

*Last minute prep at the RAC.*



*Randy Attwell welcoming attendees.*





## "An Incredible Conference"

It was September 2016 when word came down from the NCRAL office that no conference would occur in 2017 unless an organization within the region would take on the challenge. The Rochester Astronomy Club took the opportunity and hosted the annual meeting of the North Central Region of the Astronomical League at the Eagle Bluff Environmental Learning Center near Lanesboro, MN. The committee, under the leadership of John Attewell and consisting of Randy Hemann, Jay McLaren, Josef Chlachula, Julie Gawarecki and Kirk Severson, organized and budgeted a conference with 30 registrations as the minimum. Nearly 70 registered.

This year's theme was "Astronomical Observing" and the following speakers gave the audience much to admire.

Dr. Robert Mutel, University of Iowa, *The Iowa Robotic Telescope*

Dr. Carl Wenning, *Astronomical Bucket List*

Dr. Armando Manduca, Mayo Clinic, *The History and Discoveries of the Mt. Wilson Telescope*

Dr. Steve Kawaler, Iowa State University, *Architecture of Planetary Systems Through Host Star Variability*

Russ Durkee, *A Decade of Research with Backyard Telescopes*

Karl Young, University of Minnesota, *Measuring the Cosmic Microwave Background with Balloon-borne Telescopes*

Dave Falkner, *500 Years of Astronomy*

Dr. Jennifer Anderson, Winona State University, *Experimental Impact Cratering*



Web Page:

<http://www.rochesterskies.org>

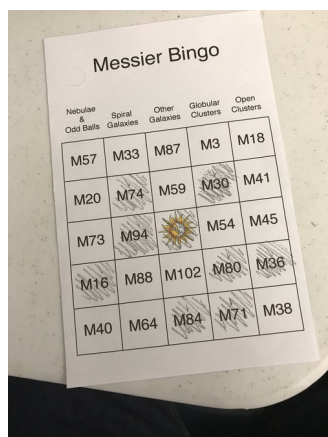
Most meetings are held at the Rochester Community College every second Tuesday of the month at 7:00 pm in the East Hall building, room EA121.

## #27<sup>th</sup> RAC Newsletter

Deadline November 2017

Please consider contributing to the RAC newsletter. Have a favorite astronomy topic? Want to share your astrophotography interest? Write about your astronomy experience. Any suggestions for the newsletter is, also, appreciated. Send your contributions to

[rochesterskies@outlook.com](mailto:rochesterskies@outlook.com)



# Introducing the Astronomical Bucket List

Dr. Carl Wenning presented the idea of a bucket list for amateur astronomical observers. “Everybody has one whether or not they realize it.”

