

SPECTRUM

Northern Cross Science Foundation Newsletter

April 2012

LOOKING UP

April 5, Thursday

General Meeting

7:00 p.m. - Astronomy 101
7:30 p.m. - Main Program
Business Meeting to follow

April 19, Thursday

Board Meeting

7:30 p.m.
Home of Jeff Setzer

April 21, Saturday

Observatory Training

8:00 p.m.
Harrington Beach

May 12, Saturday

Small Scope Party

8:00 p.m.
Harrington Beach

May 26, Saturday

Public Viewing

8:00 p.m.
Harrington Beach

May 27, Sunday

Street Festival

12:00 - 5:00 p.m.
Port Washington

May 27, Sunday

Astronomy Day

8:00 p.m.
Harrington Beach

May 30, Wednesday

Sidewalk Astronomy

7:00 p.m.
Bayshore Towne Center

Observing the "Herschel 400 List" from my backyard

... By Rick Kazmierski

The "Herschel 400" List is one of the promoted observing programs offered by the Astronomical League. I have been aware of the program for years, but my primary interest has been astrophotography. That's not to say that I haven't observed the usual brighter, larger deep sky candidates, including the Messier and assorted NGC & IC objects. However, after a while I found myself always returning to the same objects night after night and slowly my interest waned. Last year, my interest in deep sky observing was rekindled when I began work on the "Herschel 400" list of objects. Even more exciting was the realization that I could observe all the objects from my backyard in a semi-rural site under moderately light polluted skies.

William Herschel



Understanding William Herschel and his history helped me to better appreciate his accomplishments. Herschel was born in Hanover, Germany on November 15, 1738 but later relocated to England in 1757. After an early career in music, Herschel's interests turned to Astronomy. Among his many discoveries was a comet, which after months of observation, proved to be a planet. He had wanted to call it "Geogium Sidus" after his benefactor King George III. Fortunately, this name did not find favor with the astronomical community and it was eventually named Uranus, after the mythological god of

the skies. Herschel was granted a pension by King George III, who also made him "King's Astronomer". As a result, Herschel was able to devote full time to Astronomy.

Herschel's most aggressive accomplishment was his cataloging of some 5,097 objects, with help from his son John and sister, Caroline. The catalog was called "The General Catalog of Nebulae". Most of his observations were with an 18.5" reflecting telescope having a 20 ft. focal length! In 1888 this catalog was revised and enlarged by L.E. Dreyer. It now contains 7,840 nebulae and clusters. After the revision it was called the "New General Catalog".

The instrument Herschel used for his observations lacked clock drives to follow the movement of objects through the eyepiece, so he used a technique of pointing his telescope to a point on the meridian and watching what crossed his field of view. He had to stand on a ladder to do his viewing, so he would call out his observations to his sister Caroline at the foot of the ladder. She would do the recording. By using this technique he was able to observe objects in an east-west strip of the sky. As the night progressed, he would change the position of the telescope to an elevation higher or lower than the previous night, enabling him to observe the entire sky over time.

Herschel 400

Many of Herschel's objects are dimmer than 13th magnitude and out of reach for many amateur telescopes. The Herschel 400 List is composed of the best and most interesting of the Herschel objects and all objects can supposedly be observed in a 6 inch or larger telescope under moderate light pollution. However, I can tell you from experience that when it comes to your telescope of choice, "bigger is better"! I have been observing from my backyard observatory through my 14" Schmidt Cassegrain. This is definitely an advantage, but not necessary for the avid observers (Cont'd on Pg 4)

March Meeting Minutes

By Kevin Bert

The March Business meeting of the Northern Cross Science Foundation was held at Unitarian Church North. President Jeff Setzer opened the meeting at 8:40 pm and welcomed 20 members and guests. Jeff then asked for standard reports.

Gene DuPree said that the balance in the checkbook was \$10,441.87 and membership dues continue to come in.

