

SPECTRUM

Northern Cross Science Foundation Newsletter

January, 2018

Looking Up

January 4, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to Follow

January 18, Thursday

Board Meeting

7:30 p.m.

House of Jeff Setzer

January 20, Saturday

Candlelight Ski & Hike

6:00 p.m. - 9:00 p.m.

Horicon Marsh

February 1 Thursday

General Meeting

Astronomy 101

(To Be Announced)

7:30 p.m. - Main Program

Business Meeting to Follow

February 3, Saturday

Candlelight Ski & Hike

5:30 p.m. - 8:30 p.m.

Ice Age Center (Dundee)

February 10, Saturday

Candlelight Ski & Hike

6:00 p.m. - 9:00 p.m.

Pike Lake Beach Area

Boy Scout Astronomy Merit Badge Opportunity *By Rick Wandsnider*



Calling all amateur astronomers passionate about sharing your enthusiasm of the night sky...

While March is usually a month reserved for you and other members of NSFC to put the final touches on upcoming celestial viewing plans for the new year, this year you will have an opportunity to start earning your public outreach hours early by participating in offering the Astronomy merit badge to new scouts that just joined Boy Scouts and are likely earning their first merit badge ever.

The BSA Astronomy merit badge (<https://meritbadge.org/wiki/index.php/Astronomy>) provides a very broad sampling of many items ideal

for getting our next generation of astronomers hooked on night time viewing including; Viewing safety, Stars, Constellations and the Milky Way galaxy, Planets, the Moon, Sun and its effects weather.

Never in a Blue moon you say...

A Blue moon is exactly what this year's month of March brings though on the forth weekend, we will only be experiencing the first quarter -- ideal for the "moon" section of the merit badge.

Here are the details...

This all will be taking place on Fri-Sun, March 23 -25 at the HH Peters Youth facility in Fredonia WI (about 12 miles north of Cedarburg and 14 miles west of West Bend) with the majority of the sessions taking place on Saturday, March 24. Volunteers (and ideally 4-6) will be furnished with a slide deck that covers the topic and any materials required however, you are encouraged to indulge yourself not being limited to the canned presentation but using any tools at your have at your disposal.

If you are interested please contact Rick (yes another "Rick") Wandsnider at rwandsnider@earthlink.net c:414-217-5343 no later than the end of January.

Aperature Lust *By Jack Kramer*

When it comes to telescopes, aperture rules. Talk to other amateurs and you'll find that sooner or later a lust for more aperture afflicts all of us. But before you succumb, it's worthwhile gaining plenty of eyepiece time with your present scope. What have you accomplished with it? Have you observed from a dark site? It's amazing what even a small telescope can show under good skies. I've long felt that most amateurs never exhaust the capabilities of an 8-inch telescope - what could be called the mid-range of aperture. In fact, the late deep sky authority, Walter Scott Houston, stated: "It's difficult to imagine anyone viewing every object within reach of a 6" telescope." And telescope-making author Mel Bartels recommends: "An 8 to 10 inch scope will show you tens of thousands of objects with enough detail to discern their astro-

physical meaning, and still not be so complicated and heavy to lug that it will gather dust on clear nights."

Sure, you'd get a better view with a larger instrument. If big aperture lust prevails, there's the "two sizes" rule that says you only get significant gains in what you can see if you go up two standard sizes from your present telescope. Two sizes would typically be 8 inches to 12 1/2 inches, or 10 inches to 14 inches. The most noticeable difference will be if you increase light gathering by a magnitude or more. But other factors enter the picture: telescope design, for example. Going from a 10-inch SCT to a 12 1/2-inch Newtonian nets you a 56% increase in light gathering; however, it also gives a wider field of view that will be an improvement for visual observing of deep sky objects.

(Con't Pg-2)

December Meeting Minutes

By Kevin Bert

The December Business meeting of the Northern Cross Science Foundation was held at the GSC Technology Center in Germantown. President Jeff Setzer called the meeting to order at 7:30pm and welcomed 22 members and no guests. He thanked all the members that participated in outreach activities and estimated that nearly 2000 people were getting acquainted with the NCSF through social media and at sponsored events. Jeff informed members that this is the annual business meeting required by the bylaws. He explained that there was no need for elections at this meeting because none of the board members three year terms will expire at the end of the year. He continued by asking for standard reports.

