

SPECTRUM

Northern Cross Science Foundation Newsletter

August 2013

Looking Up

August 1, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to follow

August 3, Saturday

Friends of the Bog

8:00 p.m.

Cedarburg Bog

August 14, Wednesday

Sidewalk Astronomy

7:00 p.m. - 10:00 p.m.

Bayshore Towne Center

August 16, Friday

Public Viewing

7:00 p.m.

Harrington Beach

August 17, Saturday

Public Viewing

7:00 p.m.

Harrington Beach

August 17, Saturday

Public Viewing

8:00 p.m. - 11:00 p.m.

Horicon Marsh

August 21, Wednesday

Board Meeting

7:30 p.m.

August 24, Saturday

Public Viewing

7:00 p.m.

Pike Lake

August 31, Saturday

Ice Age Center

8:00 p.m. - 11:00 p.m.

Dundee, WI

2013 Solar Maximum...by Rick Kazmierski

Mickey and I purchased a 90mm Coronado H-alpha Solar Telescope several years ago in anticipation of this year's solar maximum. Articles I've read suggest a poor showing by the sun this cycle, but we have not been disappointed. The increase in activity over the past two years has been exciting to watch! Although Sunspots have not increased dramatically, prominences and surface flares, which were small and few several years ago, now abound. Some are breath taking. The solar cycle repeats itself every 11 years, so if you haven't had a chance to observe through the Club's H-alpha Solar Scope, be sure to get out to a Public Event when Sun viewing is highlighted.

The Sun is a pleasure to view and image in H-alpha for a number of reasons. It's done in the daytime hours, not late at night. Light pollution is not an issue. Its face constantly changes, but slow enough to allow video imaging without details being distorted. With day and night observing available, viewing possibilities double. Mickey and I enjoy solar viewing whenever skies cooperated, but recently she has joined me in imaging through our Solar Scope and the images included are a result of these efforts.

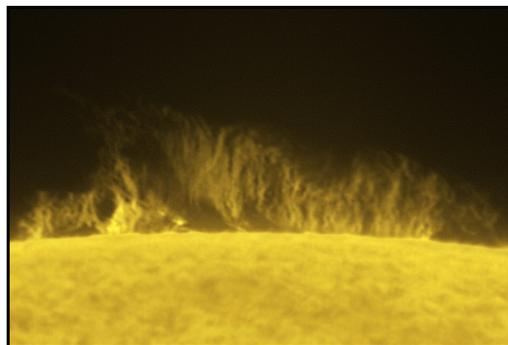


Photo by Rick Kazmierski 7/13/13
(Limb prominences)

Imaging is accomplished with a ImagingSource video camera attached to a 1 ¼ E.P. adapter, which replaces the eyepiece in the eyepiece holder. Video is streamed to a laptop on site, using software that came with the video camera. A video stream can be any length, but somewhere around 2,000 frames seems to provide a good working number. At 15 frames per second, a video stream takes about two minutes to complete. Once captured, the video is loaded into Registax 6, a free software program used to

stack and combine individual frames into one enhanced image. (Combining individual video frames of an object reduces the noise inherent

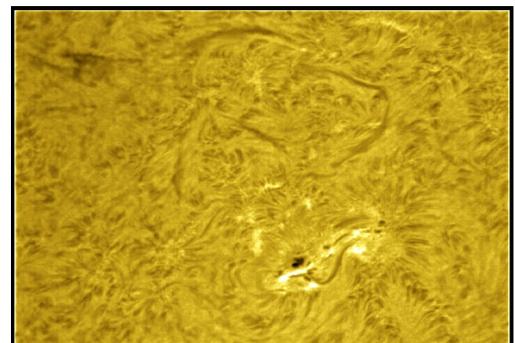


Registax 6 - Frame by frame video display*
See photo below for final processed image.

in each individual image, while enhancing the overall detail captured.) "This is one of the few times in life that you can have your cake and eat it too!"

Once a video is processed in Registax, the final image is saved and enhanced in other image processing software. "Photoshop" is the software of choice for many Astrophotographers, but there are cheaper alternatives which offer the same imaging tools. One such example is "Gimp", a free software program that can be downloaded from the internet.

