

# NORTHERN LIGHTS

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## Editor's corner

*R. Klappal*



A time like I've had the past few months I don't need! A number of things combined to give me some changes in responsibility in several areasboth at work and my personal life; then I had a hard disk crash.

I replaced the hard disk, was able to recover practically everything, and even reformat the old disk. I now have 17-gigabytes of hard disk here. I won't have to worry about disk house-keeping and deleting things for, oh, several days anyway! {;^)>

Needless to say, some things got a bit behind schedule, so you are getting the January issue in May--and with a bit of luck, you'll be getting the April issue within a week. July will be on schedule.

## Aperture Fever Rating Scale Checklist

*submitted by Randall Wehler*
*Willmar, MN*

1. Finding yourself doodling predominantly circles of increasing size over time to represent aperture.
2. An obsessional preference for circles (representing a telescope's objective).
3. Taking more than a passing interest in convex reducing mirrors found in stores, wondering what observing performance they would deliver if there were concave.
4. Checking the commercial ads first when receiving a new issue of an astronomy magazine, by-passing all of the feature articles and other eye-catching the items of interest.
5. Scanning the horizon for the biggest telescope at a star party, spending more time glancing at it than actually observing through your own instrument.
6. Squaring diameter's of circles to calculate aperture more than ten times daily.
7. Actually sneering at telescopes even smaller than your own.
8. Rationalizing more than 20 times daily why bigger is better.
9. Mute preoccupation with aperture and no response for several minutes before responding to others.
10. Believing at least nine times out of ten that the view just isn't good enough to your 'scope of the start parties.
11. Pooh-poohing magazine article statements citing the advantage of smaller 'scopes.
12. Making frequent (more than five times per week) "800"-number calls to dealers regarding their larger aperture scopes and asking, "is that the largest you have?"
13. Support poles (columns) of large buildings are imagined as telescope tubes.
14. The thought of using "aperture stops" sends shivers down your spine.
15. You can get no closer than ten feet to an iris diaphragm.
16. You think of taking out a loan to buy the "big one," using house, car, and maybe even members of your own family as collateral.

***Aperture Fever - Diagnostic Severity Level***

**Mild (1-4):** Peer support is frequently helpful; a calm, reassuring approach toward those afflicted is useful; no great cause for concern; the affliction either passes or only a modest increase in aperture occurs with few residuals.

**Moderate (5-8):** This level starts to warrant some cause for concern; telescope stores should be

avoided; caution should be exercised by other amateur astronomers in bragging about their observing claims in using larger instruments; aperture increase is not advised!

**Severe (9-12):** This intensity level is indicative of a serious malady; strong consideration should be given to canceling subscriptions to astronomy magazines and returning astronomy catalogs unopened lest the telescope ads be glimpsed at; going to star parties where larger instrument are present should be avoided at all costs.

**Profound (13-16):** The disablement of this level is beyond compare; this represents the terminal stage of the disease process with little hope of recovery; nothing more than palliative (relief) care by peers can be recommended; the afflicted person is a bigaperture "goner" and will likely meet his/her demise by the immensely large telescope falling on him/her.

## A Fine Northern Lights Display

*Cedar Amateur Astronomers, Inc.*
*D. Slauson, Editor*

I received a call at about 1:30 a.m. on the morning of September 25th The caller alerted me that a spectacular northern lights display was in pro-gress. Still groggy from sleep, I made my way to the backyard. I stood on the patio and faced north.

Indeed, this was a spectacular display. Fingers of rays were spread across the northern horizon. The rays stretched all the way to the zenith. The converging rays were beginning to form a "corona", an illusion caused by rays standing vertically above the observer. Rapid pulses of light were racing along the rays from the horizon to the zenith. Hints of red color were visible.

Although the aurora display was bright and active, the view was seriously compromised by light pollution from Cedar Rapids. I've seen several aurora storms in the past, especially in 1982 and 1991. Judging by the activity and extent of what was occurring overhead, I could only imaging how glorious the display would appear well away from city I lights.