Treasurer Gene Dupree reports a balance of \$11,446.43 in the checking account and \$551.40 in the Observatory account. He reminds members that he will be taking 2018 membership dues at any time.

Secretary Kevin Bert noted that membership nametags were updated and there were no changes in the roster. Under Astronomical League news the 2018 Regional Convention will be held in Sturgeon bay on May 4th and 5th. Details on lodging, speakers and costs should be coming out soon. The League's National Convention, (ALCON), will be held in the Twin Cities on July 11 - 14 next year. A promotional on line video from the hosting Minnesota Astronomical Society can be viewed on line from the hosting society.

Early next year interested members will form a committee for planning the 2020 Astronomical League Regional Convention.

Observatory director Dan Bert reports that the south doors are still on the parks list of things to replace early next year. Dan tells us the facility is ready for winter and the quartz heater is available to take the chill out of any members observing or imaging sessions when needed.

Imaging member Ernie Mastroianni reported some of the past years imaging events. The mount is realigned and the camera is working. Time is often hard to come by along with

clear skies. He is optimistic on having more training sessions and looks forward to increased use of the scope and equipment.

Jeff Setzer informed the membership that the holiday party would once again be held at the December meeting. Information was missed in the last newsletter so it was agreed to send out the details in the Spectrum one week earlier for members to get the word and have time to prepare a dish or to come up with a white elephant gift.

Jeff Setzer reports a few of the upcoming events. January 4th is our next general meeting. January 20 is the Horicon Candlelight Ski & Hike with winter sky viewing. February 3rd is the Dundee Ice Age Center's Candlelight Ski & Hike. February 10th is the Pike Lake Candlelight Ski & Hike. Members are encouraged to bring a scope but be sure to dress warm if you attend.

With no further business Jeff closed the meeting at 7:55 pm.

Our Nearly Forgotten Optical Instrument and M112 *By Rick Dusenbery*

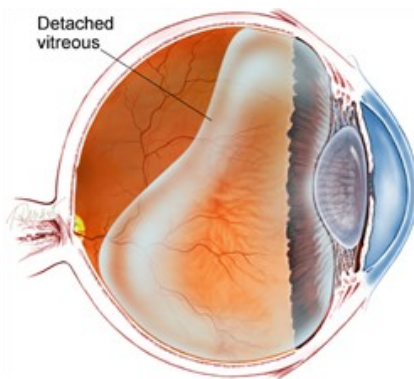
We can get so wrapped up discussing the merits of our binoculars and telescopes that it is easy to forget about our first optical "instrument"; our eyes. And I had a close call about mine recently.

About a week after returning from Southern Illinois following the Great American Eclipse, I had a scheduled eye checkup with my ophthalmologist and everything was normal. But a week later, I suddenly developed a large floater in my right eye. At the same time, light objects in the background (white walls, sky) appeared like old film grain and my vision in my right eye was dimmed, as if looking through waxed paper. The floater resembled a nebula which kept shifting around. I quickly dubbed it M112. Why not M111? Ask anyone in our club and they can tell you what M111 is! Of course the list of Messier objects ends at M110 (NGC 205) one of the satellite galaxies near the Andromeda Galaxy.

But back to my eyes; the floater and the dimmed view were such a problem that I called my eye doctor and he was able to get me right in. The sudden appearance of the floater and speckled background were indications of a Posterior Vitreous Detachment or PVD which I found is rather common as we age. This is the pulling away of the semi-liquid vitreous fluid from the retina. In most cases this is normal and the floaters and grainy background slowly disappear. However, the doctor found something more alarming; I had a small retina tear which if left untreated can lead to a retina detachment and possible blindness! My doctor immediately scheduled an appoint-

ment the next day to see a retina specialist at Froedtert in Milwaukee. The specialist also found a slight tear in my left (unaffected) eye! At least I was in the right place at the right time. He was able to perform a laser treatment called Laser Retinopexy to seal the area around each of the tears. It is sort of like spot welding! Each eye took about five minutes and was completely painless!