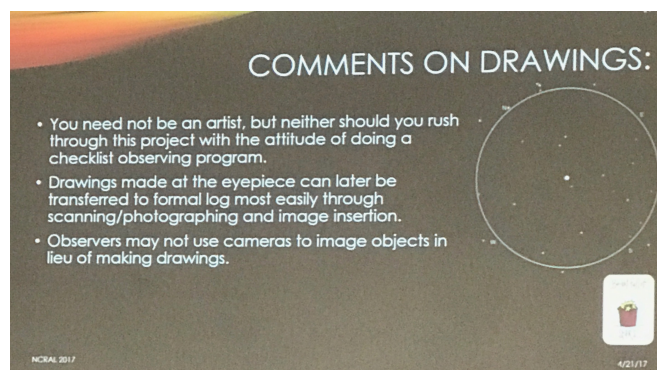
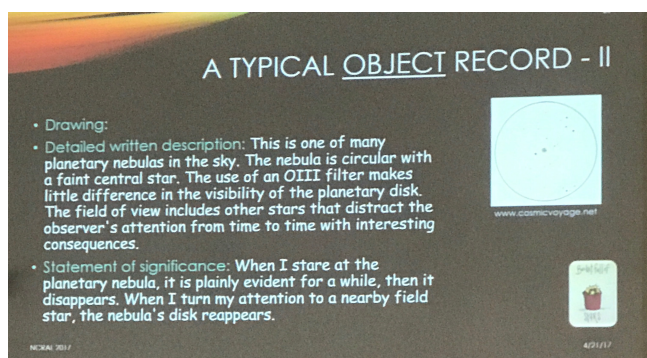
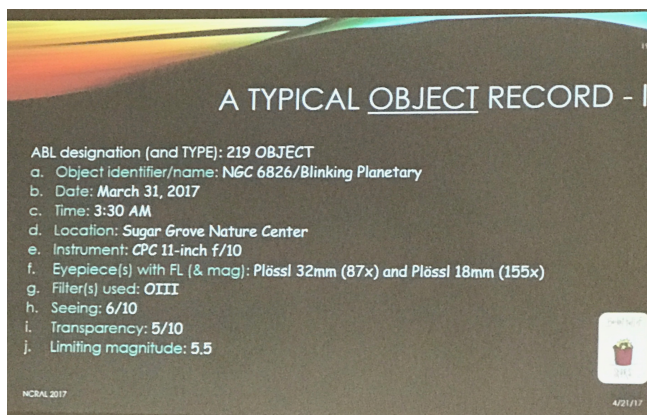
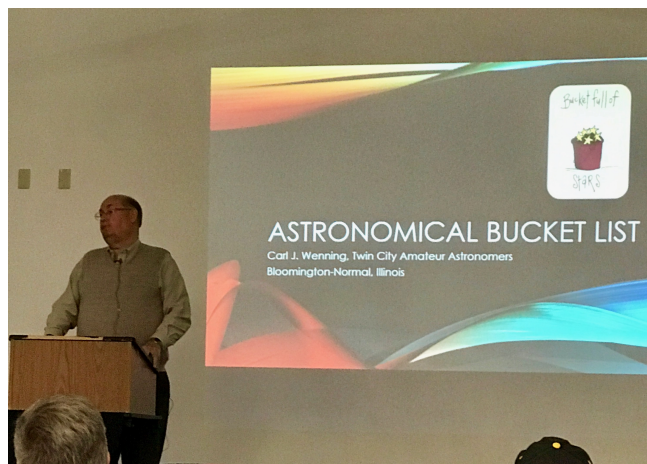
Such a program, not yet approved by the Astronomical League, would require investigation, observation, and reflection of some 250 objects, events and activities. “Emphasis in the ABL is on observing and reflecting on rather than finding and seeing celestial objects. There would be no distinction between observations made with or without assistive devices, like a go-to mount, computer applications, etc.”

Whether the idea is ever approved by AL, just the idea of having a personal astronomical bucket list could increase the knowledge of the observer. “It is important to do at least a minimum of background research before, during, or after observing each object.”

However, the idea of reflecting on the observation might be a new concept for some. A personal comment could, as Carl mentioned, bring readers from the future admiring who you were as a person or encourage others to carefully observe an object or event rather than mere viewing. On August 21<sup>st</sup>, the Great American Eclipse would be such an event to observe one’s surroundings, reactions of others along with your own.

“The list is limited to the best celestial objects and phenomena that can be observed readily with a modest instrument under relatively dark and transparent sky.” He used a Celestron CPC 11 telescope from Sugar Grove Nature Center at McLean, IL.

*Carl is a well-known Central Illinois astronomy educator. He was the planetarium director at Illinois State University from 1978 to 2000 and director of the University's physics teacher education program from 1994-2008. He has also been a member of the Twin City Amateur Astronomers (TCAA) of Bloomington-Normal, Illinois, since 1978. He is currently NCRAL representative on the Astronomical League's national council, and editor-in-chief of NCRAL's Northern Lights*



newsletter. Carl has been recognized by the Astronomical League as a Master Observer, and received the 2007 NCRAL Region Award in recognition of his service to amateur astronomy.