A few hours earlier KCRG News broadcast a news segment on how new downtown streetlights in Iowa City were hampering the observatory atop the University of Iowa's Van Allen Hall. The city official interviewed during the segment said he didn't think about how the new lights would impact the astronomers. The irony of his words and the timing of the news story now struck me.

A display like this was expected and we should look for more in the future as solar activity, well under way in the current solar cycle, continues to increase. The number of sunspot sprinkled across the Sun is impressive and indicates the level of activity on the Sun.

Stay tuned!

## Dome Dedication Ceremony: Damp But Not Without Plenty of Warmth

*Des Moines Astronomical Society Bryan Butcher*

Saturday October 17th, 1998 started out looking very poor for an outdoor ceremony to dedicated the new Ashton Observatory Ash Domes. But Mother Nature shined on the members and guests present for the event.

I jumped on the Internet at noon and checked the cloud and precipitation possibilities for the three o'clock program and if we needed to implement the 'bad weather' scenario of moving everything inside. This was not how we wanted mother nature treat us on this special day, but as Iowan astronomers ... we've learned not to expect too much from the weather during such events. The radar showed clouds covering the entire state and a line of thunderstorms to the south and a line to the west.

I arrived at the observatory later than I expected to, but taking time to wait for my daughter Lexee was well worth it. When we walked in the door of the observatory around 1:30, Tom was blowing up balloons and Joanne was measuring tablecloths to make sure all the overhanging sides were even. The excitement in the air was intoxicating!

The weather still wasn't looking very good, but the diffused appearance of sunlight observed to the west brightened our hopes that the event could proceed as planned outside. As the 3:00 hour arrived people began arriving, the balloons were placed in the domes, chili was plugged in and staying warm, and the time was approaching to christen the new domes.

I began the ceremonies with welcoming all who attended and promised an interactive and reflective atmosphere celebrating the 15th Anniversary of the Ashton Observatory. Following a brief commentary on the history of DMAS and the observatory, I invited all in attendance to share their thoughts and feelings about the society and especially favorite memories of observing with friends and fellow astronomers at the observatory. I started the sharing with a story about Jim Holloway and Tom Bailey frantically verifying a possible comet

discovery (which turned out to be a false alarm); Dave Lynch described what it was like to move the two old domes from Ankeny to Ashton-Wildwood; Lexee Butcher shared how the observatory has brought her closer to her dad (teary time for dad!); and Harry Wood pointed out the three members who were present during the original construction of the observatory. The members were Harry, Dave, and Allen Beers.

Other members shared their thoughts on belonging to the society and how they've always felt the warmth of fellowship and a sense of belonging to The Des Moines Astronomical Society. Dr. Tony Marston from Drake University got up and thanked the members of the society who help at the Drake Observatory in Des Moines and looked forward to a long-lasting relationship with DMAS.

After the last words were spoken, and the closing remarks were made, Joanne Hailey, a champion of fundraising, gave the cue to dedicate the new domes, "Gentlemen, flip your switches!!"

## Ames, Iowa Lighting Code Progress Report

*From: DaveOesper@aol.com*
*Sent: Sunday, October 04, 1998*
*To: Multiple recipients of drksky-list*

I recently received the first draft of the Ames, Iowa lighting code from the city attorney. In it, we have a section 29.912 MAXIMUM LIGHTING LEVELS, which states:

"Average initial horizontal illuminance shall not exceed the limits set for various types of uses as follows..."

And what follows is a listing of IESNA recommended minimum levels x 2 for parking lots (low, medium, high level of activity), building exteriors, loading/unloading areas, storage yards, outdoor sales areas (low, medium, high illumination of surrounding area), and service stations/convenience stores (dark surroundings, bright surroundings).

Even though I am a bit uncomfortable with allowing up to twice the IESNA recommended levels, this was a compromise point on which I had to bend a little. It is easy to build a case that if the IESNA recommended levels are considered adequate, then anything over twice that amount is clearly excessive and should be prohibited. Also, it is not quite as bad as it sounds, as we are setting MAXIMUM INITIAL levels, and the IES recommendations are for MINIMUM MAINTAINED (i.e. an aging lighting system will never fall below this level).