I returned to Froedtert two weeks later for follow-up, and all was good! The tears are



healing well with no problems. I go back in early January for a final follow-up check, but for now my eyes are nearly back to normal. The grainy background is gone and the floater (M112!) is much smaller and hardly noticeable. I am looking forward to some observing opportunities again as I missed several last month. If any of you have questions about this, feel free to ask me at our December meeting. By the way don't spend any time trying to find "M112" in the sky. It's not there!

(Con't. from Pg-1)

Consider that the laws of physics prevail; high-quality Newtonian optics will best an SCT in terms of image sharpness. Is astrophotography in your future? Then the SCT might be the answer for you after all. If you're adamant about sharp views of the planets, then an apochromatic refractor might be just the ticket.

So it can be awkward offering opinions to someone about buying a telescope because each of our priorities and interests may be quite different. Plus there's no such thing as a perfect telescope. Consider all options, read the product reviews, and find out what other people think of their own telescopes. Best of all, star parties give you a chance to look through different scopes and even get the feel for what it takes to handle one.

Remember that with a larger scope comes more grunt effort. Indeed, on any given night, a modest scope under the stars beats a big scope in the closet! To quote Yoda, the Jedi Master of Star Wars, "Size matters not".

Aperture lust does have one big benefit - it's great for other amateur astronomers who then have a source for good used telescopes at more affordable prices.

Finally, Internet telescope guru Ed Ting offers this oft-repeated advice: "Avoid 'paralysis-by-analysis'. If you spend more than an hour a day reading telescope catalogs, you are probably in this category. Just get something; you'll feel a lot better."

January General Meeting

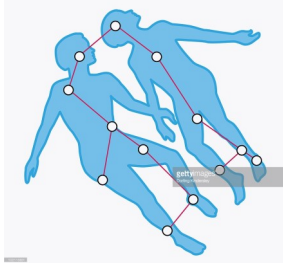
Astronomy 101 - Kevin Bert

"Stating the Location of Objects"

How to relate the position of an astronomical object to some standard references in the sky has been going on since people have looked up in wonder at our amazing universe. The Universe Sampler program contains a chapter on this topic that we will explore.

Constellation of the month;

Gemini



Main Program - Jeff Setzer

"Astro Show & Tell" Revised And Updated

Bring your new astro gear, or even not-so-new astro gear — any *one* astronomy item that has a five-minute story behind it. Everyone can participate, and the more that do, the better the program will be!



RELATED INFO

Leaders for Public Viewing

January 20

Horicon Marsh
DuPrees

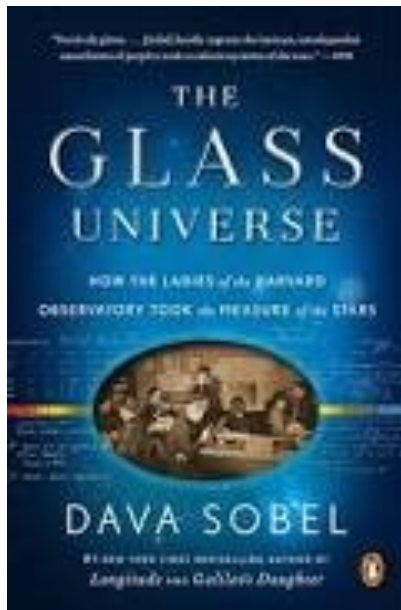
February 3

Ice Age Center
DuPrees

February 10

Pike Lake
Charlotte and Gene DuPree

The Glass Universe - Book Review



#1 New York Times bestselling author Dava Sobel returns with the captivating, little-known true story of a group of women whose remarkable contributions to the burgeoning field of astronomy forever changed our understanding of the stars and our place in the universe

In the mid-nineteenth century, the Harvard College Observatory began employing women as calculators, or "human computers," to interpret the observations made via telescope by their male counterparts each night. At the outset this group included the wives, sisters, and daughters of the resident astronomers, but by the 1880s the female corps included

graduates of the new women's colleges—Vassar, Wellesley, and Smith. As photography transformed the practice of astronomy, the ladies turned to studying the stars captured nightly on glass photographic plates.

