

# SPECTRUM

Northern Cross Science Foundation Newsletter

July 2005

## LOOKING UP

July 7 Thursday  
General Meeting  
6:30 p.m. Astronomy 101  
7:30 p.m. Business Meeting

July 8 & 9 Friday & Saturday  
Public Viewing Night  
8:00 p.m.  
Harrington Beach St. Park

July 21 Thursday  
Board Meeting  
7:30 p.m.  
Home of Jeff Setzer

July 23 Friday  
Moonlight Hike/Pub. Viewing  
8:00 p.m.  
Harrington Beach St. Park

August 4 Thursday  
General Meeting  
6:30 p.m. Astronomy 101  
7:30 p.m. Business Meeting

August 5—7 Friday—Sun  
Northwoods Starfest  
Hobbs Observatory  
Fall Creek, WI

Aug. 12 & 13 Friday & Saturday  
Public Viewing Night  
8:00 p.m.  
Harrington Beach St. Park

Aug. 18 Thursday  
Board meeting  
7:30 p.m.  
Home of Jeff Setzer

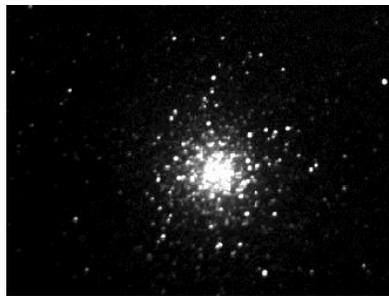
August 27 Saturday  
Ice Age Center  
7:30 p.m.

## The Globes of Summer

By Jack Kramer

[Http://www.bpccs.com/lcas/Articles/Globular.htm](http://www.bpccs.com/lcas/Articles/Globular.htm)

It seems as though each season of the year is known for a certain type of deep sky object. While there are exceptions, we do tend to associate winter with open clusters and spring with galaxies. If that's the case, then summer surely has to be the season of globular clusters. It's easy for the average observer to tick off some of the more renowned gems, such as M13, M4 and M22. Understanding something about their nature will make the observation of these objects more interesting.



The above picture is one of Mike Purcell's CCD images of M13, and while the reproduction process hardly does it justice, it does illustrate a common feature of globulars - their increasing degree of concentration toward the center. But they're not all alike; prolonged observation will reveal both major and subtle differences from one to another. In a way, globulars are one of the more mysterious deep sky objects, because little is known about how or why they came to be formed. In general, they are composed of older stars, though they are not all of the same age. They also tend to be concentrated toward the center of our galaxy...that's why there are more of them visible in the summer sky. There are two types - halo globulars and disk globulars. The more numerous halo type are located at the very edge of the Milky Way scattered "above" and "below" the hub of our galaxy. The disk

type are located within the plane of the galaxy, but they, too, are congregated toward the center of the galaxy. Deep photographs of other nearby galaxies show many with their own halos of globular clusters.

Now for the fun part. Globulars take high magnification very well, and may require it in order to resolve the components. What else should you look for in your telescope?

**Color** - Visual observation with observatory-size telescopes readily shows a variety of different colors in the stars that make up globulars. One observer described the effect as though he were looking into a "jewel box". Those of you with larger telescopes also may be able to detect some colors. Since the eye is not sensitive to color at low light levels, it takes quite a bit of light grasp.

**Stellar Distribution** - Probably you've read about "star poor" areas in globulars; this is more than just a varying distribution at the edges. M13 is a good example where the density of the stellar components varies, with star poor areas spiraling in toward the center. Sometimes this effect is more pronounced than at other times. M22 also appears to me as though there are sprays of stars emanating from the core, which doesn't seem to be exactly at the center. M30 in Capricornus has two short lines of stars emanating from the hub. M4 in Scorpius is famous for its vertical line of bright stars running through the center.

**Density** - This refers to the richness of the cluster. Some are so dense that individual components cannot be detected at the center, while others are so loose

*(Globulars on page 4)*

## June Meeting Minutes By Kevin Bert

The June business meeting of the Northern Cross Science Foundation was held at the Unitarian Church North in Mequon. Vice President Joyce Jentges opened the meeting at 7:40 p.m. to 30 members and guests.

Joyce welcomed all members and noted that President Jeff Setzer was at the Pre-Wisconsin Observers Weekend and was not available to run the meeting. She asked for standard reports.

Treasurer Rob Powell gave the latest checking balance and listed transactions over the last month. Club liability insurance, wood for the new podium, cooling system for the 20-Inch Panarusky telescope and observatory plans were main expenditures.

Secretary Kevin Bert only noted that a revised membership packet would be sent out to the most recent members.

Joyce talked about the July 2<sup>nd</sup> Brat Fry at the West Bend Piggly Wiggly. She was still in need of a few more helpers from the membership to make it work. The plan is to sell from 10:00 a.m. to Noon with one shift and from Noon to 2:00 p.m. for the other shift. Materials would be bought at the store as needed. A sun viewing scope or two would be used to entertain people while they wait. If business is brisk near the end we might extend the sales for an extra hour.