The city attorney called me earlier this week with a question, and I need some help from you folks in answering it: how can we precisely define "high", "medium", and "low" illumination level of surrounding area as applies to outdoor sales areas, and "dark surroundings" and "bright surroundings" for service stations & convenience stores? These categories are right out of the IESNA Lighting Handbook, but they fail to properly quantify them. We need to, if we are to include them in our city lighting code.

*Thanks much,*
*David Oesper*
*Ames, Iowa*

## Letters to the Editor

*Hi, Richard:*
*Re: Northern Lights Book Review*

Just wanted to take issue a bit with Paul Castle's review of the book "*Welcome to the Moon*". The publisher apparently sent out a number of these books to various astro organizations, because we got one too. About a year ago, I wrote an article in our club newsletter in which I reviewed various lunar atlases and observing guides, so as long as I had "*Welcome to the Moon*", I included that in the review.

Paul notes many good points to this book, and it does provide some good observing hints. I really wanted to like this book. However, I consider it a poor observing guide. The worst aspect is the very crude illustrations and the extremely poor photographs. (Most appear either badly overexposed or out of focus.) In some cases, arrows point to features that are virtually invisible in the photos!

I sent a copy of my review to the publisher (Naturegraph), and they quickly replied with an acknowledgement of the poor photos. They stated that there was a rush to get it published and those were the best photos the author could provide. In the next edition they hope to obtain better photographs. Another point: I suppose we could all quibble with the author's choices of featured objects. However, on some of the features he covers, he completely overlooked many interesting details that are easily seen in telescopes as small as 3-inches.

For these reasons, I do not recommend this book. Perhaps a later edition will be improved. It's aimed primarily at the beginning lunar observer, but I think they will be the ones who will be particularly frustrated by the very poor graphics. In its place, I highly recommend "*Exploring the Moon Through Binoculars and Small Telescopes*" by Ernest H. Cherrington. (It only costs $3.00 more.) Well, that's my two cents worth.

*Clear Skies*
*Jack Kramer*
*Lake County Astronomical Society*

## Northwoods Starfest Part 2

*By Jeff Setzer*
*Northern Cross Science Foundation*

A fter hanging around the observatory for a while, we realized that it was getting dark outside. So we headed out the door, and the view was glorious! I would rate the skies at Hobbs as a little darker than Waupaca. The southern sky was definitely the best I've seen in Wisconsin.

Early on, we observed the faint fuzzies, and then after 3:00 am, the seeing got very steady and we looked at the planets for a long time. Many people came by my 22" to get some looks, and we had a bit of a crowd until after 4:00 am. Kevin and Danny went to bed as the dawn was just starting to break, but I decided to take down my scope before I went to sleep. I hit the bunk around 6:00 am.

Rumbling thunder jolted me from my slumber. My first thought was "OH NO, THE SCOPE!" But then I remembered that I put the scope away before I went to sleep. What relief! Still, although it was 10:30 am, I was awake. And I did leave my ladder and lawn chair outside, so I decided to cruise over and put those items away before it rained. Then I wandered back to the camp lodge for a tasty breakfast.

The rest of the day was lazy and relaxing. After hitting the showers, I hung out at the vendor tables. My pretense was that I was looking for a pair of binoculars, but I really just liked to be inside of that wonderful observatory. I should have guessed that the weather forecast was really poor when they set up the vendors inside of the observatory clubhouse. Sure enough, it didn't take long for the rain to start. There were some talks in the nature center down the road from the observatory, but the rain kept me from attending. So, I read some magazines and hung around the Eagle Optics table some more. Still looking at those binoculars. Before dinnertime, I succumbed to the evil forces and purchased a pair of Swift 9x63s. But I wondered if I'd get a chance to use them.

After a hearty dinner, most folks went into the observatory and waited out the storm. The beauty of the clubhouse was made apparent during that Saturday night. There we were, in the middle of a downpour, and we're watching the weather report on a big-screen TV. Looks like a tornado watch for our area ... what to do? How about popping in the John Dobson video on how to make your own telescope? That enterained us for a few hours! Plus,. they set up the "midnight snack" an hour early. It was the most fun I've had during the rainy part of any star party. All in all, the weekend was a big success. The skies alone are worth the trip. But when you factor in the on-site facilities, and the well-planned programs and meals, the Northwoods Starfest is one of the "best buys' in star parties anywhere.

