

## Looking Up

**October 4, Friday**

**Public Veiwing**

7:00 p.m. - 11:00 p.m.  
Harrington Beach

**October 5, Saturday**

**Public Veiwing**

7:00 p.m. - 11:00 p.  
Harrington Beach

**Note Date Change**

**October 10, Thursday**

**General Meeting**

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

**October 12, Saturday**

**Public Veiwing**

**Fall Harvest Hike**

7:00 p.m. - 11:00 p.m.  
Harrington Beach

**New Event**

**October 12, Saturday**

**Luminary Walk**

6:00 p.m. - 9:00 p.m.  
Lac Lawrann Conservancy

**October 17, Thursday**

**Board Meeting**

7:30 p.m.  
Home of Jeff Setzer

**October 18, Friday**

**Binocular Star Party**

*(See Page-2 for Details)*

**October 19, Saturday**

**Public Viewing**

7:00 p.m. - 11:00 p.m.  
Pike LakeCampground

**October 31, Sunday**

**NCRAL Meeting**

7:30 p.m.  
Home of Rick Kazmierski

**Note Date Change**

**November 14, Thursday**

**General Meeting**

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

# SPECTRUM

## Northern Cross Science Foundation Newsletter October, 2019

### Some thoughts on Remote Imaging *By Tom Schmitkunz*

Greetings fellow astronomers. Would like to share some experiences I have had with remote imaging.

**How this got started:** In the 1990's, I started going to Star Hill Inn, in northern New Mexico. It was set up mostly for visual astronomy with a high-quality night sky. They had one scope with a CCD camera, but it was extremely difficult to use. A few years later a new site became available, New Mexico Skies, in the southern part of the state near Cloudcroft. This site was primarily for imaging, with some resources for visual work also. You could operate the scope in the dome, or remotely from the guest house. Mike Rice, owner, had the vision to gradually grow his operation into one that astronomers from all over the world could use via the internet. Back then, I used Maxim-DL and CCD-Soft as my processing tools. An interesting aside; on one visit, I was on a hike on the grounds, and came within 100' of a mountain lion, resting on a rock outcropping. I had my camera with me, but had the wide field lens on. By the time I got my telepho-

to out of the pack and ready to go, he was gone.

**Imaging today:** I use the site i Telescope for remote imaging. This enterprise is based upon the resources at New Mexico Skies, plus other sites in Australia, New Zealand, Spain, California, and now Chile. It operates via some clever software for reserving telescope time, pointing the telescope, and retrieving data. When your reservation comes up, you direct the scope to your target, enter your settings also for exposure length, filters, and binning. I generally run scripts, that say something like, on September 10, at 9 pm, take 45 minutes of exposure on M31, 3 red, 3 green, 3 blue exposures, all at 5 minutes each, all binned (1:1). Either way, after your session is over, your file data will then be available (FTP off this site) for you to copy to your own computer for processing. Sessions will be automatically terminated in the case of rain, snow, severe winds, or very high humidity. In the rare event of an equipment malfunction (as, the scope stops tracking due to a cloud passing through the field, and disturbing the tracking), you can apply for a refund.



*North American Nebula and Pelican Nebula.*

*Imaged via i telescope, from the New Mexico site, 08/26 and 09/01 2019. TAK 106 FSQ telescope, SBIG STL-11000M CCD camera.*

*12 x 5 min exposures with ha filter, binned (1:1). Processed in Nebulosity and Adobe.*

## September Meeting Minutes

By Kevin Bert

The September 2019 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 8:05 pm and welcomed 23 members and guests. He then asked for standard reports.

Treasurer Gene Dupree was absent and had no report.

Secretary Kevin Bert reports that the most recent members to join were Jim Hahn, Michael and Lisa Baka. Under the Astronomical League there was no news to report.

The observatory Director Dan Bert says there were issues with a light on the nearby pit toilet. It must have recently been mounted and could not be shut off. Imagers and observers setting up in the

parking lot were having the most difficulty with the light. In the short term a key to access the breaker will be available. It was noted that there was duct tape around the 5-inch refractors dew shield by the dew heater. There was no explanation as to why it was there. It will be looked into.

Jeff Setzer reminded members to save the dates of May 1 & 2 for the 2020 Astronomical Leagues regional convention that our club will be hosting.

