

SPECTRUM

Northern Cross Science Foundation Newsletter

May 2011

LOOKING UP

May 5, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to follow

May 6, Friday

Public Viewing

7:00 p.m.

Harrington Beach

May 7, Saturday

National Astronomy Day

2:00 p.m.

Harrington Beach

May 11, Wednesday

Sidewalk Astronomy

7:00 p.m.

Bayshore Town Center

May 19, Thursday

Board Meeting

7:30 p.m.

Home of Joyce Jentges

June 2, Thursday

General Meeting

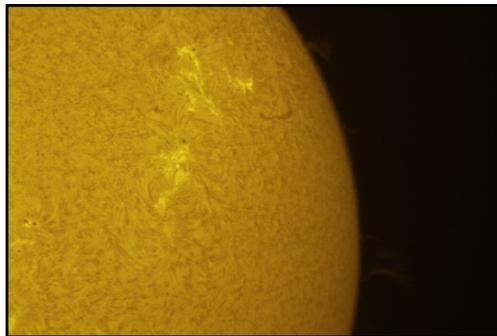
7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to follow

The 24th Solar Cycle...By Rick Kazmierski

The Sun is currently in its 24th Solar Cycle which is estimated to have begun in December, 2008 and projected to reach maximum in May, 2013. The Solar Cycle is approximately 11 years in length and has been projected back in time, using available observations and measurements to the Seventeen Hundreds. As the Sun approaches, maximum viewable activity on its surface and limb increases. This is becoming more & more apparent as the year progresses.

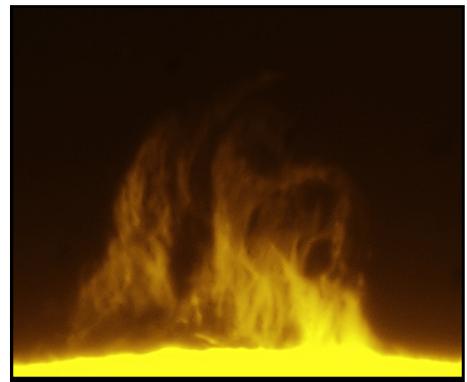


Solar Surface Activity Photo by Rick Kazmierski

The solar cycle is caused by the magnetic activity of the Sun, but there are still questions surrounding this process. Maybe the best answer with our current understanding is that differential rotation twists the Sun's subsurface magnetic field. It starts breaking through the surface, causing increasing numbers of sunspots. The twisted

magnetic field begins to weaken, and sunspot numbers decline. (The magnetic field does not return below the surface after 11 years. The field simply gets wrapped so far around the sun that it stretches and weakens). Finally, a new magnetic field forms deep within the sun, with reversed polarity, and the process begins again.

Using the NCSF Club's Solar Max Telescope this past month, I was able to capture several images of solar activity worth sharing. Video streams were taken with an ImageSource, DMK 21AU04.AS CCD camera and then stacked in the RegisStack Software Program. Each image had a combined total of several thousand images. Some post processing was done in Photoshop.



Solar Prominence Photo by Rick Kazmierski

Astronomy Day May 7...By Jeff Setzer

Astronomy Day is May 7, and we have a full range of activities planned. Come on out to the Plunkett Observatory and chase away those winter blahs!

Activities start at 2:00pm and run until 11:00pm. During the day, we'll have fantastic (and completely safe) Sun observing through the 90mm Coronado solar telescope, the largest such telescope made. See the churning "fires" on our nearest star!

Ever wonder how craters are formed on the Moon? Make your own craters and find out!

This is a hands-on activity suitable for any age. Kids love it almost as much as their parents....

Once you've visited the Moon with your own impact craters, take a guided Solar System Walk and visit all of our nearby planets. You'll be amazed how vast and empty our local astronomical neighborhood is, as you walk through our own scale model.

Of course, there will be telescopes all over, waiting for your inspection. Dozens of instruments of all (continued on Pg 3.)