The video camera we use is monochrome, which records a much finer detail than a color camera. As a result, color is added during the enhancing process in Photoshop. A golden Sun always looks most realistic.



*Photo by Mickey Kazmierski 7/11/13, 10:21 a.m.
Note Large Flare on upper half of photo with multiple sun spots towards the lower right.

July Meeting Minutes

By Kevin Bert

The July Business meeting of the Northern Cross Science Foundation was held at Unitarian Church North. President Jeff Setzer opened the meeting at 9:05pm and welcomed 21 members and guests.

Treasurer Gene Dupree gave the treasurer report. A checkbook balance of \$10,865.69 and Observatory balance of \$1,055.06 in the observatory account was current.

Secretary Kevin Bert reported no change in the membership roster. He noted that the Astronomical League's national convention, (ALCON), will take place July 24-27 in Atlanta.

Mickey Kazmierski reports that the NCRAL 2014 committee will be setting a date for their next meeting.

It was noted that the imaging committee was not active over the last month.

Observatory Director Dan Bert reported some minor repairs to the south east door frame were completed last month. He told the membership that the weekend Public Viewing nights each had leaders and assistants.

Under new business, Charlotte Dupree reported over 400 parents and children attended the library system "Family Fun Night" at Horicon. Jeff reported the Summer Solstice event held at Lac Lawrann was sunny and had about 30 viewers.

Jeff Setzer covered upcoming events for July. Harrington Beach PVN on the 11th & 12th. Pike Lake PVN also on the 12th. Side-walk Astronomy at Bayshore on the 17th. Horicon telescope viewing on the 20th and Sun-Day on Saturday at Kevin Bert's home in Grafton. Jeff said the July 18th Board meeting will be rescheduled.

With no further business Jeff closed the meeting at 9:30 pm.

Harrington - Arrayed in Fog

By Ernie Mastroianni

A low ground fog rolls in around stargazers at Harrington Beach State Park in Southeast Wisconsin on July 14, 2013. The fog came in suddenly, but was not very deep and left a clear and very steady view of the stars above, but left scopes covered in dew. Visible in this frame, which looks northeast, are the Double Cluster and the Andromeda galaxy. The photo was taken with a Nikon D700 and a 24mm f/2.8 lens set at f/4. Exposure time was 30 seconds

at ISO 5000. I was with a fellow named Wally, (he's at the right) but I forgot his last name and email. He came to a meeting and may join. Seemed to know what he was doing with astrophotography.

Astronomy.com's Pic of the Day for July 25th



Photo by Ernie Mastroianni 7/14/13

Note

"2014 Astronomy Calendars"

are now available for purchase. See Gene DuPree at the General Meeting to purchase your copy.

Things to See In the August 2013 Night Sky By Don Miles

Venus: Stays about an hour behind the Sun the rest of summer and into early fall, then it falls farther behind and stays up later in the evening. It's at (mag -0.2), so is easy to spot just after sunset.

Saturn: Is highest in the sky as the Sun is setting, and will set about (12:30am/10:30pm). It's still an amazing sight at (mag 0.7), even though is low on the horizon.

Neptune, Uranus & Pluto: Neptune (mag 7.8) rises in the constellation Aquarius about (9:30pm/sunset). It transits about (3am/1am), and is at opposition on the 26th. Uranus rises about (11pm/9:15pm) in the constellation Pisces, and is at (mag 5.8) now. It will transit at about (5:30/3:30am), so the best views will be in the morning. Pluto is already up at sunset, and as has been mentioned before, you need a couple of things to view it successfully: Good charts, a clear dark southern horizon, a moderate (~10-12") scope, and persistence to track down the (mag 14.1) former-planet. It's in Sagittarius, so is sinking lower into the southern horizon as summer fades.

Jupiter & Mars: Jupiter is at (mag -2.0) now, so will be hard to miss in the morn-

ing sky, and rises about (3:30/2:15am) in the constellation Gemini. Mars is at a much more conservative (mag 1.6), and rises at (3:45/2:15am) also in the constellation Gemini.

Mercury: Now leads the Sun, and rises about an hour before sunrise early in the month, but will soon slip towards the Sun as the month progresses. It will soon work its way around the "back" side of the Sun. So if you want to see Mercury (mag -0.2) this time around, look early in the month while there's still some distance between the two.