IOWA STATE UNIVERSITY  
Department of Physics and Astronomy

## Other Great Talks

### Architecture of Planetary Systems Through Host Star Variability

NCRAL 2017  
Eagle Bluff Learning Center  
April 22, 2017

Steve Kawaler  
Physics and Astronomy  
Iowa State University



Russ Durkee, *A Decade of Research with Backyard Telescopes*

Dr. Armando Manduca, Mayo Clinic,  
*The History and Discoveries of the Mt. Wilson Telescope*

- The most sophisticated carried out by Hubble is still giving a sense of scale with a scale
- It is believed that the great mass of the stars... are arranged in the form of a lens- or bun-shaped system... considerably flattened towards one

### Measuring the Cosmic Microwave Background With Balloon-borne Telescopes

Karl Young  
University of Minnesota

Karl Young  
NCRAL  
April 22<sup>nd</sup>, 2017

Maestro  
Mike Carlin

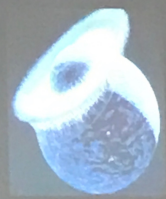
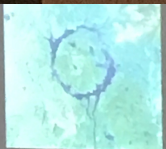
### 500 Years of Astronomy How the Giants of Astronomy Transformed Our Understanding of the Universe

North Central Region  
Astronomical League Convention  
April 22, 2017  
Dave Falkner

Dave Falkner

### Impact Cratering...

- Most prevalent geologic process in the Solar System
- Formed the Moon
- Nothing is safe!



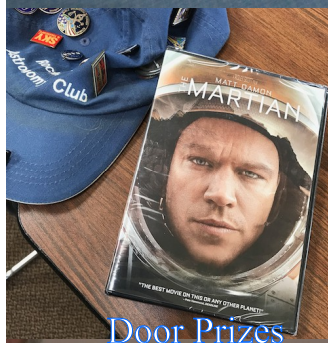
Dr. Jennifer Anderson, Winona State  
University, *Experimental Impact Cratering*



## More Than Just Business



SOUTHERNTOUCHPHOTO.COM



Door Prizes



"Bazooka Scope"



Eagle Bluff's Portable Star Lab  
Planetarium



### ALCON 2018

Minneapolis Saint Paul  
Wednesday July 11  
through  
Saturday July 14

ALCON 2018  
is hosted by the  
Minnesota Astronomical Society



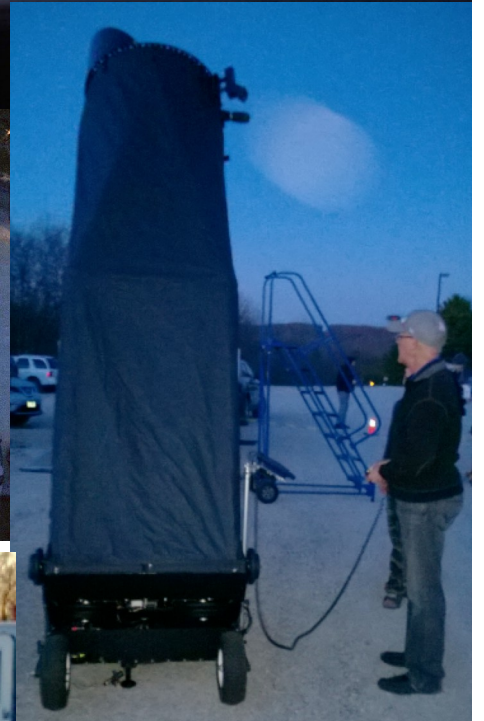
Please join us for  
four nights of  
fantastic Minnesota weather  
and help us celebrate  
45 years of astronomy outreach  
in the Twin Cities

The MAS is a proud member of





## *The Last Evening Together*

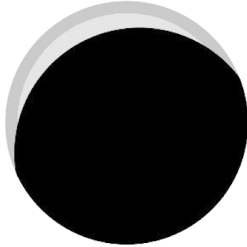


Observing on a clear and crisp moonless evening on April 22<sup>nd</sup>, the large and small telescopes gathered to see the night sky in all its glory. From M13 to the Sombrero Galaxy in Virgo, meteorites and Iridium flares, all who came were dazzled.

