

SPECTRUM

Northern Cross Science Foundation Newsletter

March 2013

LOOKING UP

March 7, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Meeting

March 8, Friday

Messier Marathon

Members Night

Dusk

Harrington Beach State Park

March 9, Saturday

Messier Marathon

Members Night

Dusk

Harrington Beach State Park

March 15, Friday

Public Viewing

Comet PanSTAARS

6:00 p.m.

Harrington Beach State Park

March 16, Saturday

Public Viewing

Comet PanSTAARS

6:00 p.m.

Harrington Beach State Park

April 4, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Meeting

How Large a Telescope? ...by Jack Kraemer

A primary issue for anyone considering a new telescope boils down to the question "How large a telescope should I get?" Cost considerations aside, there just aren't any simple answers. Each different telescope design has unique assets and drawbacks. Some of these are related to their size. So here are a few thoughts on two key factors that relate to you yourself:

The site from which you will be doing most of your observing.

How easy the telescope will be for you to use.

First, a bit of history: Charles Messier, the comet hunter and chronicler of deep sky objects, used a variety of instruments, but his favorite was said to be a refractor of about 3 1/2-inches diameter. In his day, the optics were not as good as those in present scopes. If you've ever encountered difficulties in your pursuit of the Messier list of deep sky objects, you may have been amazed how he was able to locate them all in the first place with such a relatively small and optically-inferior telescope. Of course, back in the 18th Century he didn't have to contend with the light pollution that we experience today. Skyglow makes or breaks a site.

The critical nature of your observing site is shown by the following experience. On a trip to New Mexico, I was checking out a few objects with my 4-inch refractor. This scope doesn't have enough light gathering to dramatically show off deep sky objects, but I had brought it for other purposes and wanted to see what it could do in a dark sky. From my backyard, it shows the globular cluster M13 as a circular fuzz ball with some stars at the edges just resolved. To my amazement, in New Mexico the refractor showed M13 well resolved right to the core. And from down there, the Whirlpool Galaxy (M51) was visible with faint traces of the spiral arms instead of only the two fuzzy hubs that I was used to seeing in that scope from around home.

The lesson is clear: a telescope of *any* size will perform better in a dark sky, the farther away from a metropolitan area the better. A good 4 1/2-inch or 6-inch reflector will do a fine job on the planets, and if you can get away to a really dark site, then galaxies, star clusters, and nebulae will show up surprisingly well. And still larger telescopes in a dark sky give truly awesome views.

However, larger optics really *need* a dark sky. If you won't be getting out to darker observing sites, consider that light pollution has an especially adverse effect on light buckets. That large telescope that so beautifully shows off deep sky objects in a dark sky will also do a great job of gathering the glare from light pollution. This means that while a large scope will give some fine views from your backyard, you may not see much more than you would have seen with a somewhat smaller instrument. (The moon and planets, of course, are not as affected by light pollution.)

In addition, certain sites are naturally better for observing by virtue of local atmospheric conditions, which have a greater effect on large telescopes. One of the advantages of placing an observatory at high altitude is that you're looking through a reduced amount of air, plus the air is often drier. For someone living in the desert Southwest or in the mountains, it would be easier to decide in favor of a large scope.

It's a given that in a dark sky the larger the telescope the more you will see. Then that should inspire more enthusiasm for observing, right? Perhaps. This initial enthusiasm may be short-lived, however, if using the telescope proves to be too daunting, especially in the case of someone who is fairly new to astronomical observation.

Experienced observers usually know enough to make informed choices as to the size of their next telescope. But how does the beginner know that he or she is sufficiently motivated to warrant the investment in a large telescope? The same thing applies to high-tech scopes, such as Schmidt-Cassegrains equipped with sophisticated drive systems. As a somewhat extreme corollary, a person who decides to take up the violin doesn't spend thousands of dollars on a Stradivarius right off the bat. Yet I suspect that a similar situation applies in many cases where there's an ad placed by someone selling a large, well-equipped telescope advertised as "seldom used".