Moon:

July 6th: New Moon

July 14th: First Quarter

July 20th: Full Moon

July 28th: Last Quarter



Special Events:

Meteor Showers...

There is only one meteor shower worth mentioning this month, and those are the Perseids. They peak the night of the 12th with rates of about 100/hr. These are one of the more reliable showers. The recent first-quarter Moon sets around 10:30, so it should be an excellent show this year.

Comets...

There are a couple worth viewing. The brightest is PANSTARRS at (mag 11.5) in the Constellation Bootes, and on the 2nd will be closest to Earth this lap around at 1.33 AU (Astronomical Units). Next is the highly hyped ISON, but it's not living up to predictions so far (go figure). It's still predicted to brighten up substantially by the holidays, but is now at about (mag 13.0). Look in the constellation Cancer early in the morning. The last is comet Catalina, and is another comet in the constellation Bootes. It's now at about (mag 12.0). Refer to the web for current statistics, as they have been known to brighten (and also fade) on short notice.

August General Meeting

101 Class... with Kevin Bert

The Astronomy 101 class for August will be taken from the “**Star Gazer Series**” and is entitled “*Plan Now For the Perseid Meteor Shower.*” In addition, “*Asterisms of the Summer Sky*” will be shown and commented on.

The Constellations of the month:

Delphinus and Sagitta



Main Program...

This month's program will feature an episode from the TV Series,

Cosmos: A Personal Voyage

Cosmos is a thirteen-part television series written by Carl Sagan, Ann Druyan, and Steven Soter, with Sagan as presenter. The series was first broadcast by the Public Broadcasting Service in 1980 and is still the most widely watched PBS series in the world, having been seen by over 500 million viewers world wide. NCSF will continue with the next episode in this 13 episode series.

July Events

Horicon Marsh July 9th

Reported by Mickey Kazmierski

Gene and Charlotte DuPree were joined by Rick and Mickey Kazmierski for this “Family Fun Day” at Horicon Marsh. Solar viewing began at 5 p.m. followed up by nighttime viewing, ending at 11:00 p.m. There were an estimated 400+ parents, kids, in attendance at this event,. We had a steady line, nearly the entire time. In addition to telescope viewing the Night Sky Network information on Solar Flares and dynamic effects of Magnetism were demonstrated to the crowd, reaching out to both young and old. Charlotte expressed how she had never seen such young people with impeccable behavior and genuine interest along with their parents, siblings and grandparents. This program is made possible by a collaborative effort between Mid-Wisconsin Federated Library System, Horicon Marsh Education and Visitor Center and the WI DNR.

Harrington Beach July 12th

Reported by Rob Powell

Public viewing night. Rob Powell, Bob Radtke, Rich Sauve, Gail and Harvey Sherman, Charlotte and Gene DuPree, and Carol Nelson helped to meet and greet 150 visitors under clear skies. Through the Panarusky, visitors enjoyed Saturn, M8, M13, and M57. Bob set up the six-inch Criterion (Newtonian reflector) on the south patio to permit some lunar viewing as well. The lines were 20 minutes long for Panarusky viewing, despite our frequent reminders to visitors that the parking lot was filled with additional telescopes with more experienced astronomers!

Pike Lake State Forest July 13th

Reported by Charlotte DuPree

Clear skies! We looked at the usual, Moon, Saturn, Venus, NGC 457 (Owl Cluster), CR399 (Coathanger). Al, Gail, Rick D. and Carol came out to assist. We had between 50 and 70 visitors, and they were not all campers.

Bayshore Towne Center July 17th

Reported by Rob Powell

Charlotte and Gene DuPree, Carol Nelson, Bob Radtke, Don Miles, and Rob Powell set up five telescopes on the sidewalk of Bayshore Towne Center. The first-quarter moon was enjoyed by a near constant flow of passers-by, until Saturn made its appearance. Good views of Saturn were short-lived, as the great Milwaukee nebula slowly made itself apparent.

American Science\Surplus July 19th

Reported by Charlotte DuPree

Because of Rick K. contact for NCRAL 2014, we were asked to assist with their Science Night. We got there early enough to look at the Sun. Later on, in between the clouds, we helped some beginners learn to work their scopes. We observed Venus, Saturn, Moon, Albireo and CR399. Carol Nelson helped with handing out information.

