



NCRAL CHAIR'S MESSAGE

NCRAL 2018 has come and gone. More than 60 members from 14 NCRAL-affiliated clubs were in attendance in Sturgeon Bay, WI, May 4-5. The Door Peninsula Astronomical Society hosted the event, and they did an excellent job. Accolades were justifiably heaped upon President Gary Henkelmann, Master of Ceremonies John Beck, and Convention Chair Jacque Axland. They, along with their club members, did a wonderful job of arranging and presenting the convention.

We had an extended business meeting about which you can read more in the minutes found later in this issue of *Northern Lights*. A marathon 90-minute session included lots of reports of progress. The meeting also produced numerous plans. Here I name but a few – all of which have the potential of benefiting the NCRAL membership in some significant way:

- a framework for developing and selecting a logo for NCRAL;
- a Regional newsletter award with a certificate for the editor and a small monetary award to the NCRAL-affiliated club in recognition of the memberships' contributions;
- a small grants program for increasing club-to-club interaction in the hope of growing the Astronomical League and, by default, our own Region;
- a small grants program for NCRAL-affiliated clubs to conduct innovative public outreach; and
- two surveys – one a post-convention evaluation and the other an assessment of membership wants and needs in relation to future conventions.

The logo contest, newsletter editor award, and one survey are announced later in this issue of *Northern Lights*.

I'm happy to announce that NCRAL has a new Secretary/Treasurer. Not having received any nominations for the position prior to and during the annual business meeting, it was agreed that there would be another call for nominations and that the appointment would be made by the Region's Executive Officers. I'm delighted to inform you that Mr. Roy Gustafson of Popular Astronomy Club (Rock Island-Moline, IL) stepped forward, was nominated, and elected by the Executive Officers on May 18th. You can read more about Roy later in this issue of the newsletter. Welcome aboard Roy; we look forward to working with you.

Not to be forgotten is outgoing Secretary/Treasurer Don Klemt of the Racine Astronomical Society. Don has reliably and competently served the Region for the past 10 years, and his level head and knowledge about the workings of the Region will be greatly missed. On behalf of a grateful Region, I express our thanks for Don's many years of service.

In many ways, my first year as Regional Chair was an interesting and productive time. On August 21, 2017, many of us viewed the total solar eclipse that passed through Southern Illinois, the only part of the Region that the lunar umbra touched as it raced across America. Those who traveled to be in the path of totality experienced not only a natural wonder but participated in perhaps the largest mass movement of the American population in history. There is no

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mistaking the belief that public interest in things astronomical is both alive and well – and we should never forget that.

Also in 2017-2018, we saw increased use of Facebook, more content on the NCRAL website, an expanded newsletter, and the completion of the first membership survey to which there were some 200 responses! To review these events and results in detail, just look through the past four issues of *Northern Lights*. I'd like to see these small steps become strides.

We have taken additional steps toward achieving this administration's second-year goals. Various Regional leaders have already produced and conducted the NCRAL post-convention participant survey – perhaps the first in a long time; perhaps the first ever. The survey's 30 questions have provided our convention hosts with an assessment of how well they did and supplied several suggestions for future hosts to make follow-up conventions more appealing than ever.

In addition to the above, plans for 2018 include the development of a combined NCRAL membership brochure and a survey to determine why members of the Region do and do not attend NCRAL conventions. The focus of the NCRAL membership brochure will be on benefits of membership. The basis for the brochure will be a document I have prepared with the assistance of a few others. That document, *Benefits of NCRAL Membership*, may be downloaded from the NCRAL website at <https://ncral.wordpress.com/about-2/>.

As I begin my second year as Regional Chair, I have gotten to know more members, have gained a better understanding of how NCRAL operates, and have come to understand the Region's strengths and weaknesses. I see now more than ever that it is incumbent upon the leadership and those working with them to increase the benefits of membership. It is my intention to make extensive use of the Regional Council to develop, review, revise, and approve new proposals and address other matters that normally would normally come before it.

The NCRAL leadership working with past and future convention hosts has already taken great strides in developing a comprehensive set of guidelines for hosting NCRAL conventions. Information from two recent surveys have been used improve the initial guidelines. Several NCRAL members have been hard at work recently developing yet another survey. This survey, which all NCRAL members are encouraged to complete, will help the leadership gain a better understanding of how to increase the benefits of attendance

at Regional meetings. The information will be used to refine a draft set of guidelines for hosting future NCRAL conventions. See further on in this issue of *Northern Lights* for details and information about how to complete the survey.

The Region Council has been dormant for as long as I can remember, and I am now working to see it take on the role for which it was created. This is now much easier today when email is both instantaneous and ubiquitous. This will give every affiliated club a two-vote voice in NCRAL without having to send members to our annual conventions to be heard and to vote. I hope that the Regional Council – consisting of club presidents and one other appointed by a club' president (taken to be the ALCor unless I am informed otherwise by each club's president) – will come to my aid when I call for assistance. If you are unaware of what the Regional Council is and how it works, see the Region's bylaws at <http://ncral.wordpress.com/bylaws/>.

I'm now calling for all NCRAL members to subscribe themselves through an online data collection tool to an email database. I will use this database to directly communicate with the entire membership rather than waiting upon quarterly issues of this newsletter. This will also help us to avoid relying entirely on the "pass through" approach of the past where newsletters were disseminated to members by way of club presidents, ALCors, and newsletter editors. Unfortunately, this doesn't always happen. I encourage everyone to add their email address to this list. See the article about the email database further on in this issue of *Northern Lights*.

An abridged version of the NCRAL 2017-2018 Region Report can also be found in this issue of the newsletter. Be certain to look it over and let me know of happenings during the second year of my term so I can get your accomplishments listed in next year's Report.

It has for me been an exciting first year in office for me. I look forward to what the coming year holds, and I hope you do too. I'll be in attendance briefly at ALCon in July as I participate in the AL's National Council meeting. If there is anything you want passed on at the Council meeting, contact either me or our Region's ALCor Bill Davidson.

Carl J. Wenning
NCRAL Chair (2017-2019)
carlwenning@gmail.com



REPORT FROM NCRAL 2018

~ by Sara Sheidler, Popular Astronomy Club ~

The North Central Region of the Astronomical League (NCRAL) held their annual convention the weekend of May 4-5 at Sturgeon Bay, Wisconsin. The event was hosted by the Door Peninsula Astronomical Society (DPAS) and held at The Lodge at Leathem Smith which is a hotel and convention center.

Friday evening began with a welcome by DPAS president Gary Henkelmann. Some participants then traveled about a mile to tour the Leif Everson Observatory which is equipped with a 14" Schmidt-Cassegrain telescope. They also have a weather station and a Star Garden with binocular mounts set in concrete for binocular viewing. Next to the Observatory is the Stonecipher Astronomy Center where they have a classroom and portable planetarium and give many programs for elementary school children every year. Available to visit was Newport State Park which is about an hour north of Sturgeon Bay and has recently been designated an International Dark Sky Park. Some participants did some really dark sky observing in this remote region on the "thumb" of Door Peninsula.

Saturday was devoted to speakers, meals, judging of the photography and poetry submissions, and lots of camaraderie! Beth Bartoli, who is the ranger at Newport State

Park, gave an interesting program about the long process of getting the Dark Sky designation for Newport. Tyler Linder spoke about his job as a NASA contractor who operates a group of telescopes in Chile to conduct astrometric measurements of near Earth asteroids. He does his work from the basement of his home in central Illinois. Audrey Fischer, lifelong advocate for dark skies, talked about her efforts to curb light pollution, but especially in the Chicago area where she lives. Kate Meredith gave an interesting program about her job as Education Director at Yerkes Observatory and her interest in helping special needs students especially those with low vision.

The after-dinner speaker was Kevin Poe, the Dark Ranger, who worked many years as a park ranger giving tours of the night sky to visitors at Bryce Canyon. He built his Dark Ranger Observatory near Bryce Canyon and conducts stargazing programs year-round in one of the darkest sites in North America.

It was an informative and relaxing weekend with plenty of time to talk to fellow amateur astronomers over delicious meals or a cup of coffee. The Door Peninsula Astronomical Society were wonderful hosts at this event.

MINUTES OF THE NCRAL 2018 BUSINESS MEETING

May 5, 2018
Sturgeon Bay, Wisconsin

Regional Council Meeting

Chairman Carl Wenning called the meeting to order at 3:52 pm. Secretary Donald Klemt took role call of the societies present for the meeting. Representatives from 17 different member societies were present. A quorum was present. Secretary Klemt read the minutes from the 2017 meeting and the record was moved and seconded for approval. The motion carried. Klemt then gave the treasurer's report showing a balance in the checking account at \$10,027.08.

There was no old business. Under new business, a discussion ensued regarding 2018 Regional award nominations. No nominations were received by the present officers during the year. It was determined we could still receive nominations and present the awards for both 2018 and 2019 at the NCRAL 2019 convention. A motion was made to adjourn the meeting. It passed at 4:11 pm.