For beginning observers, the first task is to learn about the sky. If they also have to do battle with an awkward or complex instrument, then there's an added element to be overcome. Even the simple Dobsonian may prove
Continued on Pg 2

NCRAL 2013...by Kevin Bert

The yearly convention for our region of Astronomical League will be sponsored by the Rochester Astronomical Club of Minnesota. Having attended a number of conventions over the years I feel it is one of the worthwhile activities the League has to offer. Conventions combine a number of activities to appeal to a large cross section of club enthusiasts. Tours, talks, workshops, contests, door prizes, meetings and the camaraderie with other likeminded individuals make for a wonderful weekend. It is very rewarding to see how other clubs operate and can show what things we can do to improve the Northern Cross.

Here are some of the details. Friday starts out with the chance to see the Tripoli Rocketry Club launch some of their high powered rockets. Later a local planetarium show is offered at three different times. A winery tour, taste and talk are other options for Friday finishing with an observing session at a club observatory and a 30 inch telescope weather permitting. Saturday offers a day of talks, door prizes, League business meeting, and banquet. All of the details can be found at the web site <http://ncral2013.com/>. I hope you will consider attending this year's convention.

If you recall, our club sponsored the 2008 convention and has started plans to host the 2014 convention. It is not too late to contact Charlotte DuPree or Mickey Kazmierski to get involved with the planning.

Telescopes - Continued from Pg 1

unwieldy in the larger sizes. Novice observers who immediately go for the big time often come to realize that learning the sky would have been a lot easier with a more modest instrument. You then have the makings of a perfectly good, but underutilized scope that gathers dust instead of starlight. There's an adage that says,

"The frequency of observation is inversely proportional to the size of the telescope".

I don't know who coined that, but it still rings true.

When it comes to transporting, setting up and taking down your telescope, you are the only one who can decide how much time and effort you're willing to expend. To some, a six-inch Dobsonian is as much scope as they care to haul around. Others think nothing of packing out an 18-inch light bucket. The Dobsonian mounting is a great step forward in that its light weight and manageable size has eliminated what was formerly the most awkward part of a large telescope. Note that any size Schmidt-Cassegrain usually takes longer to set up than even a 12 1/2 or 13-inch Dobsonian. Of course, there is still the telescope tube itself, which may be quite heavy. Scopes larger than about 13-inches generally have truss tube structures that are disassembled into a number of parts. But then that involves assembly and disassembly at the observing site. A nice fea-

ture of the older Orion catalog was that it indicated how much effort is required to set up each of their larger-sized telescopes. Can you do it by yourself or should you have an extra pair of hands? When someone says a large telescope is "portable", that may simply mean it's smaller than the average refrigerator!

For many people it makes very good sense to own more than one scope. (That just might require a really good sales pitch to your spouse!) Experienced observers who have a large instrument quite often own a second one - a smaller, easy-to-use telescope for their backyards or when they don't feel like hauling out the behemoth or when observing conditions are not the best. In some cases, they've hung onto their "starter scopes" long after they've graduated to larger instruments.

This leads to one final thought. It may seem reasonable to regard a large or high-tech scope as an investment for the future, for eventual trips to the boondocks or a venture some day into CCD imaging. That sounds like a good, forward-thinking plan. But how far ahead are you planning? For the present, you just might be depriving yourself of the real enjoyment of observing. Ultimately, you could lose interest before the future ever gets here.

You've probably concluded that I have a bias against large or high-tech telescopes. Actually, that's not the case at all. Such telescopes entice all *Continued on Pg 4*

Things to See In the March 2013 Night Sky *By Don Miles*

Mars, Mercury, Neptune & Venus: All are too close to the Sun for at least the month of March. Mars trails too close to the Sun to be viewed until early July when it will then lead the Sun and become a morning object. Mercury and Neptune lead the Sun too close to be viewed this month. Your next chance to see Mercury will be late May when it's an evening object. Neptune will be a viable morning target by early April. Venus is on the "back side" of the Sun, and even when it does sneak out from behind and become an evening object; it will linger in the twilight of the Sun until late summer. It really doesn't show much separation until about mid-September.

Uranus: Is highest as the Sun sets, and itself sets about (8pm / sunset). It is at (mag. 5.9) in the constellation Pisces.

Jupiter: Is already up at sunset, is highest in the sky around (6:30pm / 7:15), and is located in the constellation Taurus. This month, bright Jupiter (mag -2.3) sets around (1am / 11:30pm), and is now slowly moving to the East back towards the

right horn. It continues its eastward journey until November.