Secretary Kevin Bert noted the latest members to join the club were Chuck and Joel Geier. A discussion on the Astronomical League national convention, (ALCon), and our regional convention, (NCRAL), on July 4 – 7 in Chicago followed. There was no additional Astronomical League information to report on.

There was no old business. Under new business Kevin Bert reported that he would be using The Universe Sampler guidebook as material for the Astronomy 101 classes in the coming months. Interested members wishing to purchase the \$10.00 guidebook can sign up at the meeting or contact Kevin. The book is not necessary to sit in on

the classes, but it is needed if you want to complete the observing program. The first class will start in May.

Jeff continued on with a list of upcoming NCSF events. March 10th is the Sheboygan Swap & Sell. March 23 and 24 are Messier Marathon dates at Harrington Beach. The new yearly schedule is on the club website. A few dates need to be confirmed but the bulk of the viewing events are listed. Look for a list in the next newsletter.

With no further business Jeff closed the meeting at 8:55 pm.



Membership Roster for 2012

Enclosed in the April Spectrum you will find the latest Membership Roster. Please check your personal information listed and contact Kevin Bert with any corrections at 262-375-2239 or e-mail kevin.bert@hotmail.com.

Observing Events for 2012

Also enclosed is the 2012 Observing Schedule. This calendar contains a list of Public viewing events for the upcoming viewing season. Additional events may be added as the year progresses, so watch the Spectrum or visit our Club's website at www.NCSF.info for updates.

Welcome

Welcome to our newest Board member,
Jennifer Ryan.

Things to See In the April 2012 Night Sky By Don Miles

Jupiter & Venus: Both trail the Sun with brilliant Venus (mag -4.4) outshining every other planet & star in the night sky now. Venus will set about 10:30pm *early in the month*, and still 10:30 *later in the month* (10:30 / 10:30pm).

Venus starts the month about 15.5 degrees above and to the left of Jupiter (mag -2.1), and quickly leaves Jupiter behind as it speeds away to the East. By the end of the month, Venus will have increased that separation to about 30.5 degrees, and will end up near the upper tip of the right horn of Taurus (which is also the lower left bright star of the constellation Auriga). The best time to see the two will be right after the Sun has set. You'll be able to pick them out even before it's completely dark if you look above and left of where the Sun just set. Jupiter sets about (10:00 / 8:30pm), and Venus about (10:30 / 10:30pm).

Mars: Will have just risen right after sunset in the constellation Leo. Look for Mars (mag -0.7) between the front and hind feet, and watch as Mars reverses its drift directions in April. Early in the month, it continues drifting westward towards Regulus until it's within about 4 degrees. Then about mid-month, it will stop moving westward, sink a couple of degrees, then starts drifting to the East until it is again about 5.5 degrees away from Regulus.

Mars transits about (11 / 9pm), and sets about (5:30 / 3:45am).

Saturn: Rises around (8:30pm / Sunset), and is at (mag. 0.2). The rings continue to be at an excellent angle to see the distinct gaps between the rings and the body of Saturn, and also within the rings itself. The best views will be about (2:15am / Midnight) as it's highest in the sky. On the night of the 15th, Saturn will be at opposition, which means it's in the opposite area of the sky as the Sun is (Sun to our back while our face is pointed towards Saturn, so will be fully illuminated and up all night).

Pluto & Neptune: Pluto (mag 14.1) is highest in the southern sky right before the Sun rises, and hasn't moved any perceivable distance from last year's position. It's still about 7 degrees above and to the left of the top of the teapot of Sagittarius. Neptune (mag 8.0) is also best to see right before the sun rises, and can be found in the constellation Aquarius. Due to their lack of brightness, it easier to find them using detailed star maps.

Mercury & Uranus: Mercury (mag 1.8) is the higher of the two as the Sun is coming up, and Uranus (mag 5.9) will be even closer to the Sun. Even though Mercury is fairly bright, it will be difficult to catch after the 3rd, which is when it's at its greatest Western elongation. The morning of the 22nd,

Uranus will be about 2 degrees above Mercury, so if you hadn't spotted them before, that may be your chance to have some reference.