## Building Committee Started

*Northern Cross Science Foundation*

At the last board meeting a building committee was started for the roll-off roof design observatory to house the 20 Inch Panarusky Telescope. If you are interested in joining the committee contact Jeff Setzer. As of now, no date has been set for the groups next meeting.

## Panarusky 20" Telescope

*Northern Cross Science Foundation*

The 4. 0 inch secondary mirror was received from eOptics a few weeks ago. It has since been shipped to QSP in California, and will arrive back near the time of our November meeting. It was decided that the club should purchase the mirror un-coated and pay the extra money to have QSP apply a special high reflective, enhanced coating. This will, in effect, make the telescope capable of collecting more light. The spider for the secondary holder is in place. The holder itself is next on the list of things to make.

*from the Sheboygan Astronomical Society*

## Children's Misconceptions about Science

As I promised, here's the list of common misconceptions that Harald forwarded to me last month. I maintain that ignorant children grow up to be ignorant adults, and that many of these are believed by the adult population as well. I would challenge everyone to think about how they would explain these things to a child, if asked.

-Randy Griffin

## *Astronomy*

1. Stars and constellations appear in the same place in the sky every night.
2. The sun rises exactly in the east and sets exactly in the west everyday.
3. The sun is always directly south at 12:00 noon.
4. The tip of a shadow always moves along an east-west line.
5. We experience seasons because of the earth's changing distance from the sun (closer in the summer, farther in the winter).
6. The earth is the center of the solar system. (The planets, sun and moon revolve around the earth.)
7. The moon can only be seen during the night.
8. The moon does not rotate on its axis as it revolves around the earth.
9. The phases of the moon are caused by shadows cast on its surface by other objects in the solar system.
10. The phases of the moon are caused by the shadow of the earth on the moon.
11. The phases of the moon are caused by the moon moving into the sun's shadow.

12. The shape of the moon always appears the same.
13. The earth is the largest object in the solar system.
14. The solar system is very crowded.
15. The solar system contains only the sun, planets and the moon.
16. Meteors are falling stars.
17. Comets and meteors are out in space and do not reach the ground.
18. The surface of the sun is without visible features.
19. All the stars in a constellation are near each other.
20. All the stars are the same distance from the earth.
21. The galaxy is very crowded.
22. Stars are evenly distributed throughout the universe.
23. All stars are the same size.
24. The brightness of a star depends only on its distance from the earth.
25. Stars are evenly distributed throughout the galaxy.
26. The constellations form patterns clearly resembling people, animals or objects.

### *Space*

1. The earth is sitting on something.
2. The earth is larger than the sun.
3. The sun disappears at night.
4. The earth is round like a pancake.
5. We live on the flat middle of a sphere.
6. There is a definite up and down in space.
7. Seasons are caused by the earth's distance from the sun.
8. Phases of the moon are caused by a shadow from the earth
9. Different countries see different phases of the moon on the same day.
10. The amount of daylight increases each day of summer.
11. Planets cannot be seen with the naked eye.
12. Planets appear in the sky in the same place every night.
13. Astrology is able to predict the future.
14. Gravity is selective; it acts differently or not at all on some matter.
15. Gravity increases with height.
16. Gravity requires a medium to act through.
17. Rockets in space require a constant force.
18. The sun will never bum out.
19. The sun is not a star.

## Naperville Astronomical Association

Naperville Astronomical Association had two public events in October - the first for the South East Naperville Girl Scout District. With 300-400 girl scouts involved, the N.A.A.'s members and their telescopes were one of several programs going on, starting at 7:30 on Friday, Oct. 2nd. The event was held at the Danada Equestrian Center, on Naperville Rd., between Warrenville Rd. and Butterfield Rd., near the Danada mansion.