Saturn: Is a late evening /early morning object rising about (10:30pm / 8:30pm) this month, and is highest in the sky at (4am / 2am). It's at (mag 0.4), and stays in the constellation Libra. The views will still be excellent with the rings still tipped at a steep angle so you can see a lot of detail. There aren't many bright stars in the area, so Saturn will stick out of the crowd, and its yellowish color also gives it away.

Moon:

March 4th: Last Quarter

March 11th: New Moon

March 19th: First Quarter

March 27th: Full Moon

Special Events:

Messier Marathon

There are no meteor showers worth mentioning this month, but you can look for a couple of comets: C/2012 L4

(PANSTARRS) and C/2012 L4 (ISON).

Look for PANSTARRS in the evening sky right after sunset. You'll need a low unobstructed W/SW horizon to catch it. On the evening of the 8th, the comet will still be very low on the horizon behind the setting Sun, but should be at its brightest (approx. -0.6), and in the constellation Pisces. You should see a brighter fuzzy center, and a spread out tail pointing away from the Sun. The evening of the 12th, the comet will be less than a degree (two Moon widths) to the left of the recent new Moon. It starts its appearance this month low to the horizon, and slowly rises to about 10 degrees above the horizon by the end of the month all the time moving northward.

Comet ISON is very-very faint right now (~ mag 15), but will be directly overhead this month in the constellation Gemini. It won't be bright enough to be easily seen for quite a while (mid-summer). It will progressively get brighter and brighter as summer fades into fall, and should be an easy binocular target by late September.

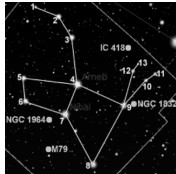


March General Meeting

101 Class... "Eyepiece Field Orientation"
Presented by Kevin Bert

The Astronomy 101 class for March is taken from The Universe Sampler Manual. Knowing what direction is what in the eyepiece field of view can get confusing. Is Jupiter's south pole at the top or bottom of the image? It depends on what type of telescope you are viewing through along with a few other considerations. Get the answers at the next meeting. A manual of the Universe Sampler is available for \$10.00.

Constellation of the Month:
Lepus



February Events

Harrington Beach Ski & Hike *February 2*

Reported by Charlotte DuPree

The sky was mostly cloudy, the temperature cold, and it was windy. With the sky turning to partly cloudy, Gene put the 6 inch Dyno scope and the 80mm refractor outside. Viewing objects were Jupiter, Orion Nebula, Christmas Tree Cluster, and M35.

Pike Lake Ski & Hike *February 9*

Reported by Charlotte DuPree

Another viewing night began with cloudy skies. We started the night inside the shelter; with our display of handouts. Gene kept looking outside for any sign of Jupiter. Around 7:00 he finally saw it peeking through some thinning clouds, and set-up the 8 inch. By 7:30 it was elbow to elbow inside, so I also moved outside. The sky was totally clear, so he got out the 12.5 inch and I took over the small scope. This was the biggest crowd, ever, for the event. We had long, steady lines at both scope's until 9:00. Viewing objects were Jupiter, Orion nebula, Christmas tree cluster and M35. We also met two couples, who came to the event, just to look through the scopes, so they were glad when it cleared up. Thanks to Al Steinberg for being there and helping with questions.

Astrophotography Imaging Committee

...by Ernie Mastroianni



The NCSF astrophotography imaging committee met twice in January at the home of Nolan Zadra.

Among the conclusions reached at the first meeting were that a dome would be the best way to shelter the astrophotography equipment; that our astrophotography resources should be a club resource for all members; and that outreach and public education should be an important part of our astrophotography efforts. The committee also discussed the type of astrophotog-

Main Program

"UNDAUNTED: The Forgotten Giants of the Allegheny Observatory"

This video tells the remarkable stories of Samuel Pierpont Langley, John and Phoebe Brashear, and James Edward Keeler. Despite catastrophic setbacks and unrelenting hardships, these determined individuals defied the odds to ultimately make world-changing contributions to science and technology. Among the many accomplishments are the establishment of standard time zones, the founding of astrophysics, major contributions to the invention of aviation, advances in solar research, precision star distance mapping, and discoveries in planetary science.

raphy that members were interested in pursuing and the equipment necessary.