Regional Business Meeting

Chairman Wenning called the meeting to order at 4:12 pm. He summarized the events of the past year. He talked about forming an advisory committee but noted that no action was taken. Members were encouraged to be more active in using our social media and website to promote upcoming astronomy events in our region, including star parties, regional and national conventions and other related activities.

Speaking on behalf of newsletter Editor-in-Chief Jim Gibbs, Chairman Wenning noted that the *Northern Lights* newsletter has gone from 14 pages last year to 18 pages this year. He is also seeking contributions from members of the Region. Jeff Setzer, our NCRAL webmaster, noted that the website is available to list all activities that are given to him



for the regional website. Vice Chair John Attewell talked about updating our club emailing lists to get a better response from the membership.

Chairman Wenning then expressed his desire to be very proactive leader in the region. He noted that he will be "resurrecting" the Regional Council to conduct the Region's business outside of the once-per-year annual business meeting as is called for in the Region's Bylaws.

ALCor Bill Davidson gave a report on last year's national convention in Wyoming, including how the national will deal with clubs who do not pay their dues on time.

There was no old business.

Under new business it was noted that the Minnesota Astronomical Society will host ALCON 2018, the national convention, in Minneapolis July 11-14. The NCRAL 2019 convention will be in Moline, Illinois, May 3-4. Alan Sheidler from the Popular astronomy Club, which is next year's sponsor, gave a presentation as to what to expect. The theme of the convention will center around, *Astronomy Voyages of Discovery: Past, Present & Future* and will be held at the Stoney Creek Convention Center in Moline, IL.

Future NCRAL conventions will be held as follows: 2020-Port Washington, Wisconsin; 2021-Green Bay, Wisconsin; 2022-open; 2023-Bloomington-Normal, Illinois, and 2024-open. Chairman Wenning asked for volunteers to assist with the preparation of a post-convention survey, and Gary Henkelmann volunteered.

Election of the Secretary/Treasurer was next on the agenda. There were no prior or current nominations and no volunteers, so it was decided the Executive Committee would seek out a volunteer for this position, fill it, and report to the membership when the position is filled. A motion was made, seconded and approved. ALCor Bill Davidson and RAC President Randy Hemann will investigate modifying the Region's Bylaws, so they are easier to understand.

Various motions were made for the Regional Council to implement instituting a Regional newsletter award (approved), a logo for the Region (approved), a small grant program to help struggling Regional clubs to attract new membership (approved), and a small grant program and to help Regional clubs encourage other clubs to join the Astronomical League (approved).

These discussions were at one point interrupted by a motion to adjourn, which was defeated. Chairman Wenning will working with the Regional Council to implement all these motions. Details of the approved programs will be presented in future issues of the ***Northern Lights*** newsletter. Because we used up our allotted time for the business meeting, a second motion was made to adjourn, and it was approved at about 5:15 pm.

Respectfully Submitted,
Don Klemt, Secretary/Treasurer

ADD YOUR EMAIL ADDRESS TO THE NCRAL MEMBER DATABASE

Add your email address to the NCRAL member database so you can get direct mailings of ***Northern Lights*** and important and timely announcements about Regional conventions, star parties, and so forth. Your email address will never be shared with or sold to outside entities. Only blind addressing (Bcc:) will ever be used with this email list so that others will not see your email address.

Sign-up takes only about a minute. You'll need to provide your name, email address, astronomy club affiliation (or indicate at-large membership) 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: <https://goo.gl/gsS8SF>

POST-CONVENTION SURVEY RESULTS

At the urging of the NCRAL 2019 convention host (Popular Astronomy Club), and with the agreement and assistance of the NCRAL 2018 convention host (Door Peninsula Astronomical Society) as well as several individual NCRAL members, a post-convention survey was developed and then administered following the NCRAL 2018 convention. The survey consisted of 30 questions. There were 25 fixed-response questions and 5 free-response questions.

About half of the convention attendees (31 to be precise) completed the online survey in the two weeks following the conclusion of the convention. Detailed results of the survey were provided to the Region's elected officers as well as the immediate past and future convention hosts. It is hoped that this and future post-convention surveys will provide the necessary input to make NCRAL conventions better than ever. The answers to the fixed-response questions are given on the following pages.



CONVENTION ATTENDANCE

1. Did you attend the NCRAL 2018 annual convention?
 - a. Yes – 31
 - b. No – 0
2. How did you find out about the convention?
 - a. Door Peninsula Astronomical Society – 14
 - b. Astronomical League **REFLECTOR** – 8
 - c. NCRAL **Northern Lights** newsletter – 10
 - d. NCRAL website – 2
 - e. Acquaintance – 2
 - f. Other – 6
3. Did you receive adequate convention information from the hosts prior to the event?
 - a. Yes – 25
 - b. No – 6
4. During which month(s) would you prefer that the NCRAL annual meeting be held? Check all that apply.
 - a. April – 14
 - b. May – 26
 - c. June – 5
 - d. July – 2
 - e. August – 2
 - f. Other – 3
5. Please let us know how we might improve the solicitation process. (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

REGISTRATION

6. How challenging did you find it to register in advance for this convention?
 - a. Easy – 28
 - b. Relatively easy – 3
 - c. Somewhat difficult – 0
 - d. Difficult – 0
7. Did you receive confirmation of registration from the convention hosts?
 - a. Yes – 26
 - b. No – 5

8. Did you receive timely and adequate information about the convention location in advance of arrival?
 - a. Yes – 31
 - b. No – 0
9. How efficient did you find the onsite check-in process?
 - a. Very efficient – 29
 - b. Somewhat efficient – 2
 - c. Somewhat inefficient – 0
 - d. Inefficient – 0
10. Please let us know how we might improve the registration process. (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

PROCEEDINGS

11. How did you find the pace of the convention?
 - a. Too slow – 2
 - b. Somewhat slow – 2
 - c. About right – 26
 - d. Somewhat fast – 1
 - e. Too fast – 0
12. Was there adequate time for attendees to ask questions of speakers?
 - a. Yes – 31
 - b. No – 0
13. How suitable did you find the convention meeting rooms?
 - a. Very suitable – 9
 - b. Mostly suitable – 8
 - c. Suitable – 8
 - d. Somewhat unsuitable – 5
 - e. Very unsuitable – 1
14. To what extent were you able to see the speakers and their presentation adequately?
 - a. Very easily – 12
 - b. Easily – 8
 - c. Adequately – 4
 - d. Poorly – 7
 - e. Very poorly – 0



15. To what extent were you able to hear the speakers and their presentation adequately?

- Very easily – 19
- Easily – 6
- Adequately – 4
- Inadequately – 2
- Very inadequately – 0

16. How worthwhile did you find the business meeting to be?

- Useful – 21
- Not useful – 3
- I did not attend the business meeting. – 7

17. Please let us know how we might improve the convention process. (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

BREAKS AND MEALS

18. To what extent were you satisfied with the quality of the convention meals?

- Very satisfied – 23
- Somewhat satisfied – 6
- Neutral – 1
- Somewhat dissatisfied – 0
- Very dissatisfied – 1

19. To what extent were you satisfied with the refreshments made available at break time?

- Very satisfied – 14
- Somewhat satisfied – 6
- Neutral – 8
- Somewhat dissatisfied – 2
- Very dissatisfied – 1

20. What did you think about the duration of the 30-minute breaks?

- Too long – 2
- Somewhat long – 4
- About right – 24
- Somewhat short – 1
- Too short – 0

21. Please let us know how we might improve breaks and meals. (Free response.) The number and quality of

responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

SATISFACTION

22. What did you like most about the convention? (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

23. What did you like least about the convention? (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

24. In an overall sense, how satisfied were you with the topics and content of the talks?

- Very satisfied – 19
- Somewhat satisfied – 4
- Neutral – 4
- Somewhat dissatisfied – 4
- Very dissatisfied – 0

25. To what extent did the convention provide you with adequate opportunity for you to meet and interact with other attendees?

- Very much – 20
- Somewhat – 9
- Adequate – 2
- To a minor extent – 0
- Very little – 0

26. To what extent were you satisfied with the convention center meeting rooms (lecture hall layout, seating, display are, etc.)?

- Very satisfied – 9
- Somewhat satisfied – 9
- Neutral – 8
- Somewhat dissatisfied – 3
- Very dissatisfied – 3



27. To what extent were you satisfied with the convention hotel bedrooms (if you stayed there)?

- a. Very satisfied – 4
- b. Somewhat satisfied – 8
- c. Neutral – 2
- d. Somewhat dissatisfied – 3
- e. Very dissatisfied – 1
- f. I did not stay at the convention hotel. – 13

28. To what extent were you satisfied with the observing session/facility tour (if you participated)?

- a. Very satisfied – 19
- b. Somewhat satisfied – 4
- c. Neutral – 0
- d. Somewhat dissatisfied – 1
- e. Very dissatisfied – 0
- f. I did not participate in the observing session/facility tour. - 7

29. To what extent did you find the convention to be of value in terms of information and experiences gained in relation to the time and money spent doing so?

