, $m = 2.5$), passing it February 27th. The moon is nearby January 18th, February 14th, and March 13th. On the March date, the Jovian Giant sets over four hours after sundown.

Saturn begins January about 30° up in the southwest, nearly 13° to the lower right of Lambda Aquarii (λ Aqr, $m = 3.7$). The planet is moving eastward in dim Aquarius. By mid-February, when Saturn disappears into evening twilight, the planet closes to less than 4.5° from the star.

Through a telescope, the rings continue to close from 9.2° to about 5° at the end of the season. Look for the moon near the planet on January 13th and 14th. There's a close grouping of a 2% moon and Saturn on February 11th. Saturn reaches conjunction on February 28th.

By the end of the season, Saturn rises at Nautical Twilight.

During mid-March, Mercury begins a promising elongation (18°) and a highly inclined ecliptic with the western horizon. It reaches greatest elongation after the equinox. It is nearly 10° up and 20° to the lower right of Jupiter.

Whether you are a cold weather observer or seek warmer climes, take a look at the sky. Watch Venus and Mercury dance in the morning sky and take in the lovely Orion region of our galaxy.

Jeff

NCRAL SEEKING FUTURE CONVENTION HOSTS

During NCRAL's annual business meeting, the Region receives offers for hosting future conventions. We are now looking for hosts for NCRAL 2025 and beyond. It's never too early to start planning to host an NCRAL convention.

Whether or not your club has ever hosted an NCRAL Regional convention, please consider doing so in 2025 or later. While hosting a Regional convention is a lot of work, it can be quite rewarding – even fun. It allows an affiliate to show case its facilities and accomplishments, supercharge the existing membership, build club camaraderie, personally get to know interesting guest speakers, and share in convention profits. You also can use such an event to grow your club's membership.

NCRAL has **Convention Planning Guidelines** written by three-time convention coordinator Carl Wenning (2010, 2016, and 2023). Carl has updated the most recent version with lessons learned following NCRAL 2023. To download the *Guidelines*, visit the following URL: <https://ncral.wordpress.com/conventions/>. Look for the link at the bottom of the page.

Please email NCRAL Regional Chair Alan Sheidler at adsheidler@gmail.com should you have any questions or wish to toss your affiliate's hat into the ring for hosting a future NCRAL convention.

ADD YOUR EMAIL ADDRESS TO THE NCRAL MEMBER DATABASE

Did you know that only about 525 of our Region's 1,900 members receive this newsletter? That's less than one-quarter of the membership! Please help NCRAL get its newsletter out to the membership by encouraging fellow club members to add their email addresses to the NCRAL member database. Editors, please include this information in your affiliate's newsletter. It's one of the many benefits of belonging to the Astronomical League.

When one adds his or her email address to the NCRAL member database, he or she will receive direct notifications about the availability of **Northern Lights**. In addition, subscribers receive important and timely announcements about Regional conventions, elections, star parties, and so forth. Only blind addressing (Bcc:) will be used with this email list so that others will not see subscribers' email addresses. Email addresses will never be shared with or sold to outside entities.

No one will add your email address to this list for you, so you'll need to do it yourself. Sign-up takes only about a minute. Resubscribe if you recently changed your email address and are not receiving our notifications. You'll need to provide your name, email address, and astronomy club affiliation (or indicate A.L. membership-at-large) and let us know if you hold specific positions within your club. Go to the following case-sensitive URL to add your information to our database at <https://tinyurl.com/NCRAL> today, so you won't miss important future communications.

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REGIONAL OFFICER & LEADER CONTACT INFORMATION

Chair: Alan Sheidler

Bio: Alan has been an active member of the Popular Astronomy club in the Quad Cities for 30 years and has held the offices of vice president and president. He is currently serving as the director of observing. Alan has been very involved in public outreach activities and in 2022 received the Master Level Astronomical League Outreach Award. He has also completed a number of AL observing programs including those for Double Stars, Globular Clusters, Planetary Nebulae, Venus & Mercury transits, and all four of the NCRAL Seasonal Messier Observing Awards.