At the second meeting on January 30, we discussed the surprising variety of domes available on the market and their prices, which were higher than many expected. We narrowed down locations for a possible new structure, and discussed the possibility of adding onto the Plunkett observatory. We also made some rough calculations on the overall cost of the project. Nolan showed us websites that featured private observatories in the Midwest and Rob Powell discussed fundraising methods and our best options for possible donors.

We also agreed that it will be necessary to talk to officials at the park and the department of natural resources about amending our agreement for our use of state land. Currently, the park and the state have the option, with only 90 days notice, of evicting the club. The club and the state agree that the telescopes and equipment would be ours, but the park would take ownership of the building. The committee feels that we need to make clear that the dome and structure should be classified as equipment, not as a structure, so the state could not take ownership of the dome. At our next meeting, we'll discuss mounts, telescopes and astro cameras.

NCRAL 2014 Committee

by Mickey Kazmierski

Our committee met on valentines day at the Kazmierski home. What a dynamic group of individuals! Only the second

meeting and we already have a venue! That's right, NCRAL 2014 - April 4 & 5th at the Country Inn & Suites, Port Washington. AND! We have a big speaker, who will be flying out from California. We have vendors who have agreed to setup. Committee members continue to brainstorm for ideas, such as a bus tour for the Friday afternoon of the conference. Stay tuned!



RELATED INFO

Leaders for Public Viewing

March 15

Harrington Beach State Park

Leaders needed

March 16

Harrington Beach State Park

Leaders Needed

STAR PARTIES - 2013

NCRAL Convention

April 12 - 13

Rochester, MN

www.ncral2013.com

Wisconsin Observers Weekend

June 6 - 9

Hartman Creek State Park

www.new-star.org

Northwoods Starfest

August 9 - 11th

Hobbs Observatory

Fall Creek, WI

www.cvastro.org

New Public Observing Dates

Please add the following public viewing dates to your calendars for Pike Lake.

May 18, 8:00

July 13, 8:00

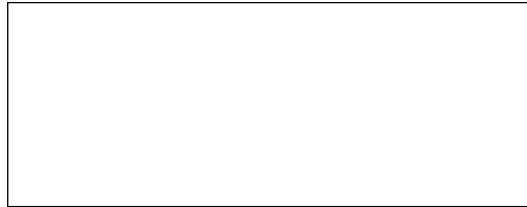
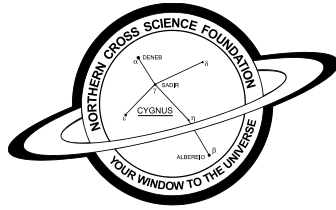
August 24, 7:00

October 5, 7:00

Banquet Refund

We have done pretty well over the years when it comes to choosing snow free days for our annual Banquet, but this year we found ourselves snowed in! It was decided at the February Board Meeting not to reschedule the event, but rather to refund the money to those who were signed up. Treasurer Gene DuPree will distribute refund checks at the March General Meeting. Those not attending will receive their refund in the mail.

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Telescopes - Continued from Pg 2

of us, seasoned observer and beginner alike. They've made it possible for amateur astronomers to enjoy an expanded view of the universe on a scale unimagined only a generation ago. If you've ever viewed through one in a really dark sky, then you don't need to be convinced about the capabilities of a large telescope. But as you ponder the alternatives, it's important to bear in mind that these telescopes do require a higher level of commitment on *your* part. Sadly, I've seen several large telescopes put up for sale because their owners couldn't maintain that commitment. The decision as to telescope size depends not just on what you can afford, but on what you will actually do with that scope once you have it in hand.

Will you eagerly look forward to each opportunity to get out under the stars? Or will the telescope itself be a disincentive? In the final analysis, the best telescope is the one you will use most often. That depends on you.

**Jim and Gwen Plunkett
Observatory**



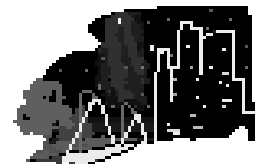
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Dan Bert: 262-375-2239

SPECTRUM

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

<http://www.ncsf.info>

Monthly Meeting Information

7:00 p.m. Astronomy 101
7:30 Main Program
Unitarian Church North
13800 N. Port Wash. Rd.
Mequon, WI 53097