The "glass universe" of half a million plates that Harvard amassed in this period—thanks in part to the early financial support of another woman, Mrs. Anna Draper, whose late husband pioneered the technique of stellar photography—enabled the women to make extraordinary discoveries that attracted worldwide acclaim. They helped discern what stars were made of, divided the stars into meaningful categories for further research, and found a way to measure distances across space by starlight.

Their ranks included Williamina Fleming, a Scottish woman originally hired as a maid who went on to identify ten novae and more than three hundred variable stars, Annie Jump Cannon, who designed a stellar classification system that was adopted by astronomers the world over and is still in use, and Dr. Cecilia Helena Payne-Gaposchkin, who in 1956 became the first ever woman professor of astronomy at Harvard—and Harvard's first female department chair.

Elegantly written and enriched by excerpts from letters, diaries, and memoirs, *The Glass Universe* is the hidden history of a group of remarkable women who, through their hard work and groundbreaking discoveries, disproved the commonly held belief that the gentler sex had little to contribute to human knowledge.

Star Parties 2018

NCRAL 2018

May 4 - 5

Sturgeon Bay, WI

Door Peninsula Astronomical Soc.

www.doorastronomy.org

ALCON 2018

July 11 - 14

Minneapolis/St. Paul, Minnesota

Minnesota Astronomical Society

alcon2018.astroleague.org

WOW

July 12 - 15

Hartman Creek State Park

WWW.new-star.org

Northwoods

August 17 - 19

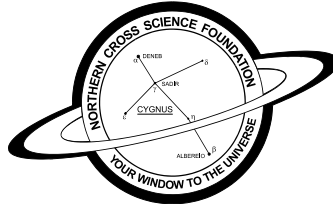
Hobbs Observatory

Beaver Creek Reserve

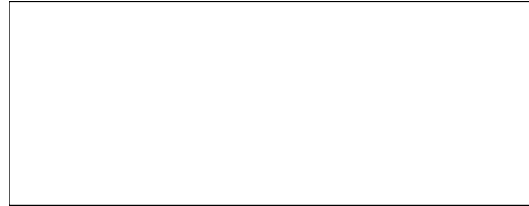
Fall Creek, WI.

www.cvastro.org

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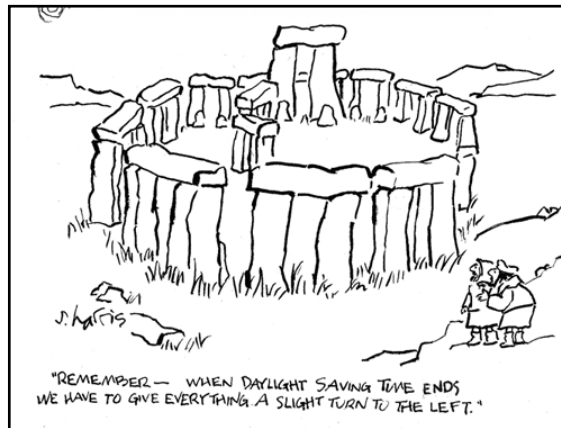
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Astronomy Humor



I'm reading a book on anti-gravity. It's impossible to put down!

A spiral galaxy walked into a bar for a drink. The barman threw him out and said "Your barred".

SPECTRUM

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NCSF is a member of the North-Central Region of the Astronomical League.



NCSF supports the *International Dark Sky Association*

This Issue, along with back Issues of SPECTRUM, can be found on the NCSF Web Site.

Monthly Meeting Information

7:00 p.m. Astronomy 101 Mtg.
7:30 p.m. Main Program
Location at the -
GSC Technology Center
W189 N11161 Kleinmann Dr
Germantown, WI 53022

Spectrum Newsletter
5327 Cascade Drive
West Bend, WI 53095

Please send your Questions, Suggestions, Articles, and photos to:
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