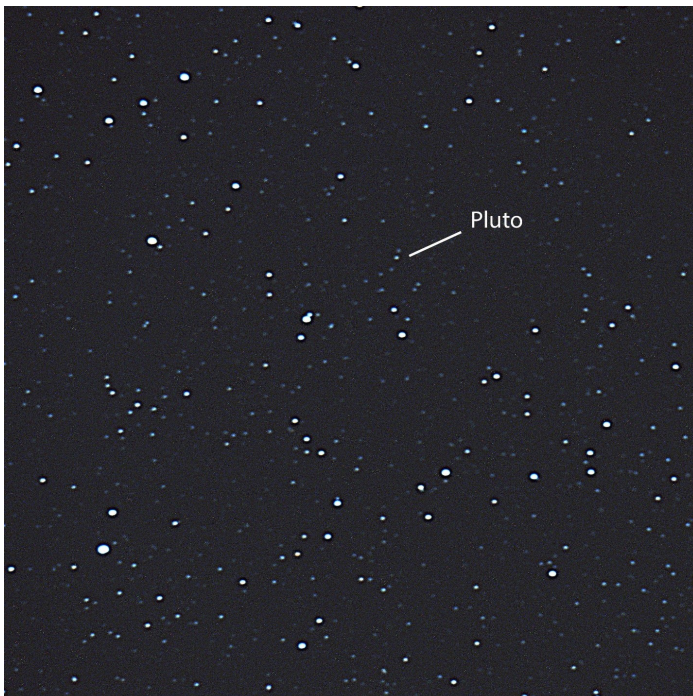
With no new business Jeff reminded members of upcoming events. September 6th and 7th are public viewing nights at Harrington Beach. Pike Lake State Park is scheduled for the Community Campfire and telescope viewing on the 14th. September 21st is the Small scope star party. October 4th and 5th are the last Public Viewing nights at Harrington Beach with the Fall Hike on the 12th as the final event.

## Harrington Beach Imaging *by Ernie Mastroianni*

Sharing the same area of the sky as Saturn and Jupiter in late August was the much dimmer dwarf planet Pluto. At 14th magnitude, it's too faint for all but the biggest light buckets, but not beyond the reach of a two-minute exposure through my 9.25 inch Celestron, which can routinely record stars down to 16th magnitude. I set up outside the Plunkett observatory at Harrington Beach State Park and used a recently-purchased QHY-168C color camera to image a half degree square star field centered on Pluto's position. Sky Safari Pro was my program of choice, which I have on my vintage iPad.

Guidescope issues (lens cap not removed!) prevented me from acquiring round stars on all but two frames, but those frames produced a clean enough image to reveal Pluto among the background stars. I wanted to shoot the same field a few days later to show its motion, but time and schedule did not allow time for a second

After Pluto, I aimed the same scope and camera to NGC 891 in



Andromeda. The galaxy, 30 million light years away, appears edge on. An hour's worth of nicely-tracked exposures (guidescope lens cap off!) revealed the dark lane of dust that bisects this interesting deep sky target.



NGC 891 Photo by Ernie Mastroianni

## Binocular Star Party *By Kevin Bert*



With the Small Scope Star Party in the books, the next club Star Party theme will be dedicating a night for Binoculars. This year it will again be held at Harrington Beach on October 18th at 7:00pm. Some wide field objects are better suited to view through binoculars rather than a telescope. We are all wired to use two eyes and it makes a difference viewing with binoculars at celestial objects. Many

offer a 3-d effect and always reach to a fainter magnitude than the same size telescope with single eyepiece. I hope to see dozens of binoculars at the event both hand held and on a mount. Don't let it stop you from attending if you don't own binoculars. All members and their guests are welcome.

There are only a few rules that apply for the evening.

- 1) Only true binoculars, (two objectives). No Bino-viewers on a telescope.
- 2) Willingness to share views.

Snacks are optional but always welcome at members events. We will set them up in the Observatory and make them available to members throughout the evening.

Always remember what a famous philosopher said. "The distant universe looks even farther away when you look through the wrong end of binoculars."



## October General Meeting

### Astronomy 101 *by Kevin Bert*

#### "Binocular Highlights"

What are some of the best astronomical objects for Binoculars? We will highlight some of them at our next meeting in anticipation of viewing some of them at the Binocular Star Party.

#### Constellation of the Month

### Pisces



### Main Program *by Mike Borchert*

#### "Lowell Observatory"

Join us Thursday October 10th as I discuss my trip to the Lowell center, Flagstaff, Arizona. I will discuss the history and re-building of the 24-inch Clark Telescope along with my night visit. See you there.



## September Public Viewing Events

### September 6th, Harrington Beach

*by Gene R. DuPree*

The sky was partly to mostly cloudy when we arrived at the observatory. There were a few people waiting, wanting to know how the observatory works, and what were we going to look at. The Moon was popping in and out and hard to find when does that, which I just hate. It finally stayed out long enough to see, and people were just amazed at the view of the Moon never seeing it like that before. Jupiter and Saturn just blew them away, after it cleared. As fast as it cleared it was cloudy again, and no hope of clearing. Rick D, Rich, Richard, and Al had been set-up in the parking lot. They all had left except Al. A couple from New Berlin, who were here last week for the aurora watch, arrived as we were closing down the observatory for the evening. They had lots of questions! We had closed the roof, locked the door, looked up to a completely clear sky. Al's scope was still out and he gave the couple some great views of about a half dozen objects. As they were leaving a man from the campground stopped, and he looked at a few objects, also with lots of questions we tried to answer. Then Al was able to pack up his equipment and leave for home.

### September 7<sup>th</sup>, Pike Lake State Forest

*by Gene R. DuPree*

The night started out cloudy. The Moon appeared, so we set-up the 8 inch dob. It was the day after first quarter, and I looked for the Straight Wall and there it was. There were four visitors taking a hike from the tower, that stopped. They never looked through a telescope before and couldn't believe the Moon view. Jupiter, and Saturn made them speechless. The brief ten minutes of clearing made their day, and ours too. Thanks to Al and Charlotte for their support.