Contact: Adsheidler@gmail.com



Vice Chair: Bill Davidson

Bio: In the days of the Apollo missions, Bill first observed the moon (and sunspots!) with a 50x, 60mm JC Penny's refractor telescope. Not discouraged, 40 years later, he built and observes with a 6.25-inch achromatic doublet objective, f/10, 1600mm focal length refracting telescope. He recently retired as a college mathematics instructor, has been a member of the *Rochester Astronomy Club* (Minnesota) for more than 20 years, and serves as editor of the club's award-winning newsletter *Rochester Skies*. (Two-year term as Vice Chair; currently in his third term, 2023-2025.) As Vice Chair, Bill manages the Region's [membership awards and grants program](#).

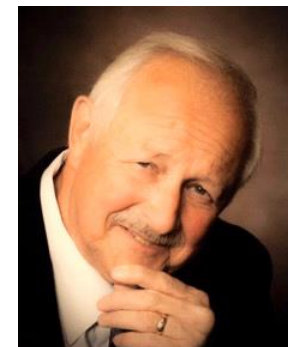
Contact: rochesterskies@outlook.com



Secretary-Treasurer: Roy Gustafson

Bio: Roy, a member of *Popular Astronomy Club* (Quad Cities), got interested in astronomy when visiting the Adler Planetarium in Chicago when he was in 2nd Grade. The star projected by the Zeiss Projector hooked him and started him on the path of astronomy. He has been active in outreach and has presented astronomy programs to over 20,000 people. He was awarded the **Master Outreach Award** from the Astronomical League. Roy travels with his telescopes and has observed both Transits of Venus and total solar eclipses in 2017 and 2019. Roy also taught astronomy at Black Hawk Junior College in Moline, IL. Roy retired from John Deere & Company after 32 years of service. As Secretary-Treasurer, Roy manages the Region's [observing awards program](#). (Two-year term as Secretary-Treasurer; currently in his third term, 2018-2024.)

Contact: astroroy46@gmail.com



Regional Representative: John Attewell

Bio: John's interest in astronomy was kindled during two great comet events – comets Hyakutake (1996) and Hale–Bopp (1997). For the next ten years he used a 2½-inch refractor borrowed from his brother which he mounted on a rickety camera tripod. It wasn't until 2009 that he acquired a serious telescope as a gift from his family. He started attending meetings of the Rochester Astronomy Club in 2002, becoming a member in 2006, and Vice President in 2019. In 2017, he chaired the NCRAL annual conference held at Eagle Bluff Environmental Center in Lanesboro, Minnesota, and served as NCRAL Vice Chair from 2017-2019. John's particular interest is the history of astronomy. (Three-year term as Regional Representative; currently in first term, 2022-2025)

Contact: john_attewell@hotmail.com



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Webmaster: Jeff Setzer (appointed)

Bio: Jeff has been an amateur astronomer since 1984 and has been part of the *Northern Cross Science Foundation* (Wisconsin) since that time. He is a longtime member of their Board of Directors, has held several office positions, and is currently their President. He has completed several Astronomical League observing programs, made his own telescopes and optics, and is a self-described telescope nut. You will often find him at star parties with his 22" Starmaster and TeleVue 85 telescopes. Jeff is webmaster of the NCRAL website which can be found at <https://ncral.wordpress.com/>.

Contact: astrosetz@hotmail.com



Newsletter Editor: Carl J. Wenning

Bio: Carl has been an avid amateur astronomer since being introduced to the sky by his grandfather during July 1957. He has been involved with the *Twin City Amateur Astronomers* (Illinois) since September 1978. Today he is an **Astronomical League Master Observer** and spends most of his free time introducing nascent amateur astronomers to observing using his club's Celestron 11" and PlaneWave 20" telescopes. He also spends a considerable amount of time nowadays observing with his club's image intensifier. Carl served as editor of his club's newsletter, *The OBSERVER*, from 2014-2021 for which he received the Astronomical League's *Mabel Sterns Newsletter Editor Award* in 2017. Carl served three consecutive two-year terms as NCRAL Regional Chair from 2017 to 2023. He also has served as the Region's **Northern Lights** newsletter editor from 2016 to present. He was recognized for his Regional education and outreach efforts in 2007 when he received the **NCRAL Region Award**. Carl served as planetarium director (1978-2001) and physics teacher educator (1994-2008) at Illinois State University. After retirement, he continued teaching parttime at ISU through the spring of 2022.

Contact: carlwenning@gmail.com