April Meeting Minutes

By Kevin Bert

The April business meeting of the Northern Cross Science Foundation was held at the Unitarian Church North in Mequon. President Joyce Jentges opened the meeting at 7:55 pm. and welcomed over 29 members and guests. She then asked for standard reports.

Treasurer Gene Dupree had nothing to report.

Secretary Kevin Bert reported that membership cards would be available at the next meeting. He reminded the members of the dates of the Astronomical League Regional convention in Green Bay being April 29 and 30 along with the scheduled activities.

Joyce briefly talked about the March 9th annual Swap-N-Sell at Sheboygan. It was very well attended and had a lot to offer the attendees. Joyce had been fortunate to win the grand prize, a beautiful wood finished eyepiece case on display.

Jeff Setzer encouraged members to help out at the clubs largest public event of the year, **National Astronomy Day**. It will be held at the Jim & Gene Plunkett Observatory at Harrington Beach State Park start

ing at 2:00 pm on Saturday May 7th and will run until the park closes at 11:00 pm. Most of the same activities from previous years will take place there. Jeff is coordinating this year's event and is asking members wishing to bring personal telescopes to give him a call. This event kicks off the public viewing season for 2011. Even if you are not in a position to help at the event, you are encouraged to promote the event and stop out to enjoy the activities.

Joyce told us that she is waiting for information on the observing mound at Door Peninsula so as to give us details of the construction. Our hope is to some time soon build a version of our own at the Jim & Gwen Plunkett Observatory.

Under new business, and with the topic of the NCRAL convention on our minds, Joyce brought to our attention that the League has an opening for a group to host the 2014 Regional Convention. The convention's business meeting is the time for a hosting group to announce its intention to run the event. After talking about the details of running a convention and the club's success hosting the 2008 NCRAL, Joyce wanted a show of hands of those

that approve of the Northern Cross hosting the 2014 convention. Jeff Setzer volunteered to be chairperson for the event. It was noted that this event would correspond with the clubs 40th anniversary too. The response was favorable and the consensus was to go ahead and host it.

Joyce continued on with a list of upcoming NCSF events. The day before National Astronomy Day, (May 6th), is a Public Viewing night at Harrington Beach. Gene and Charlotte Dupree volunteered to be leaders for this 7:00 pm event and would be looking for members to help them. Wednesday May 11th is the year's first Bayshore Town Center sidewalk astronomy viewing. The starting time is 7:00 pm and interested members should contact Jeff Setzer for a parking pass. Sunday June 5th is a solar viewing day at Harrington Beach.

Charlotte Dupree noted that there was a presentation on Galileo at the Community Room of West Bend's City Hall on May 4th.

With no further business Joyce closed the meeting at 8:35 pm.

Things to See In the May 2011 Night Sky By Don Miles

Saturn: Look for Saturn (mag. 0.5) rising in the east, still in the constellation Virgo, as the sun is setting. The best view will be when it's highest in the sky, (which this month is around 11:30pm early in the month, but by about 9:30 later in the month). Saturn will be up all night, and will set about the time the sun rises.

Pluto & Neptune: Yes...Pluto is still on some peoples viewing list (no matter what its current classification is). Your best chance to see faint Pluto (mag 14.0) will be right before twilight (about 4:30am). Pluto is still in the constellation Sagittarius, and so the best time of the year is mid-summer when the southern constellations are highest on the southern horizon. You'll have a much better chance with Neptune (mag 7.9). Neptune is in the constellation Aquarius, and rises about 3:30am early in the month, and by about 1:30 by month's end.