- a. Very good value – 14
- b. Somewhat of a good value – 9
- c. Neutral – 6
- d. Somewhat of a poor value – 2
- e. Very poor value – 0

30. Please let us know how we might improve the meeting facilities. (Free response.) The number and quality of responses to this question were excellent. They are too long to share here. Nonetheless, the comments have been shared with the 2018 and 2019 hosts and will be used to help prepare a new NCRAL Convention Planning Guide.

NCRAL CONVENTION PLANNING GUIDE

NCRAL now has its own draft convention planning guide. The guide was developed by experienced hosts of NCRAL conventions in conjunction with one future host who asked lots of excellent questions. Significant contributions were made by Alan Sheidler (Popular Astronomy Club) and John Beck (Door Peninsula Astronomical Society). NCRAL Chair Carl Wenning, served as contributor and lead author.

The **NCRAL Convention Planning Guide** has three sections. Section 1 deals with the “preliminaries” of what it takes to host a Regional convention. Section 2 deals with programming information. Section 3 deals with budgeting information.

The guide is considered a “living document” that will be updated as new survey information becomes available. The recent NCRAL 2018 post-convention survey was included in the document. Results from the ongoing NCRAL Convention Preferences Survey (see article above) will also be included. The goal is to increase the benefits of convention attendance, thereby increasing attendance at our Region’s conventions.

To either review or download the planning guide, you may access it through the NCRAL website the following URL: <https://ncral.wordpress.com/conventions/>. Look for the link at the bottom of the page.

PARTICIPATE NOW IN NCRAL CONVENTION PREFERENCES SURVEY

Recent attendance at NCRAL conventions has typically been around 50-70 members, and we believe it is time to determine how attendance at future conventions might be increased. Several NCRAL members, working through the Regional Council (NCRAL Executive Officers, Presidents, and ALCors), have created an online survey to learn how we can best improve Regional conventions to increase the number of members who participate in the future. Our desire is to make sure conventions remain a good value and make them comply with the memberships’ wishes to the greatest extent possible.

ABOUT THE SURVEY: This is an anonymous online survey. We do collect a certain amount of non-identifying

demographic information from each participant to help us better understand the results. Survey participants may choose not to answer any or all demographic questions. If you decline to answer any or all demographic questions, be certain to click on the response "I prefer not to answer this question."

Based on one's history of NCRAL convention attendance (frequently, sometimes, rarely, never), survey participants will answer different questions.





We will ask about likes and dislikes, limitations (most of which we cannot control but all of which we will keep in mind as we plan conventions), and preferences. The survey consists of 30 questions. There are mostly fixed-response questions with a few free-response questions thrown in for completeness. The survey will take only about 5-10 minutes to complete, depending upon how much commentary one wishes to include.

It is critically important that we have responses from those with and without a histories of convention attendance. This will help improve the quality and appeal of our conventions. This also will serve as an important resource as we prepare to update our new **NCRAL Convention Planning Guide**. Please complete this anonymous online survey by July 21st. The survey can be accessed at the following case-sensitive short URL: <https://goo.gl/WEHeJf>

NCRAL REGION REPORT: 2017-2018 (ABRIDGED)

~ by Carl J. Wenning, Regional Chair ~

Region Administrative Updates:

- The Region appointed a new Secretary/Treasurer in the person of Roy Gustafson of the Popular Astronomy Club, Rock Island/Moline, IL.
- The Region took charge of and updated its information on the Astronomical League website
- The Region expanded the content of its own website: <http://ncral.wordpress.com/>
- The Region published four consecutive issues of **Northern Lights**, the region's quarterly newsletter. It currently averages over 18 pages per issue and is published and distributed as a PDF. All back issues of the current series are accessible on the Region's website at <https://ncral.wordpress.com/newsletter-archive/>

Notable Awards:

- Carl J. Wenning of the Twin City Amateur Astronomers received the Astronomical League's Mabel Sterns Newsletter Editor Award for 2017 during AstroCon at Casper, WY.
- No Region Award was conferred for 2018 due to a failure to solicit nominations. A process has been put in place to reasonably assure that this will not happen again.

Star Parties:

- The annual 2017 Wisconsin Observer's Weekend was held during July at Hartman Creek State Park near Waupaca, WI.
- The Iowa Star Party was held August 30 – September 3 at the Whiterock Resort in Coon Rapids, IA.
- The Sangamon Astronomical Society (Springfield, IL) hosted the Illinois Dark Skies Star Party during September at the Jim Edgar Panther Creek State Fish & Wildlife Area in west central Illinois, September 21-23, 2017.
- The Minneapolis Astronomical Society hosted Camping with the Stars @ Eagle Lake Observatory in Norwood-Young America, July-28-30, 2017
- The Minneapolis Astronomical Society celebrated Spring and Fall Astronomy Day with special daytime activities and observing in April 29 and Sept 30, 2017.

NCRAL 2018 Regional Convention:

Dark Skies for Bright Stars was the theme of the NCRAL 2018 Regional convention held May 4-5, 2018 at the Lodge at Leathem Smith in Sturgeon Bay, WI. The event was hosted by the Door Peninsula Astronomical Society. There were nearly 70 registrants and guests in attendance. The event celebrated the recent designation of nearby Newport State Park as an International Dark Sky Site, the first in Wisconsin and only the 13th in the entire United States.

Notable Activities During 2017-2018:

- The Region was one of several states to host many observing events for the August 21, 2017, total solar eclipse that passed through Southern Illinois. Most of the path of totality was clear with one major exception, Carbondale, which hosted one of the largest observing event in the state ever (attended by many thousands) and was disappointingly clouded out moments before the start of totality.



- Effective use is now being made of the Regional Council using email as the means of communications.
- The Regional Council developed and approved a *NCRAL Convention Planning Guide* in the expectation of improving Regional conventions and growing attendance.
- The Regional Council developed and approved a NCRAL Newsletter Editor Award with a certificate for the winning editor and a \$50 honorarium for the associated club.
- The Regional Council has approved a draft document dealing with the benefits of NCRAL affiliation from which a brochure will later be produced; this brochure will complement and not compete with the AL benefit of membership brochure.
- The Region is currently developing a database of all member names and email addresses for more rapid distributions of the Northern Lights newsletter and announcements.
- The Region is adopting and adapting several *TCAA Guides to Amateur Astronomy* written by members of the Twin City Amateur Astronomers (Bloomington-Normal, IL) for affiliate use and public dissemination. Guides can be modified with the NCRAL affiliates' names, logos, contact information, introduction, etc. All guides named below can be accessed at the following URL: <http://tcaa.us/TCAAGuides.aspx> and editable templates will eventually find their way to the Region's website.

1. <i>Introduction to Amateur Astronomy</i>	5. <i>Coordinating Observing Sessions</i>
2. <i>Membership and Benefits</i>	6. <i>Have a Successful Observing Session</i>
3. <i>Astronomy as a Hobby</i>	7. <i>Buying Binoculars and Telescopes</i>
4. <i>The Art of Sky Interpretation</i>	8. <i>Optimizing Observations of Deep Space Objects</i>

Two additional guides are currently being written. They are tentatively titled as follows:

9. <i>Ideas for Starting, Operating, and Growing an Astronomy Club</i>
10. <i>Introductory Astrophotography & Video Imaging</i>

- The Region developed and conducted a very substantial survey of the entire membership. Some 200 participated in this survey which produced very useful findings that will help direct the leadership of NCRAL in coming years. Detailed results of the survey can be found in the Spring 2018 issue of *Northern Lights* newsletter which can be found online at: <https://ncral.wordpress.com/newsletter-archive/>
- The Region developed and conducted its first every post-regional convention survey of participants of NCRAL 2018 in an effort to conduct and evaluation and improve future offerings. The 30-item survey is available by contacting the Regional Chair.
- The Region has slowly increased the number of posts on its Facebook page, and its newsletter has continued to grow in scope and size with several columnist now regularly contributing.
- The Region is in danger of losing Yerkes Observatory. The University of Chicago has publicly announced that they are divesting themselves of any interest in the historical site by October 1, 2018. Efforts are underway to get the University to donate the Observatory to a local Foundation. Efforts are also underway to generate a \$15 million endowment that might support the facility into the future.
- Light pollution problems continue to plague the Region. Some electric companies are promoting the installation of higher efficiency yet brighter street lights. There seems to be little concern by some communities about the astronomically preferable "cooler" illumination over that provided by blue-white LEDs despite growing evidence to support the reverse. Chicago is gravely threatened by more intense illumination in the not too distant future as the city moves to change out its lower efficiency street lights.
- Two notable amateur observatories were built in Illinois. The Champaign-Urbana Astronomical Society has recently completed a 16' x 24' roll-off-roof observatory, and the Twin City Amateur Astronomers have built a 4-building observatory complex for dark sky astrophotography and improved visual observing. By midsummer four telescopes will be in operation: 10" Takahashi, 16" AG Optical, 20" PlaneWave, and 24" AG Optical, each outfitted with advanced 16-megapixel astronomical cameras, filters and filter wheels, and even adaptive optics systems.