Moon:

- April 6th: Full Moon
- April 13th: Last Quarter
- April 21st: New Moon
- April 29th: First Quarter

Special Events:

There is only one meteor shower this month that will not be washed out by the light of the Moon, and those are the Lyrids. These peak the night of the 22nd with rates reaching about 20/hr.



April General Meeting

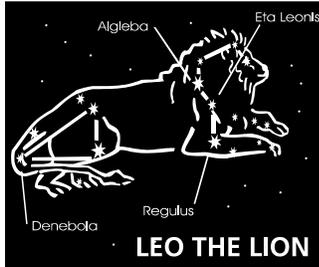
101 Class... by Kevin Bert

The Astronomy 101 class for April is entitled
“Circumpolar Constellations”

For the details that all sky watchers should know, please attend.

The Constellation of the month:

Leo



Main Program

“World’s Toughest Fixes”

“Giant Telescope”

(Video)

Watch a team of engineers as they move and clean a 27-foot, 23-ton, \$15 million telescope mirror.

Note:

At the April and May General Meetings, we will have Baader solar film material for sale, with instructions. Anyone that needs a solar filter for the Venus transit can buy a piece at .50 a square inch. You do not have to make a full aperture filter, to keep down the price, an off axis filter will work just as well. You can also make a filter for your finder scopes.

Upcoming Events

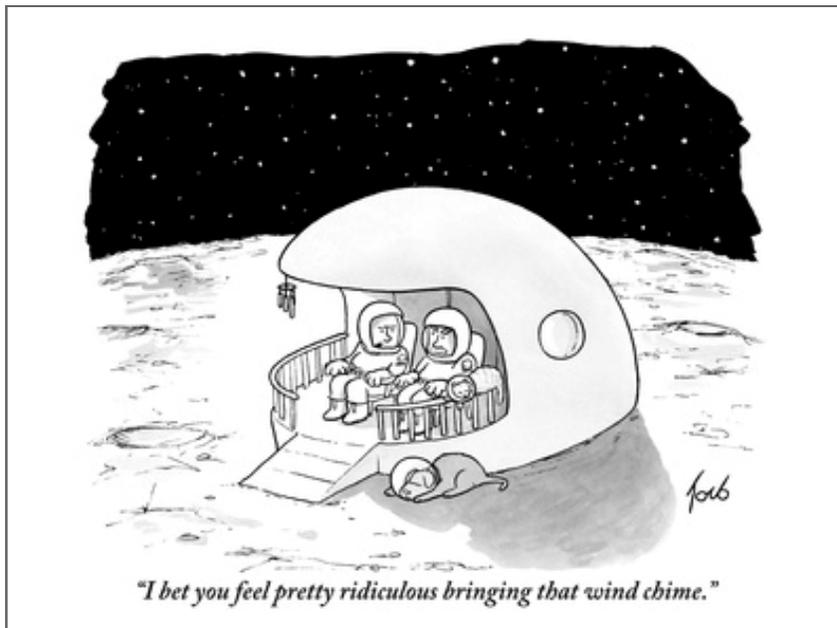
Venus Transit by Gene DuPree

A Venus Transit will happen on June 5, starting at 5:10 pm. This once in a life time event, unless you saw the transit in June 2004, is at sunset instead of sunrise. The next one will take place in the year 2117. NCSF will host two public viewing sites for the transit. Gene and Charlotte will have the observatory open and Al Steinberg will be the leader at Pike Lake. We need volunteers at both of these sites, we hope to have a lot of visitors.