The second event was another public observing event, for the Winfield Park District, on Saturday, Oct. 24 th at 7:30. The program was along the same lines as the earlier Wheaton Park District program, with about 30 to 50 public expected. The park district grounds are located on County Farm Rd., just south of High Lake Rd., on the West side of the road (north of the railroad tracks). All who volunteered to run a telescope, point out constellations, or otherwise help out, were appreciated.

## Member Biographical Series: Meet Refet Dehari

*Wehr Astronomical Society*
*Franklin, WI*

In the night, I asked my mom to take me outside to use the bathroom because I was afraid to go alone. I stopped and looked up at the sky and I was amazed with the stars. I asked my mom questions about the stars and the moon. She just laughed at me and my crazy questions and never answered them. That was when I became really interested in the sky.

Five years ago I came to the United States from Masadonia (Yugoslavia). I still was interested in astronomy. There aren't any astronomy clubs in Yugoslavia and I didn't think that there would be any here. When I was in the store one day shopping my eye came across a telescope. I asked people in the store what the telescope could actually do. When they told me that you could see the rings of Saturn I decided to buy a 60mm refractor telescope. After I got the telescope I wondered how I can find the planets so I can see them through the telescope.

I went back to the store and asked people if there was any type of organization that can teach you about astronomy and the telescope. The store is called American Science Center. An employee gave me information and a newsletter for the Wehr Astronomical Society Club and I became a member. When I first went to the club I didn't know many people. By this time I had my third telescope, which has a 4.5 inch mirror. But I felt uncomfortable with it compared to the bigger telescopes I viewed from members at the club. Therefore, one of the members told me to purchase the Star Hopper Eight from Celestron. As they are very hard to come by, I was extremely excited when they told me where I could purchase one.

I've been so intrigued with this new telescope and for many weeks I woke early in the morning to view Saturn and Jupiter. Now I can view them at midnight - finally I can get more sleep! But now I find myself waking up early to view Mars and Venus and the Orion Nebula. It looks like I will never get enough sleep! It has not even been a year since I began viewing the stars through my telescope and I look forward to viewing each new section of the sky as the Earth moves seasonally. I cannot wait to return to my homeland to share my new hobby with my friends. It has the darkest skies which bring out the depth in the stars and I believe they will see through MY telescope things they have never seen before.

When I think of the size of the universe it makes me think it has to be something infinite and so huge, without a form and without a beginning, in order to begin everything else which exists in the universe because I don't think anything could begin from nothing. This is what I believe would be some intelligent being and I think are not alone. To prove all that is, the rotation of the earth, the way the day covers the night and the night covers the day, the change of seasons and the affect of the moon as it orbits the earth, I believe it tells us there is a powerful being who is curious about our life.

My feelings are best expressed by these quotes from the Quran;

*"it is he who created the night and day and the sun and moon: all the celestial bodies swim along, each in its rounded course."*

(21:33).

*"Moreover, He comprehended in His design the sky and it had been as smoke."*

(41:11).

*-- Refet Dehari*

## In Memory - Jim Toeller

*Milwaukee Astronomical Society*

It is my sad duty to report that Jim Toeller, a long time member, passed away in October. Whatever the activity, Jim was supportive of the MAS and its members. When he retired and moved to North Carolina, he was elected to founder member status.

Jim served as our president for a year, then as treasurer for ten years. These included the difficult period when we were constructing the 25" Zemlok telescope and the building that houses it, all on a shoe string budget.

As an observer, Jim was active in our grazing occultation program, traveling around Wisconsin and Illinois with our cable trailer, chasing Moon shadows. He also attended our campouts and group observing sessions.

Jim loved building telescopes. In addition to helping out with the maintenance of our observatory he worked on the 10 inch portascope project. He also was involved in the early designs for the Zemlok telescope and worked on the 22 foot dome it is housed. Before he retired and moved, he helped on the work to motorize the slit on the big dome. Jim was willing to lend a hand with any project we had going.

What ever the situation, Jim was always a good time. He liked to kid around and we often exchanged some good natured barbs. He was a friend to us who knew him and will be missed.

*Gerry Samolyk, MAS Observatory Director*