Horicon Marsh IEC July 20th

Reported by Charlotte DuPree

At this event we were scheduled to do some solar viewing. Partly cloudy skies and an almost full Moon later on allowed for the viewing of Venus, Saturn, CR399, Albireo, M5, and M57. Rick D. brought his scope for night time viewing. We had a crowd before and after movie night held in the Horicon Marsh International Education Center. The movie was the Original “Swiss Family Robinson”.

RELATED INFO

New Members

NCSF Welcomes New Club Members

Walter and Jane Gersmehl
Sheboygan, WI



Leaders for Public Viewing

August 3

Cedarburg Bog (Friends of Bog)
Dan Bert

August 14

Bayshore Towne Center
Leaders Needed

August 16

Harrington Beach
Leaders Needed

August 17

Harrington Beach
Leaders Needed

August 17

Horicon Marsh
Gene and Charlotte DuPree

August 24

Pike Lake
Gene and Charlotte DuPree

August 31

Ice Age Center
Gene and Charlotte DuPree

STAR PARTIES - 2013

Northwoods Starfest

August 9 - 11th

Hobbs Observatory

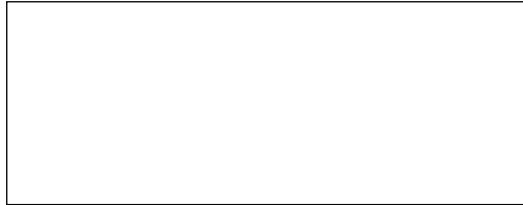
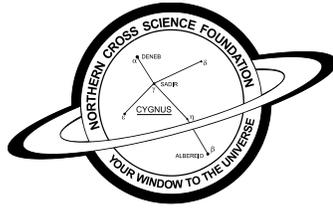
Fall Creek, WI

Jim and Gwen Plunkett
Observatory



Observatory Director:
Dan Bert: 262-357-1943

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The Rob Powell Family Camping

“Impromptu Public Viewing
at the Plunkett Observatory”

Rob Powell reports that he took advantage of a family camping trip this past June, and the ultra steady skies in mid-July. Rob opened up the Jim & Gwen Plunkett Observatory as often as clear skies would allow for Public Viewing!

6/25/13 8:30 to 11:00 pm. About 30 visitors enjoyed Saturn, M13, AND M57

6/26/13 8:15 to 11:30 pm. About 40 visitors enjoyed Saturn, M13, M57, and M51. The spiral arms of M51 were very evident and seen by averted vision from the half-dozen or so "die hard" visitors who stayed until close-up time.

In July, we had an unusually long period of steady, clear air.

7/8 7:45 to 11:15 pm. I opened the observatory for some Unitarian Church North friends who were camping there at the time. About 6 guests enjoyed Saturn, M8, M13, M57, and a very clear M51.

7/10 8:05 to 11:35 pm. About 24 very enthusiastic and inquisitive visitors enjoyed Saturn, M13, M57, and M51. The conditions that night were the best of the entire year, from my viewing experience. Stunning clarity of Saturn and amazing clarity for the Whirlpool galaxy. Although only a few objects were viewed, we took full advantage of the clear air to view each target at multiple magnifications using amazing Televue Ethos eyepieces. The assembled crowd asked very good questions and thoroughly enjoyed the evening.

7/11/13 6:30 pm to 12:30 am. About 40 visitors were treated to a night of stellar delights. We cheated dusk by using binoculars and the Panaruskys' finder scope to locate Saturn very quickly after sunset. Viewing began at around 8:15 pm. Visitors enjoyed these deep space objects as well: M8, M13, M27, M31, M32, M51, and M57. Prior to viewing Andromeda through the telescope, visitors all learned how to star hop, naked eye, to the galaxy. Binocular viewing followed, and telescopic views followed that as well. Many thanks go out to Michaela Powell, who bundled handouts together for the many children who visited, helped with crowd control, and made sure that the guest register was signed.

SPECTRUM

Is published by the Northern Cross Science Foundation, Inc. A nonprofit organization based in the state of Southeastern Wisconsin and is a Member of the North-Central Region of the Astronomical League.



The NCSF supports the International Dark sky association.



Send inquiries to:

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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