Goal and Objectives for 2018-2019:

The current administration's goal for 2018-2019 is to increase individual memberships in NCRAL-affiliated societies, promote the regional membership's involvement in NCRAL events, and increase the number of astronomy clubs participating in the Astronomical League and, by default, the Region. At its annual business meeting at NCRAL 2018 in Sturgeon Bay, WI, the Region set the following objectives for 2018-2019:

- Develop a formal logo for the Region.
- Develop a small grants program for outreach by clubs to the public.
- Develop a small grants program for club-to-club recruitment for Astronomical League and by default NCRAL.
- Develop an NCRAL membership brochure as well as suitable recruitment materials and practices.
- Develop a survey of the NCRAL membership specifically focused on why many members do not attend Regional meetings and attempt to find what it takes to increase participation from the section of the membership.

Respectfully submitted,

Carl J. Wenning
NCRAL Chair (2017-2019)

NCRAL LOGO CONTEST GUIDELINES AND CRITERIA

Many clubs, societies, and associations within NCRAL have beautiful logos. These logos find their ways to newsletters, brochures, web pages, letterheads, business cards, official documents, publicity, regalia, award certificates, coffee cups, and just about anything else one can image. Unfortunately, NCRAL does not have an official logo. The North Central Region of the Astronomical League seeks to develop a Regional logo. The membership at the NCRAL 2018 convention in Sturgeon Bay, WI, heard and approved a motion for the NCRAL Regional Council to create a "one-time allocation of a suitable amount of money for the creation of several draft NCRAL logos, one of which will be amended as necessary and approved in concept by the general membership at the NCRAL 2019 regional meeting. The approved draft will be finalized shortly thereafter."

To this end, the leadership is now soliciting suggestions for logos. A set of guidelines and criteria have been approved by the Regional Council which consists of NCRAL-affiliated society presidents and ALCors as well as the Region's Executive Officers (chair, vice chair, secretary/treasurer, and regional representative to the National Council). The guidelines and criteria for preparing and selecting a draft logo are as follows:

Guidelines:

1. We are not currently seeking finished products, merely draft logos.
2. The draft logos need not be design by a member of a NCRAL-affiliated society; anyone is eligible to enter the competition.
3. More than one submission by the same person is permissible.
4. Drawings must be the original work of the competitor; no use of preexisting logos will be permitted; no copycatting of existing logos will be permitted.
5. Both astronomically accurate and stylized logos are acceptable.
6. Draft logos may be submitted at any stage of development so long as they adhere to these guidelines.
7. Drafts may be submitted in either color and/or black & white; submissions should be made only after publication of the Summer 2018 issue of ***Northern Lights***.
8. Drawings must be submitted as high-resolution files (e.g., 250 kB); send as attachment, do NOT embed in the message.
9. All logo drafts must be electronically submitted via email to the Regional Chair at carlwenning@gmail.com. Submissions must include name of author, contact information, club affiliation (if any), statement indicating that the draft logo the original work of the submitter.
10. All submissions will be published in the Fall 2018 issue of ***Northern Lights***; the submission deadline is August 30, 2018.



11. Comments for improvements then will be solicited from the entire NCRAL membership. These comments will be forwarded to the various artists for use in revising the initial draft(s). The Regional officers reserve the right to reject any submission(s) that could be construed as offensive.
12. Revised drafts will appear in the Winter 2019 issue of *Northern Lights*. Readers will then be asked to vote for the best three logos and offered the opportunity to make further suggestions for revisions. Deadline for submitting revised logo drafts to the Regional Chair is November 30, 2018.
13. The three revised drafts receiving the most votes will be published in the Spring 2019 issue of *Northern Lights*. No re-submission is necessary.
14. At the NCRAL 2019 convention in Moline, IL, the assembled members of NCRAL will vote on the top final draft. The 3rd place award winner will receive a prize of \$25, 2nd place \$50, and 1st place \$75 plus the benefit of knowing that their draft logo in finished form will be the one to represent NCRAL.
15. Up to \$350 will be allocated to render the formal artwork and produce scalable image files. Any trademark becomes the property of NCRAL. NCRAL will use the finished logo in any fashion deemed reasonable by the Executive Officers.

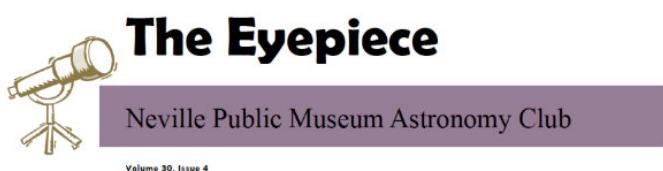
Criteria:

The final draft artwork that is chosen on the basis of the actual NCRAL logo will have the general characteristics:

1. **Simple** – The simplest logos are those that people will recognize immediately and remember the best.
2. **Scalable** – The logo should be simple enough to be able to be scaled down or up and still look good.
3. **Impactful** – The logo should capture the viewer's attention and leave a positive impression; the logo should look good in both color and black & white renditions.
4. **Relevant** – The logo should be relevant to who we are as NCRAL; it must have a meaning that obviously relates to astronomy.
5. **Accurate** – The logo should be astronomical accurate to the extent possible.

NCRAL NEWSLETTER EDITOR AWARD ANNOUNCED

At the NCRAL 2018 business meeting in Sturgeon Bay, WI, the membership agreed to move ahead with the development of a NCRAL Newsletter Editor Award. The Regional Council was given charge of establishing this award, including both recognition of the winning editor and a small honorarium for the associated club, society, or association in recognition of member contributions. Below are the approved submission and judging guidelines.



NCRAL Newsletter Editor Award

Purpose

The newsletter editor of a club, society, or association performs the primary function of informing members about what is happening in their club and in the sky. Editors of astronomy club newsletters must often overcome considerable challenges to



do so. They must be quite creative in filling the allotted space for each issue, especially when the call for articles from the membership does not produce sufficient material. They must have good ideas, be skilled writers, and work like graphic artists, traits which by themselves deserve recognition. They must have passion for communication, and all these qualities, when present, give their publications an unmistakable polish.

In acknowledgement of the time, effort, skill, and importance of the role of the newsletter editor within a club, society, or association, NCRAL hereby establishes the NCRAL Newsletter Editor Award to recognize these essential people for what is often a thankless task. In addition, the award recognizes the membership of the award-winning newsletter editor with a token honorarium acknowledging their contributions to the newsletter.

The Award:

- The first-place NCRAL Newsletter Editor Award consists of a suitable certificate presented at each year's Regional convention.
- The award includes a \$50 honorarium to the award recipient's club/society/association in recognition of the support the membership provides to the newsletter editor.
- The competition is open to all AL/NCRAL-affiliated clubs and only AL-affiliated club/society/association editors are eligible for this award.
- The award program is chaired by the vice chair of the Region.
- Judges for this program include the Region's Executive Officers and past award recipients if any, provided the past award recipient(s) remain associated with the AL and by default NCRAL.
- Top finishers for this award (1st, 2nd, and 3rd place) will be recognized in *Northern Lights*.
- The first-place winner will also be recognized on the Region's website.

Submission Guidelines:

The president of the club/society/association should email a copy of the designated issue of the associated newsletter in Adobe Acrobat pdf file format to the NCRAL vice chair (john.attewell@hotmail.com), along with a cover letter of recommendation in the same file format. In addition, complete contact information of the editor must be included. A photo of the newsletter editor, preferably in an astronomical-type setting, should be sent electronically in jpg format to the same email address by March 15th.

Judging Guidelines:

These public guidelines are based on the Mabel Sterns Newsletter Editor award and are meant to help judge the newsletters. They also give newsletter editors a target for which to aim when they work to improve the quality of their newsletters. These guidelines aren't necessarily inclusive of all judging parameters but represent quite well what is expected of a high-quality publication.

1. Is the Astronomical League and/or NCRAL logo present on the front page? (No formal NCRAL logo currently exists.)
2. Does the newsletter have an attractive masthead?
3. Does the cover page of the newsletter appear enticing?
4. Is there an effective use of "white space" and images throughout to break up the text to make the layout attractive?
5. Is there a pleasing mix of text and image content?
6. Are article images positioned near the article text relating to them?
7. Are images captioned appropriately, and referenced in the article? (Not applicable to images for decorative purposes.)
8. Is there an effective use of columns to ease the work of reading?
9. Is the newsletter of an appropriate length? (If it is too short, it might not be much of a challenge to produce.)
10. If it is long enough for one, does the newsletter have a table of contents on the front page?
11. If it contains URLs, are the links interactive?
12. Is the header of pages following the cover page used creatively to connect pages with masthead on the cover page?