Uranus, Venus, Mercury, Jupiter, and Mars: They're still all grouped pretty close, but are spreading out as far as our view from Earth. They'll all rise before the Sun, with Uranus (mag 5.9) being the first about an hour before the Sun. Venus

(mag -3.9) is the next to rise (about 45 min before the Sun). Venus will be much easier to find because it's so bright, and Mercury (mag 0.8) being next (about 30 min before the Sun). After that are Jupiter & Mars. Jupiter (mag -2.1) and Mars (mag 1.3) are less than 30 minutes ahead of the Sun. If you look for the pair in the first week, you should be able to pick out Jupiter. Once you find Jupiter (as it is the brighter of the pair), look slightly above and to the east about 1/2 degree (the approximate width of a full moon) for much more faint Mars. Mars will continue to slowly distance itself from the Sun rising earlier and earlier as the summer progresses. On the morning of the 11th, Venus and Jupiter will pass within a little over 1/2 a degree from each other with Jupiter being above and to the left of Venus.

Moon:
May 3rd: New Moon
May 10th: First Quarter
May 17th: Full Moon
May 24th: Last Quarter

Special Event:

There is one meteor shower this month, and these are the Eta Aquarids. The best time to see them will be late in the evening of Thursday the 5th into the morning of the 6th. Predicted rates are 10~20/hr. The moon will be setting earlier in the evening, so won't be a factor. These are caused by the Earth passing thru the debris field of Comet Halley. The debris field is pretty dispersed, so you may see them a couple of days before and after the 5th.



May General Meeting

101 Class... By Kevin Bert

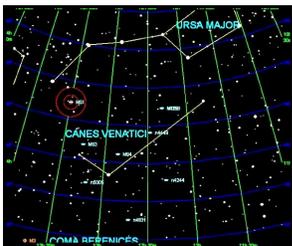
This months 101 class is entitled:

"Meteor Showers"

Find out when these yearly events take place and what causes them

Featured Constellation of the month

"Canes Venatici "



(Astronomy Day continued from Pg 1)

makes and models will be on display during the day. Some are even home-made!

After sundown, we'll turn our telescopes to the craters and mountains of the Moon, the Ringed Planet Saturn, colorful binary stars, star clusters, stellar nurseries and remnants of dying stars. We will even turn our gaze away from our own Milky Way, and spy on neighboring galaxies so far away their light left them when dinosaurs still roamed the Earth.

To make all this happen for our guests, we need your help! Volunteer to bring your own telescope, lead a Solar System walk, staff the observatory or just sit behind the information table and answer questions. Anyone can volunteer; no special knowledge or skill needed. But we need you! Even if you just want to attend the event and "be around" but not volunteer for a specific item or time, please let me know.

All volunteers will get free hot dogs for our volunteer picnic at 6:00. If you'd like to participate, please bring a dish, bag of chips, M&Ms, or something like that to share. The more the merrier! Bring Your Own Beverage. Again, please let me know in advance so we know how many hot dogs to make.

How do you let me know that you're coming? Easiest thing by far is email (astrosetz@hotmail.com), but you can direct message me on Twitter (@astrosetz) or Facebook (www.facebook.com/astrosetz). Or call me at 262-384-4136. I look forward to celebrating National Astronomy Day with you on May 7

Main Program... By Jeff Setzer

This Months Main Program is entitled .

"Apps for the Mobile Astronomer"

Jeff will present some of the latest astronomy-related software available for mobile platforms. If you have a smart-phone, tablet or iPod Touch, bring your questions and your mobile device!



Astronomy Day

An annual event intended to provide a means of interaction between the general public and various astronomy enthusiasts, groups and professionals.

This event was started in 1973 by Doug Berger, the president of the Astronomical Association of Northern California. His intent was to set up various telescopes in busy urban locations so that passersby could enjoy views of the heavens. Since then the event has expanded and is now sponsored by a number of organizations associated with astronomy.

April Events

There were no scheduled events in April. The NCSF observing season takes off full speed in May with a weekend devoted to public viewing and Astronomy Day. (See Jeff Setzer's article, Page-1.) We also have our first Bayshore Town Center event for the year in May. For the full list of events in 2011, watch for announcements in the Spectrum or visit our Club's website at www.ncsf.info.

Astro Humor

Q: What is an astronomical unit?

A: One helluva big apartment

Common sense is the collection of prejudices acquired by age 18.