### September 14th, Pike Lake State Forest

*by Gene R. DuPree*

I arrived at 6:10, and a few people were there, ready to do some viewing. By 7:00, Rick D., Jeff, and Al were set-up, talking to visitors, looking for Jupiter, and there it was. By then we had a lot of visitors, and more were coming, also the same with the clouds. When you thought it wouldn't clear it did, and we saw Saturn. Those were the only objects we had all night, with the clouds in and out. It was later that the Moon was lighting up the eastern clouds, but by then the 100 plus visitors had left and so did we.

### Small Scope Star Party Update

*By Kevin Bert*

There was optimism of clear weather on the days leading up to the SSSP. Unfortunately the Wisconsin Nebula had the final word this year. With rain in the forecast I was however pleased to see some of our members still show up at Harrington Beach for some telescope and astronomy talk. A few small scopes were even on display. There was a small clearing that showed the big dipper at evenings end but viewing will have to wait till next year. Thanks to all for bringing goodies to share and be sure to look for next years SSSP date.



## Related Info

### Welcome New Member

Victor Santiago

### Leaders for Public Viewing

#### October 4, Friday

Harrington beach

Gene & Charlotte DuPree

#### October 5, Saturday

Harrington beach

Leaders Needed

#### October 12, Saturday

Harrington Beach

Leaders Needed

#### October 12, Saturday

Lac Lawrann Conservancy

Rick Kazmierski

#### October 19, Saturday

Pike Lake

Gene & Charlotte DuPree



### NCRAL Update

**The Vision 2020 NCRAL (North Central Region of the Astronomical League) convention planning is in full swing. The location will be at the Lakeview Conference Center located in the Country Inn Suites Hotel in Port Washington. Our club is hosting the Regional event next year, May 1 & 2. Please save the date on your calendars. Any questions at this point, please contact Mike Borchert or Jeff Setzer. More information to follow.** *By Mike Borchert*

## 2019 Board of directors

### **President - Jeff Setzer**

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## **SPECTRUM**

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

*Con't from PG-1)*

They are very good about this.

Why do this? One is cost. Setting up a system with a quality telescope, mount, camera, computer, and lots of accessories can be very expensive. Also, the variability of Wisconsin weather can be a problem. Imaging things not visible from Wisconsin is another reason. Also, with a choice of over 20 telescopes in 5 areas of the world, you can imagine something, somewhere on any given day. Where ever you are in the world, one of their sites at least is in darkness, and available, if clear. Sounds like a good way to deplete your savings account.

Minuses of remote imaging: When I imaged at New Mexico Skies, I set up and started my imaging run. Then, while it ran, I observed the excellent sky with binoculars. Seeing a near perfect sky with binoculars, and watching images pop up on the screen is pretty cool. Imaging remotely, you lose that quality of being there, and directly experiencing the night sky.

Finances: The minimum commitment is \$39/month. If this is all you want to spend you could probably get at least 6 high quality 1-hour images with a quality 4" refractor, over the course of a year. If you want to do more, you can add money to your account. I feel my costs are fair, and compared to the cost of setting a quality imaging system, I think this makes sense for me. I believe there is a trial subscription plan available, so you can see what can be accomplished.

A Facebook page exists for i Tel users. This is very valuable tool to me, because a can see exactly what sort of results I may expect with a given scope and object. Because the larger scopes are expensive, I have noticed that many people only take 1 or 2 frames each of R, G, B, and get very decent results with limited exposures. Perhaps having

Bortle 1 or 2 skies, f4.5 optics, and excellent mounts just allows you to get great results in a short time. I generally prefer longer exposures. Also, the manager of i Telescope, Christian Sasse, posts helpful news and maintenance reports on this site also.

### **Miscellaneous ramblings:**

I am not selling i Tel here, or saying other people should use this. Rather, I feel that this works for me, and it could work for you. It could be part of your imaging for the year, imaging items not visible from Wisconsin, or very low in our skies.

The quality of work our imagers in the Milwaukee area are currently doing is quite high. I applaud the skill and determination of imagers in our area which can result in very fine images, often spectacular. This is motivating for all of us, and as our skills improve, so will our results.

I use nebulosity/adobe now, but probably will move to Pixinsight in the next few months. This seems to be the most respected and widely used imaging product currently available.

If you are starting out, I would say the biggest thing is learn from others. Don't re-invent the wheel. Our societies in SE Wisconsin have imaging groups, which can provide excellent direction. Start small. Mount a DSLR on a tripod, and from a dark sky take 30-second wide angle images of the night sky, at, say, ISO 1600. Later, add a drive for longer exposures, and larger lenses. There is a great deal of value in doing this before you even think about telescopes, mounts, and CCD cameras.

All this will involve work, and at times, significant frustration, like for those who drive to a remote site, and while setting up, realizing that they left a key part on the kitchen table. But the payoff is high, so stick with it.

### 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:  
[rickenkaz@charter.net](mailto:rickenkaz@charter.net)