13. Is the footer of pages following the cover page used effectively (page number, newsletter name, volume and/or issue designation, copyright notice if appropriate)?
14. Is there a significant amount of member-contributed content?
15. Is there a creative use of letter formatting (font, size, text effects, word art, smart art, separators, etc.)?
16. Is there a visually appealing use of color in text, images, and captions?
17. Is the content newsworthy and pertinent to the club's membership?
18. Does it contain primarily astronomy content that is a pleasure to read?
19. Does it include meeting minutes (as appropriate), items of historical interest, and references to club resources?
20. Does it include astronomical resources such as star charts and monthly observing highlights?
21. Does it include meeting schedules and locations?
22. Does it include officer and/or board member names and their contact information?
23. Does it greet, welcome, and/or encourage new members?
24. Is it free of spelling errors (demonstrating the effective use of spell check)?
25. Is it free of grammatical errors (demonstrating editor's proofreading expertise)?

CALL FOR NOMINATIONS:

**EXECUTIVE OFFICERS - CHAIR, VICE CHAIR, REGIONAL ALCOR,
NCRAL REGION AWARD, NCRAL NEWSLETTER EDITOR AWARD**

It's never too early to start thinking about the nominations process for next year's **Executive Officer elections**. Assembling a slate of officer candidates last minute can be difficult, if not impossible, as seen at the recent business meetings at Lanesboro, MN, and Sturgeon Bay, WI. In the first case, only prolonged and repeated calls for nominations resulted in candidates for some offices. In the second case, no nominations were received, and the selection of a new secretary/treasurer was handed off to the Region's Executive Officers.

Also worthy of note is the fact that our last regional Chair held the position for 12 years and the last regional Secretary/Treasurer held the position for 10 years. They did so most graciously because no one was willing to stand for election. Regardless, according to the NCRAL bylaws, no officer should succeed himself/herself more than two times for a maximum serial term of 6 years (chair and vice chair) or 9 years (secretary-treasurer and representative to the Astronomical League). Fortunately, no one is term-limited this coming year, but this does not mean that those currently holding positions will be willing to stand again for election.

According to NCRAL bylaws, in 2019 we must elect both Regional chair and vice-chair to two-year terms. We need to elect a Regional ALCOR to a 3-year term. In compliance with the Region's bylaws, the Regional Chair plans to appoint a Nominations Committee in compliance with the Bylaws sometime this autumn. Note the following from the Article V, Section 2, of the Bylaws:

The NCRAL Chair shall appoint a nominating committee chair who will not be eligible to stand for election to any NCRAL office. The nominating committee chair shall select, from among the NCRAL membership, one or more candidates for each office to be elected and the committee chair shall issue a report to the NCRAL Chair prior to the Regional business meeting or the lapse of one (1) year following the previous convention. Additional nominations may also be made by any NCRAL member to the committee chair and provision shall be made for nominations from the floor at the Regional Business Meeting of Article VII.

If you are willing to be serve as a member of this nominations committee, please contact the current Regional Chair directly at carlwennenning@gmail.com

In addition, we should also start thinking about nominations for the **NCRAL Region Award**. Do you know someone who has dedicated his or her time and energy to promoting astronomy? Wouldn't you like to let them know they are appreciated for their hard work? This is your chance! This award recognizes exceptional individual effort and meritorious service to amateur astronomy through the member's local astronomy club, public outreach, the NCRAL, or the Astronomical League.



The Regional is now calling for nominations for both the 2018 and 2019 Region awards. Unfortunately, a call for 2018 nominations was not sent out. In addition, there was one nomination that was carried over from the previous year that should have been considered, but the leadership did not find out about it until a chance conversation revealed it after NCRAL 2018.

Using the guidelines and submission forms below, we have made it easier than ever to nominate someone you feel deserves this award. This award will be presented in a special ceremony concluding the dinner banquet, of the next Regional convention, NCRAL 2019, to be held at Moline, IL, Friday/Saturday, May 3-4.

The Rules for nomination are as follows:

1. The individual must be a member in good standing, either through an AL/NCRAL-affiliated society or as a current member-at-large in the North Central Region.
2. The three current regional officers and the regional representative are NOT eligible for this award. Past winners are also ineligible for this award.
3. The regional officers and the regional representative are the voters and will base their decision on the information provided. Each member votes independently and will use his/her best judgment. All decisions are final.
4. The winner will be contacted not less than 30 days in advance of the NCRAL meeting at which the award will be presented. The winner will not be publicly revealed until the time of the presentation. Those not selected, will not be revealed.
5. All non-winning nominations will be kept on file for two years after initial submission. After such time, a new nomination will need to be competed.

There are many deserving candidates within NCRAL. It is our hope to have a least one nomination from each society of the Region. We look forward to receiving your nominations by the date of the March equinox. If there are any questions, please contact me via phone, email, or mail on the Submission Form shown below.

Submission Format for the NCRAL Region Award

Candidate's name (as it will appear on plaque) _____

Shipping Address _____

City _____ State _____ Zip _____

Club Affiliation _____

Nominator's name _____ Club affiliation _____

Address _____ City _____ State _____ Zip _____

Phone _____ E-mail _____

Submission Guidelines:

Prepare a statement of the nominee's accomplishments in one or more of the areas listed under criteria. This statement should not exceed 3 double-spaced pages (1,000 words). Length does not necessarily equal strength. The statement should include number of years in office or committee membership and dates of said membership. The statement should also include length of time participating in public education, number of presentations, etc.

Supporting data; please include any relevant newspaper clippings, photos, and other articles that support the nomination. For service to groups such as schools, scouts, etc., it would help the committee if you could obtain a brief statement from the teacher, leader, chair etc. on the usefulness of the presentation.

NOMINATIONS MUST BE RECEIVED by the date of the March equinox. Any nominations received after this date will be kept on file for 2020. All nominations must be sent via email to John Attewell, NCRAL Vice Chair, at john.attewell@hotmail.com. For additional information you may contact John at Mobile: (507) 398-4492 or Home: (507) 282-3120.

Lastly, let's not forget about the **NCRAL Newsletter Editor Award** which is new this year. It is expected that the inaugural award will be conferred at the NCRAL 2019 meeting. See the announcement for this award earlier in this issue of **Northern Lights**.

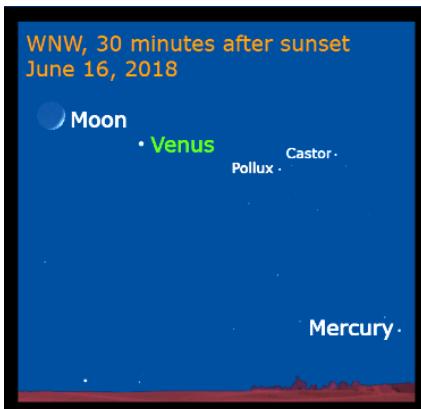


EVENING PLANET PARADE

Five Bright Planets Visible During One Evening

~ by Jeffrey L. Hunt* ~

For about a month near the summer solstice, five planets are visible during the early evening, but they are not easily visible simultaneously from mid-northern latitudes. As the sky darkens a parade of planets extends across the sky from brilliant Venus in the west to Mars in the southeast. The "X" factor of seeing 5 planets simultaneously is Mercury. It reaches its greatest elongation on July 12, although Mercury is visible throughout its apparition. Here's how to look for the five planets:



June 16, 2018: Start looking for Mercury early in its apparition, although the rising time for Mars is much later. Mercury ($m=-1.0$) sets 63 minutes after sunset, 15 minutes before Nautical Twilight (sun's altitude is -12°). Mars rises in a dark sky nearly 3 hours after sunset. At 30 minutes after sunset on this evening, Venus ($m=-3.9$) is 25° to Mercury's upper left. The waxing crescent moon (3.3 days old) is 7.9° beyond Venus.



July 12: At sunset, Mercury ($m=0.4$) is 13° up in the west-northwest. Thirty minutes later, it has an altitude of only 8.5° with brilliant Venus 16.4° to its upper left. Venus is 3.4° beyond Regulus. Mercury sets 78 minutes after sunset and Mars touches the southeast horizon at the same time. Locate Mercury, then wait until Mars clears the horizon.



July 2: Look for Mercury ($m=-0.1$) 10° up in the west-northwest 30 minutes after sunset with brilliant Venus 16.6° to Mercury's upper left. Regulus ($m=1.3$) is 8.1° beyond Venus. Mars touches the



July 17: The best evenings for seeing all five planets are around this date, but you'll need optical assistance. Thirty minutes after sunset, Mercury ($m=0.7$) is 5.1° above the horizon. Regulus is 9.5° to the upper left of Mercury with Venus 8.5° beyond the star. Mars rises six minutes before Mercury sets, although both are low in the sky. Mercury is dimmer as the apparition continues so optical aid is needed to first locate it. Twilight lingers for over 2 hours at this time of the year at mid-northern latitudes.

horizon 25 minutes after Mercury sets and 15 minutes before the end of twilight.