Albert Einstein

CURRENT CLACK

Leaders for Public Viewing

May 6

Public Viewing

Leaders Needed

May 7

National Astronomy Day

Jeff Setzer

May 11

Sidewalk Astronomy

Jeff Setzer

Star Parties

Wisconsin Observers Weekend

June 30—July 3

Hartman Creek State Park, WB

www.new-star.org

Northwoods Starfest

August 26 - 28

www.cvastro.org

Prairie Skies

September 22 - 25

Kankakee, IL

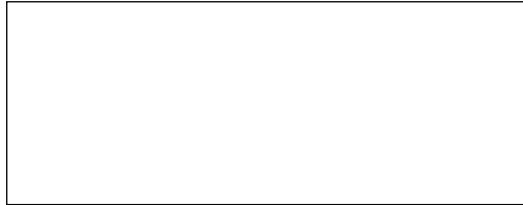
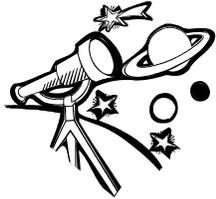
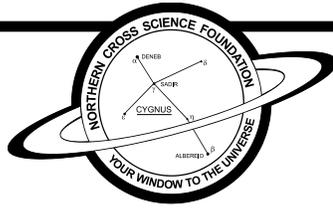
www.prairieskies.org

Jim and Gwen Plunkett Observatory



Observatory Director:
Dan Bert: 262-375-2239

SPECTRUM
5327 Cascade Drive
West Bend, WI 53095



2011 BOARD OF DIRECTORS

President—Joyce Jentges
102 N. Montgomery St. Apt #1
Port Washington, WI 53074
262-483-4270
joycejentges@hotmail.com

Vice President - Jeff Setzer
1418 Trillium CT
West Bend, WI 53095
262-338-8614
astrosetz@hotmail.com

Secretary - Kevin Bert
2292 Ridgewood Road
Grafton, WI 53024
262-375-2239
kevin.bert@hotmail.com

Treasurer - Gene DuPree
6219 Jay St.
Myra, WI 53095
262-675-0941
grdupree@charter.net

Rick Kazmierski
262-305-1895

Don Miles
262-675-2796

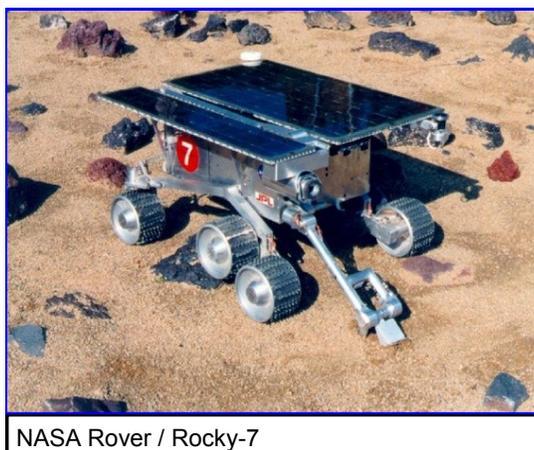
Tony Marek
414-354-6076

Newsletter Editor & Publisher
Rick & Mickey Kazmierski
262 305-1895/ rickkaz@charter.net

Mars Rovers...NASA

Design techniques honed at NASA's Jet Propulsion Laboratory in Pasadena, California for the twin Mars rovers, Spirit and Opportunity, were used to create the rovers currently examining the inside of Japan's nuclear reactors, in areas not yet deemed safe for human crews.

The rovers currently taking radioactivity readings in the damaged Fukushima Daiichi nuclear power plant buildings, are equipped with multiple cameras and hazard material sensors. The images and readings provided by the rovers indicate that radiation levels are still too high to allow human repair crews to safely enter the buildings.



NASA Rover / Rocky-7

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.



Send inquiries to:
SPECTRUM
5327 Cascade Drive
West Bend, WI 53095

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

<http://www.ncsf.info>

Monthly Meeting Location
Unitarian Church North
13800 N. Port Wash. Rd.
Mequon, WI 53097