Supernova 2012aw

For those who haven't heard, on 3/16/12 supernova Supernova 2012aw was discovered at 13.1 magnitude in M95 and is visible in amateur telescopes. Since M95 is a relatively bright galaxy and nicely placed in Leo, a prominent Spring constellation, it is well placed for viewing. The supernova is at the Southern edge of the galaxies' outer structure and easily recognized. If you find yourself out viewing during the next month, be sure to take a minute to scout it out.

Astro Humor



RELATED INFO

The NCSF Public viewing season officially begins in May. Watch the Newsletter or view the Club website for these events and event leaders. Member participation is critical to successful public events. Bring yourself, and a telescope, if you have one. Our Club does make telescopes available for loan to members. For more information, see a Board Member.

Leaders for Public Viewing

April 21

Observatory Training

Kevin & Dan Bert

STAR PARTIES - 2012

NCRAL/ALCon2012

July 4 - 7th

Chicago, IL

www.alcon2012.astroleague.org

Wisconsin Observers Weekend

July 19 - 22nd

Hartman Creek State Park

www.new-star.org

Northwoods Starfest

August 17-19th

Hobbs Observatory

Fall Creek, WI

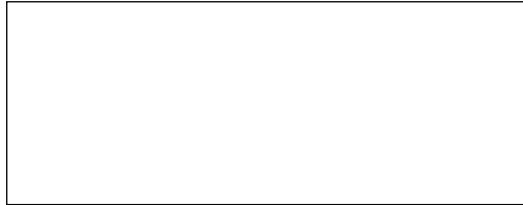
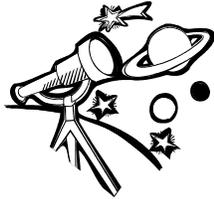
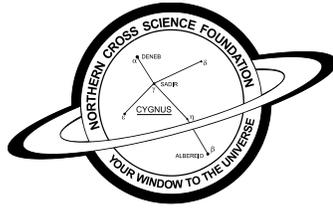
www.cvastro.org

Jim and Gwen Plunkett Observatory



**Observatory Director:
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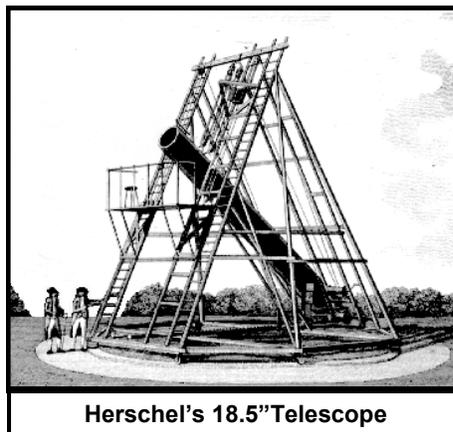
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(Cont'd from Pg 1) wishing to pursue the List.

Although there are some large objects on the List, the vast majority are under 10 minutes of arc. For the planetary nebula and galaxies, which there are many, 3 minutes of arc or smaller is the norm. The mistake many observers make is not using enough power at the eyepiece. Ninety-five percent of my observations are at 165X, and it is not unusual for me to increase that to 300X. If the power used is too low, objects that would have otherwise been visible will be missed. Many of the galaxies are dim and small, but I find if I take the time to fully understand what it is I am looking at and its relationship to other objects in the field the whole observation is more meaningful. A mistake that many fall victim to is making a marathon of the observations. (When I say "many", I am speaking of myself.) I am also rating the objects poor, fair, good, very good, and excellent for future reference. The ratings are not empirical, but simply reflect my own personal impression of the object in the eyepiece.

This past winter has been mild, with a record number of clear nights for observing, so I am progressing well on the List. I imagine it will take another year to finish, but I am enjoying the journey and find I am not all that anxious to complete the project. One thing I am learning is how to enjoy the many more objects that are available to the amateur astronomer outside the usual big, bright candidates!



Herschel's 18.5" Telescope

Our club has a "Discussion Group on Google"
See our website: <http://www.ncsf.info/> for details.

SPECTRUM

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The NCSF supports the International Dark sky association.



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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 Location
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