On July 17, 2.5 hours after sunset and after Mercury sets, the planet parade arches across the southern sky. Brilliant Venus sparkles 5° up in the west and Mars is 5° up in the southeast. Saturn is 32.8° to the upper right of Mars, above the Teapot of Sagittarius. Jupiter is 50.8° to the west of Saturn and 1.8° to the west of Zubeneschely (α Lib, $m=2.8$). The moon (5.0 days old) is nearly between Venus and Jupiter.

If you're travelling to the southern United States or farther south in late July, the five planets are visible simultaneously at those more southerly latitudes. See <https://wp.me/pJpvr-1Eg> for more details.

Another opportunity to see five planets simultaneously, from mid-northern latitudes, occurs in the morning near the time of the summer solstice in 2020. While these groupings are infrequent, they provide magnificent displays of the solar system's beauty.

MARS AFTER OPPPOSITION IN 2018

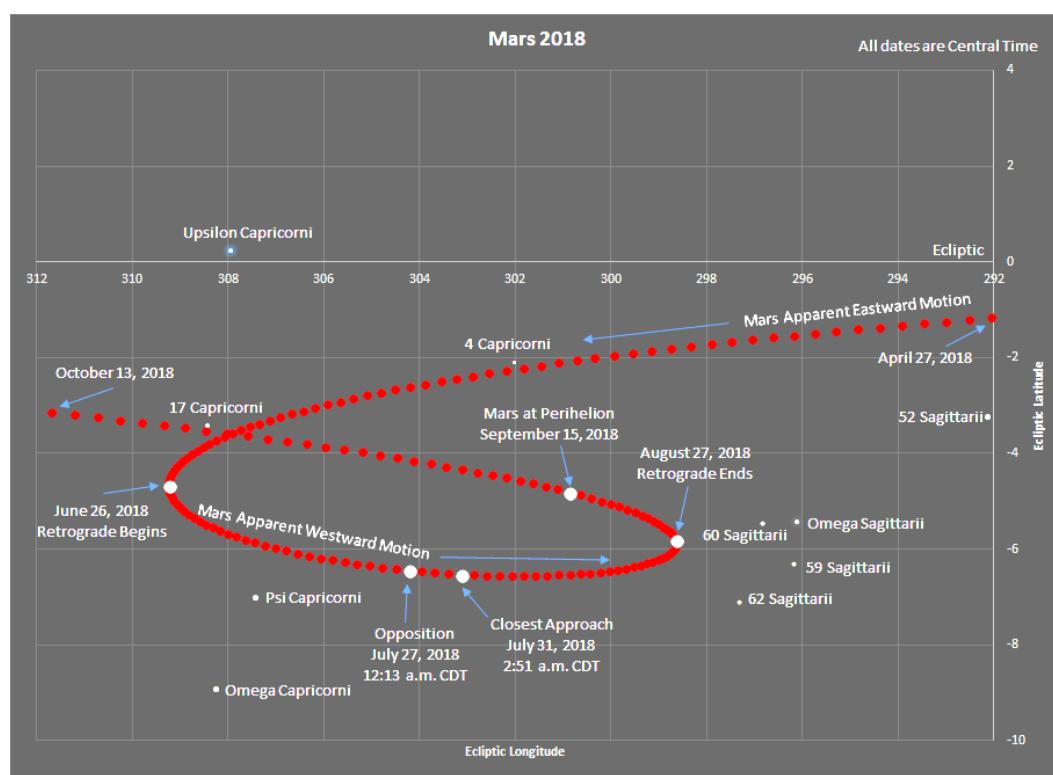
~ by Jeffrey L. Hunt ~

This summer Mars makes its closest approach to Earth since 2003, when it was 0.373 Astronomical Units away. These approaches occur when Mars' opposition occurs near its perihelion, so called perihelic oppositions. Before robot spacecraft

visited Mars, these close approaches provided opportunities for discovery through earthbound telescopes.

After the 2018 opposition and closest approach, Mars fades quickly in brightness and apparent size. By the year's end, it appears as a brighter "star." This article chronicles Mars' movement until the end of 2018.

It should be noted that a retrograde loop of Mars was published in the Spring Equinox issue of the *Northern Lights*. It can be referenced in back issues of the publication or found at this link: <https://tinyurl.com/mars-retro-2018>.





Additionally, the times in the summary are calculated for Chicago, Illinois, from data by the U.S. Naval Observatory. When appropriate, time intervals are included so that observers can correct for their locations.

The highlights:

- **July 27, 2018** (magnitude, -2.8; apparent size, 24.3"; distance from Earth, 0.386 Astronomical Units; setting time after sunset, 546 minutes), Mars is at opposition. At 9:15 p.m. CDT (60 minutes after sunset), the moon appears 7° to Mars' upper left. Mars is 5° up in the southeast. Saturn, 22° up in the south-southeast, is nearly 31° to the upper right of Mars. Jupiter, 27° up in the southwest, is 80° to Mars' upper right; this Giant Planet is 1.7° to the right of Zubeneschamali (α Lib, m= 2.8). Brilliant Venus is 10° up in the west, 54° to the lower right of Jupiter. **It should be noted** that Mercury sets 31 minutes after sunset and at Civil Twilight (sun's altitude is -6°). See the accompanying article about summer's planets and the evenings when to find all five bright planets in one evening.
- **July 31** (-2.8, 24.3", 0.385 AU, 528m), Mars is at its closest to earth – the closest approach. Even at this distance, Mars is about 1/100 the apparent size of the full moon.
- **August 23** (-2.3, 22.2", 0.422 AU, 453m), At 9:00 p.m. CDT (81 minutes after sunset), the waxing gibbous moon (12.7 days old) appears 8° to the upper left of Mars, visible 10° up in the south-southeast. Saturn, 25° up in the south, is 27° to Mars' upper right and Jupiter, in the southwest, is 46° beyond Saturn. Brilliant Venus is in the west, 30° beyond Jupiter and sets at 9:11 p.m. CDT (92 minutes after sunset).
- **August 27** (-2.2, 21.5", 0.435 AU, 440m), Mars' retrograde ends near the kite-shape asterism of 4th magnitude stars (ω Sag, 59 Sag, 60 Sag, and 62 Sag) known as Dog's Country or Dog's Kingdom. After this date, Mars resumes its eastward motion, slowly at first.
- **September 15** (-1.7, 18.2", 0.514 AU, 415m), Mars is at perihelion. It is now 128 million miles from the sun. The planet is now nearly three times dimmer and 25% smaller in apparent size than when it was at its closest approach.
- **September 19** (-1.6, 17.6", 0.533 AU, 413m), At 8 p.m. (67 minutes after sunset) the waxing gibbous moon (10.2 days old) appears 4.5° to the upper right of Mars, now 21° up in the south-southeast. Saturn, 24° up in the south-southwest, is 30° to the right of Mars. Bright Jupiter, 11° up in the south-southwest, is 43° to the right of Saturn. If you look earlier, Venus is 16° to the lower right of Jupiter, although Venus sets at 7:56 p.m. CDT (63 minutes after sunset). The interval of time between sunset and Mars setting stays at approximately 400 minutes for the remainder of the year.
- **October 6** (-1.2, 14.8", 0.627 AU, 428m), Mars passes 8.5' to the lower right of 17 Capricorni (m=5.9). Binoculars or a low aperture telescope resolves the pair. Venus sets at Civil Twilight. It is the second planet of the five bright planets from last summer's planet parade to exit the evening sky, after Mercury's brief appearance.
- **October 13** (-0.9, 13.6", 0.669 AU, 414m), This is the last date displayed on the retrograde chart. Mars has diminished nearly 6 times in brightness and 44% change in its apparent size.2
- **October 18** (-0.9, 13.2", 0.702 AU, 418m), At 7 p.m. CDT (55 minutes after sunset) the waxing gibbous moon (9.8 days old) appears 5.8° to the left of Mars, now 27° up in the south-southeast among the stars of Capricornus. Saturn, 21° up in the south-southwest, is 40.2° to the lower right of Mars. Jupiter, 4° up in the west-southwest, is 38.3° beyond Saturn. Jupiter sets 84 minutes after sunset. As measured by standard time, Mars is now setting before midnight and will be clearly doing so when daylight saving time reverts to standard time early next month. Mercury returns to the evening sky, heading for its greatest elongation on November 6. Four planets are back in the sky again, although Venus is days away from its solar inferior conjunction. Mercury passes 3 degrees from Jupiter on the evening of October 28.
- **November 5** (-0.5, 11.5", 0.823 AU, 424m), Mars passes 34' above Deneb Algiedi (δ Cap, m=2.8). Use binoculars or a small telescope to resolve them.
- **November 15** (-0.3, 10.5", 0.894 AU, 428m), At 5:30 p.m. CST (60 minutes after sunset) the First Quarter moon (8.3 days old) is 3.1° to the lower right of Mars, now 33° up in the south-southeast. Saturn, 14° up in the southwest, is 54° to the lower right of Mars, setting 163 minutes after sunset. Jupiter sets a few minutes before Civil Twilight. It is the third planet in the parade to exit the sky as it disappears into the sun's glare.