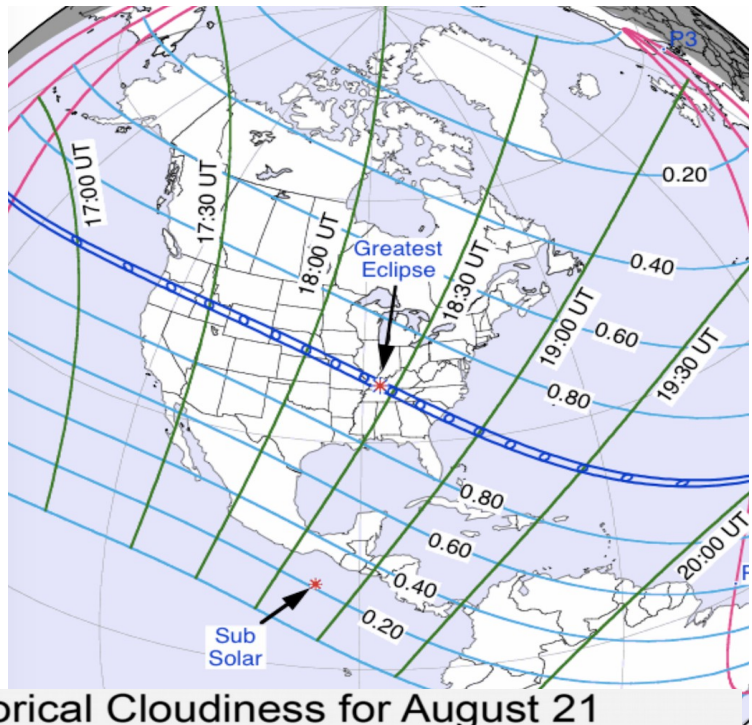


## August 21, 2017: The Great American Total Eclipse...

BUT you can't witness totality. (Here I would insert the 'crying' emoji.) There will be something to observe in Rochester and surrounding area, though. The "Great American Partial Eclipse" begins locally at 11:45 am with maximum occurring at 1:08 pm with 85% of the sun blocked!



The partial eclipse ends at 2:31 pm, a duration of 2 hours, 47 minutes.



### Average Historical Cloudiness for August 21



The Postal Service has just released a first-of-its-kind stamp that changes when you touch it. The Total Eclipse of the Sun stamp commemorates the August 21<sup>st</sup> eclipse, transforms into an image of the Moon from the heat of a finger. The First-Day-of-Issue ceremony took place on the summer solstice, June 20<sup>th</sup>, at the Art Museum of the University of Wyoming in Laramie. Images were taken by well-known eclipse chaser Fred Espenak.





## News from the 2017 NCRAL Convention

The **2018 NCRAL** convention will be held in Door County, Wisconsin, hosted by the Door Peninsula Astronomy Club. Dates are to be determined.



From left to right: Donald Klemm (Secretary-Treasurer), Carl Wenning (Chair), Bill Davidson (Representative to the AL Council) and John Attewell (Vice-Chair).



The Minnesota Astronomical Society will be hosting the Astronomical League National Convention in 2018 on July 11-14. The convention will be held at the Hilton Minneapolis/St. Paul Airport Mall of America. The theme will be **Outreach**. For more details go to [ncral.wordpress.com](http://ncral.wordpress.com), select Newsletter Archives near top of page, and *Northern Lights* Summer 2017.



**Rochester Astronomy Club**  
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### Officers

<b>President:</b>	Randy Hemann
<b>Vice President:</b>	Kirk Severson
<b>Secretary:</b>	Brandon Wyman
<b>Treasurer:</b>	Julie Gawarecki
<b>Web Master:</b>	Don Schlosnagle John Attewell
<b>Astro League Coord:</b>	Dean Johnson
<b>Newsletter:</b>	Bill Davidson

### RAC Social Media



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