- **December 1** (0.0, 9.2", 1.01 AU, 426m), Mars is 90° east of the sun, in the south at sunset. Saturn is low in the southwest, 62° to the lower right of Mars. Saturn sets 117 minutes after sunset.
- **December 14** (0.2, 8.4", 1.12 AU, 420m), At 5:20 p.m. CST (60 minutes after sunset), the waxing crescent moon (7.7 days old) is 4.3° below Mars, now 43° up in the south. Saturn is 69° to the lower right of Mars. Saturn sets 113 minutes after the sun and 6 minutes after Nautical Twilight (sun's altitude is -12°). Soon Saturn disappears into sunlight as it heads towards its solar conjunction, the fourth planet from summer's planet parade to leave the sky.
- **December 31** (0.5, 7.4", 1.26 AU, 402m), Mars ends the year appearing as a brighter star 47° up in the south-southwest at Astronomical Twilight (sun's altitude is -18°). It is to the lower left of the six, 4th magnitude stars of the western fish in Pisces. Mars is the remaining planet from summer's planet parade when five planets were visible during the evening in late July. It is 20 times dimmer and 70% smaller than when it was closest to us in late July.

Future oppositions leading up to the next perihelic event occur later at each opposition season (October 13, 2020; December 8, 2022; and so on) until the opposition occurs near aphelion (February 19, 2027, $m=-1.2$; Mars is 4° above Regulus, with Jupiter 10° to the right of Mars and close to a nearly full moon). These "aphelic oppositions" occur when Mars is highest in the sky, in the northern hemisphere. As oppositions move into spring and summer, the oppositions occur closer to Earth and lower in the sky, with Mars being brighter and having larger apparent angular sizes; the next perihelic opposition occurs September 15, 2035 with the closest approach on September 11 (0.382 AU). This closest approach is about 370,000 miles closer than this year's event.

Mini Messier Marathons

~ by Carl Wenning, Twin City Amateur Astronomers ~

In the early 1990s, the Twin City Amateur Astronomers (TCAA) developed a seasonal Mini Messier Marathon. This was not the first club in the Region and certainly not the last to do so. The difficulties of observing all 110 Messier objects on a single night (usually in March) is well known. The traditional task constitutes a significant physical challenge for many of our older observers. So, in the spirit of the original Messier Marathon, the nearly insurmountable annual task was split up into four much easier seasonal tasks.



During NCRAL 2018 in Sturgeon Bay, WI, I was speaking with another observer about challenging observations, and just happened to mention the TCAA's Mini Messier Marathon that our club has been using. I noted that our club acknowledges (with a certificate) members who complete each the four seasonal tasks. I'm reiterating that information and providing details here.

A certain amount of liberty has been taken to roughly equalize the number of celestial objects to observe each season to 27 or 28. Naturally dispersed, the highest concentration of Messier objects is in the spring sky due to the abundance of galaxies in the Virgo-Coma region. The lowest concentration just happens to be in the autumn sky. Here is the seasonal breakdown:



Winter: M1, M45, M36, M37, M38, M42, M43, M78, M79, M35, M41, M50, M46, M47, M93, M48, M44, M67, M40, M81, M82, M97, M101, M108, M109, M65, M66. (27 objects)

Spring: M95, M96, M105, M53, M64, M85, M88, M91, M98, M99, M100, M49, M58, M59, M60, M61, M84, M86, M87, M89, M90, M104, M3, M51, M63, M94, M106, and M68 (28 objects)

Summer: M83, M102 (NGC 5907?), M5, M13, M92, M9, M10, M12, M14, M19, M62, M107, M4, M6, M7, M80, M16, M8, M17, M18, M20, M21, M22, M23, M24, M25, M28, and M54. (28 objects)

Autumn: M55, M69, M70, M75, M11, M26, M56, M57, M71, M27, M29, M39, M2, M72, M73, M15, M30, M52, M103, M31, M32, M110, M33, M74, M77, M34, and M76. (27 objects)

Please note that this is just a description of what the TCAA has done in the past. This seasonal observing program is NOT a program of the Astronomical League, nor is the Region in the business of providing certificates. If other clubs in the Region are interested in adopting this program (or a variant) as their own, they are most free to do so.

For complete details about the objects observed, see Messier Object list, ordered by Season, in the *RASC Observer's Handbook* and available online at the following URL: <http://www.messier.seds.org/xtra/similar/dataRASC.html>

THE NEW (AND OLD) CUAS OBSERVATORY

~ by Doug Rokke & Dave Leake, Champaign-Urbana Astronomical Society ~

The Champaign-Urbana Astronomical Society, Inc. has provided East Central Illinois residents and society members an opportunity to experience the night sky since its inception in 1986. The club arose out of a park district class on how to observe Halley's Comet. Being a park district affiliate group, the group did early observing in the parks around and within Champaign-Urbana. We currently have roughly 75 members.

The club's big break happened in 1991 when someone from California asked about an abandoned observatory building 35 miles south at Prairie Observatory, operated by the University of Illinois. The dome used to house a 40-inch research-grade instrument. Club members joked that we should offer to talk a smaller 15-foot, twin shutter dome that also sat on the site. The Department of Natural Resources was happy to part with the liability and the dome came back to Champaign in the fall of 1991. The dome used to sit behind the main campus observatory and was one of four facilities used to activate the lights of the 1933 World's Fair in Chicago using the light of Arcturus and a photocell. So, our dome had a little history to go along with it! The bricklayer's union brought out their apprentices and built the building for us and a homebuilt 16-inch classical Cassegrain instrument was installed for the opening in July 1992. It still sits on the original 1925 polar axis. Just this year, the telescope went through a refurbishment where a new fork mounting, and homemade drive system were installed. It pays to have a retired engineer in your club!

The club held free monthly sky watch events at the dome on the Saturday closest to the first quarter Moon. But the dome only holds 5-6 at a time and it is not ADA accessible. Informal talks began in the fall of 2014 to maybe augment our facilities with a roll-off-roof structure. We picked the brains of our neighbors to the northwest, the Twin City Amateur Astronomers (Bloomington-Normal), who had built such a structure at their Sugar Grove site. CUAS acquired 501(c)(3) status then formed a committee so our monthly meetings weren't dominated by observatory talk. The committee brought a consensus recommendation to the membership.

A budget of \$50,000 was proposed and fundraising began. The club had excess equipment and sold some off to start the campaign. The club had a poster printed for in-town displays, business cards, brochures, a press release and talks were given to local civic groups. We even put up a donation box at our open house events as every little bit helps. Club members were also very generous. By early 2017 we contacted Backyard Observatories, out of Lodi, Ohio, to start exchanging drawings. CUAS batted around different floor plans from a 10' x 12' structure with one pier to a 24' x 30' structure with poured footings for four piers. The walls would be 7-feet high. It also pays to have an architect in your club! The group voted to go for the largest structure with the idea we would have room to expand. An amount of \$24,880 was quoted.



Work began in August of 2017 with site prep. Illini Concrete was hired to lay out the slab, footings for the piers, and footings for the roof support posts. Backyard Observatories and their crew of three arrived in September and finished the building in five days. Then members took over for the detailing. An existing external shed was stocked with a self-starting 8-kilowatt generator and cable was trenched to supply power to both the roll-off-roof structure and the domed observatory. Light fixtures were wired from a

breaker box that provided light for a storage room and a small control room. RGB LED rope lights were recessed in a raceway around the walls of the structure. OSB was added to the interior walls.

After several votes, the club christened the facility the "Prairie Winds Observatory" (PWO) on April 21 with a ribbon cutting and cake! A club member donated a 14-inch Meade LX200 Go-to instrument to be one of the primary telescopes in the new structure.



Prairie Winds Observatory of the Champaign-Urbana Astronomical Society

As with any structure of this type, it is never truly "done." Telescopes are currently on tripods, but piers are in the works and we need to establish both our storage area and control room. But we are excited to continue to offer that cosmic experience to the general public.

The observatory complex is located on County Road 700E, south of the Monticello Road, southwest of Champaign, Illinois, and southwest of Willard Airport. See www.cuas.org for details.



YERKES OBSERVATORY PETITION



On March 7, 2018, the University of Chicago announced the intention to “cease operations” at Yerkes Observatory in Williams Bay, Wisconsin. Their stated deadline of October 1, 2018 gave just 6 months for the concerned staff and community to work with the University on a transition plan which the University admittedly does not have.

A petition has been created calling for a more reasonable approach in dealing with the historic observatory. The petition can be found at the following case-sensitive URL: <https://goo.gl/whcRCK>

Please consider showing your support with a signature. We feel that doing anything less than giving the time, resources and fairness of a properly planned and executed transition of operations would be an enormous injustice to the monument of history, education, and community that Yerkes Observatory has become.

FUTURE NCRAL REGIONAL CONVENTIONS

Each year at NCRAL’s annual business meeting, the Region receives offers for hosting upcoming meetings. The following affiliates have agreed to hosting future conventions. We are still in need for additional hosts, but especially for 2022, 2024, and the years beyond. It’s never too early to start planning to host.

- 2019 Rock Island, IL: Popular Astronomy Club (confirmed)
- 2020 Port Washington, WI: Northern Cross Science Foundation (confirmed)
- 2021 Green Bay, WI: Neville Public Museum Astronomical Society (confirmed)
- 2022 OPEN
- 2023 Bloomington-Normal, IL: Twin City Amateur Astronomers (confirmed)
- 2024 OPEN

If your club has never hosted an NCRAL Regional convention, please consider doing so. While it is a considerable amount of work, it can be quite rewarding – even fun. It provides an opportunity to showcase your group’s facilities and accomplishments, build club camaraderie, and to get to personally know interesting guest speakers. You can also use such an event to grow your club’s membership.

Remember, NCRAL now has its own draft convention planning guide. The guide was developed by experienced hosts of NCRAL conventions in conjunction with one future host who asked lots of excellent questions. Significant contributions were made by Alan Sheidler (Popular Astronomy Club) and John Beck (Door Peninsula Astronomical Society). NCRAL Chair Carl Wenning, served as contributor and lead author.

The **NCRAL Convention Planning Guide** has three sections. Section 1 deals with the “preliminaries” of what it takes to host a Regional convention. Section 2 deals with programming information. Section 3 deals with budgeting information.

The guide is considered a “living document” that will be updated as new survey information becomes available. The recent NCRAL 2018 post-convention survey was included in the document. Results from the ongoing NCRAL Convention Preferences Survey (see article above) will also be included. The goal is to increase the benefits of convention attendance, thereby increasing attendance at our Region’s conventions.

To download and review the planning guide, you may access it through the NCRAL website the following URL: <https://ncral.wordpress.com/conventions/>. Look for the link at the bottom of the page.

Please contact NCRAL Chair Carl Wenning at carlwenning@gmail.com should you have any questions or wish to toss your hat into the ring.



REGIONAL OFFICER & LEADER CONTACT INFORMATION

Chair: Carl Wenning (2-year term expires spring 2019, in first term)

Bio: Carl has been an amateur astronomer since being introduced to the sky by his grandfather during July 1957. Today he is an AL Master observer. He has been a member of the Twin City Astronomers of Bloomington-Normal (Illinois) since 1979. He serves as the club's secretary, historian, and editor of the club's newsletter *The OBSERVER* for which he received the AL's 2017 Mabel Sterns Newsletter Editor Award. Carl is a former planetarium director and physics teacher educator who remains actively involved in astronomy education and public outreach events.



Contact: carlw彭ning@gmail.com

Vice Chair: John Attewell (2-year term expires spring 2019, in first term)

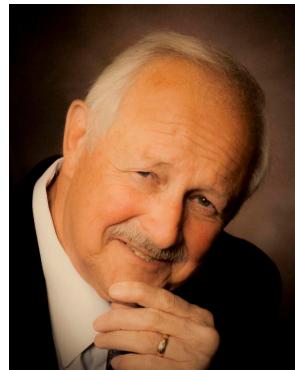
Bio: John is a statistical analyst by day and amateur astronomer by night. He is particularly interested in the history of astronomy, especially how early astronomers used mathematics to explain their observations. John is a member of the Rochester Astronomy Club (Minnesota) and was the planning chairman for the 2017 NCRAL convention held at the Eagle Bluff campus near Lanesboro, MN.



Contact: john_attewell@hotmail.com

Secretary-Treasurer: Roy Gustafson (2-year term expires spring 2020, in first term)

Bio: Roy got interested in astronomy when visiting the Adler Planetarium in Chicago when he was in 2nd Grade. The stars 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 last year the Total Solar Eclipse. Roy also taught astronomy at Black Hawk Junior College in Moline, IL. Roy retired from John Deere & Company after 32 years of service.



Contact: astroroy46@gmail.com

Representative: Bill Davidson (3-year term expires spring 2019, completing unfinished term)

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, 1600 mm focal length refracting telescope. He recently retired as a college mathematics instructor, has been a member of the Rochester Astronomy Club (Minnesota) for 20 years, and serves as editor of the club's newsletter *RochesterSkies*.



Contact: rochesterskies@outlook.com



NCRAL 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.

Contact: astrosetz@hotmail.com



Northern Lights Editor-in-Chief: Jim Gibbs (appointed)

Bio: Jim has been observing the starry skies since he was 10 years old and on and off ever since. His primary affiliation is with the Twin City Amateur Astronomers (Illinois) where he has been a member for 5 years. He is also a member of the Fox Valley Astronomical Society where he has held several leadership positions. He is an avid amateur astronomer who enjoys observing and especially imaging around the TCAA dark sites and travelling around finding other dark sites. He is a software engineer and currently is concentrating in growing his small consulting business.

Contact: jrgibbs@msn.com



NCRAL BYLAWS AVAILABLE ONLINE

Did you know that NCRAL has a set of Bylaws? The Region's Bylaws explain who we are, what we are about, and even include a bit of history. For instance, did you know that NCRAL was established on August 30, 1947? Did you know that NCRAL is to be governed by an Executive Council consisting of the Region's three elected officials (Chair, Vice Chair, Secretary-Treasurer) in concert with the Representative to the AL Council? Did you know that there is an NCRAL Council that guides the Region in concert with the presidents and one representative of all the AL-affiliated astronomy clubs in a six-state region? If you'd like to know more about how NCRAL operates, be sure to check out the Bylaws at <https://ncral.wordpress.com/bylaws/>

NCRAL WEBSITE

~ by Jeff Setzer ~

Did you know that NCRAL has its own website? It's true! Point your browser to ncral.wordpress.com and you'll see a central repository for information about our Region and constituent clubs, as well as back issues of *Northern Lights*.

As Webmaster, I maintain the information on the website, but the original idea was — and still is — to publish contributions from members. As part of that mission, we will be hosting the emailed newsletters at the website, so people can easily access back issues.

Will the website progress from an occasionally used reference to something more? That's entirely up to you, dear reader. If you have ideas or submissions, contact me at astrosetz@hotmail.com



Hold the Date!

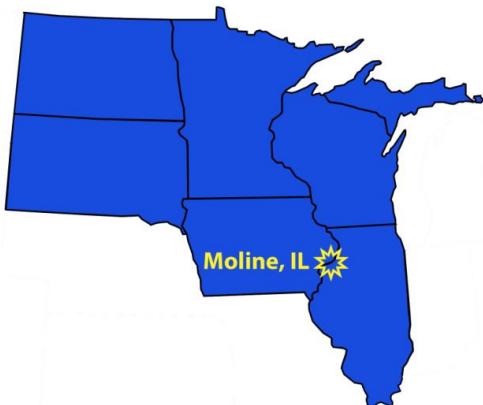


NCRAL 2019 Annual Convention

Presented by the Popular Astronomy Club

*Astronomical Voyages of Discovery:
Past, Present & Future*

May 3 – 4, 2019



Convention Location

Stoney Creek Hotel & Conference Center
101 18th St., Moline, IL 61265

**To be the first to know as plans are finalized, please
send your name, club affiliation, and email address to:**

2019NCRALInfo@gmail.com



NCRAL & AL ON FACEBOOK

Did you know that NCRAL now has a Facebook page for sharing information about your Region's AL-affiliated clubs? This is a great way share observations, notes, images, and any other things you think the NCRAL membership or AL members-at-large living in our region would enjoy. Check us out at:

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

Lastly, would you like to see your images on the NCRAL Facebook page banner? If so, send your image and a 2-3 sentence caption to the *Northern Lights* newsletter assistant editor at carlwenning@gmail.com.

Also, did you know that the Astronomical League is on Facebook? It's a active site with lots of good information. Check it out at:

<https://www.facebook.com/search/top/?q=astronomical%20league>



AL-AFFILIATED CLUBS CAN NOW DIRECTLY UPDATE THEIR INFORMATION ON THE AL WEBSITE!

Did you know that the president, treasurer, or ALCor of your club may update information about your club yourself by requesting an account at URL https://members.astroleague.org/request_account and entering their email address and then pressing the "Request account information" button near the bottom of the page? An email with instructions and a link to create a new account will then be sent within a few minutes. Once logged in, there are instructions at <https://members.astroleague.org/content/club-officer-tutorial> on how to update your club's info.