Rob Powell reminded members of the Plymouth camp telescope viewing on the following night and asked for help from the membership to bring telescopes. The starting time would be at 9:30 p.m.

Joyce ran down a list of upcoming NCSF events.

Under new business, Joyce said that a meeting with Harrington Beach personnel and the DNR was postponed from June 13<sup>th</sup> to the 21<sup>st</sup>. Fundraising for the project would start soon.

With no further new business, Joyce closed the business meeting at 8:05 p.m.

Respectfully submitted,

Kevin Bert, secretary

## Observatory Meeting at Harrington Beach

### By Jeff Setzer

On Tuesday, June 28, Rob Powell and I met with district representatives of the Wisconsin DNR. Our meeting centered on the construction details, site location and ownership of the observatory. After 90 minutes, the meeting ended with all parties being quite satisfied with the results.

The site identified is slightly northeast of the picnic shelter at Pucket's Pond. Any trees that would need to be moved (there were 3 identified to the east) would be moved as part of the site preparation by the DNR. Electricity would be run from the existing transformer, again as part of the site preparation.

A few minor modifications to the building structure were identified. All pilings would have to be 4 feet deep, instead of the 3 feet specified in the architect's plans. Doors need to be 36" wide as part of the DNR specifications, and

stainless steel fastening hardware must be used instead of galvanized hardware whenever pressure-treated wood is involved. These are all minor modifications that will have very little impact on the cost of the observatory.

Ownership would work exactly as we envisioned it: the building would be donated by the NCSF to the DNR, and it would be owned by the DNR. All contents of the building would be owned by the NCSF. We would retain naming rights to the building, as long as it was not obscene or offensive (similar rules as when buying vanity license plates).

The DNR officials were very supportive and enthusiastic about this project. They will do all of the site preparation work, including surveying, over the next several weeks. If everything goes through, we could begin construction in 2-3 months, which would put us

into late summer/early fall.

At this point, they have all the information they need. Another meeting will take place in about a month to make sure everything is on track, but in the meantime, we are communicating on a regular basis through email and telephone.

Our fundraising efforts, led by Treasurer Rob Powell, will now begin in earnest. Expect to see details of the different opportunities available to members and the general public in the August newsletter.

This is an exciting time for all Northern Cross Science Foundation members, past and present. After more than 20 years, our dream appears to be near realization. I want to thank each and every one of you for your support as we build a facility that we can proudly call our own.

## From The Editor

### By Joyce Jentges

June has been a busy month, astronomically speaking. Some of our members spent a week or parts of it, camping at Hartman Creek State Park for Mega-Pre W.O.W. and W.O.W. Skies were pretty good the earlier part of the week, but most of us left early on Saturday because of threatening storms.

Earlier in the month we had two back to back public viewing nights. For the Saturday night session, skies weren't too bad for a while, but attendance was poor.

Kevin Bert's Sunday on Saturday once

again brought clouds. We had rain and storms in the evening. Thanks to Kathy Bert for preparing the wonderful food for this event.

If you would like to look at the newsletter online, versus getting a paper copy in the mail, please send me an email with a email address so I can send you notification when it is available.

My deadline for the August newsletter is July 21st. Remember, we need articles from you to make this newsletter successful.

### Public Viewing Night Leaders:

July 8: Kevin Bert

July 9: Rick & Georgine Poulin

Registration is now available online for Northwoods Starfest and Astrofest. Go to [www.cvastro.org](http://www.cvastro.org) for more information about Northwoods Starfest which will be held August 4—6, 2005. For Astrofest, the website is [www.chicagastro.org](http://www.chicagastro.org). Astrofest is September 8-10, 2005.

**Important: This year, the NCSF will not have an exhibit at the Ozaukee County Fair. If you will remember, last year our spot was right under a street light which made viewing anything at night challenging, and we were a little too close to a beer tent.**

I hope to have order forms to begin an order for NCSF hats at the July meeting. If you cannot attend, they will be included in the August newsletter.

**FOR SALE:** Meade 10 -Inch LX200 Schmidt Cassegrain Telescope with field tripod.

Three years old, hardly used and in excellent condition. Case full of eyepieces and photographic accessories.

Only selling all items together and asking for \$2500.00 If interested call Betty Kempter at 414-228-7379.

## Astronomy 101 And Main Program

### By Kevin Bert and Joyce Jentges

The July 101 class is entitled "Observing Hints," by Kevin Bert. Discernment of faint detail through an astronomical telescope is perhaps the severest test of discipline for the human eye. Practice is the only way to train your eye to see detail in difficult objects. There are a few tricks that a beginner can learn, to help aid in finding more details. "Observing Hints" are

a list of helpful hints that will push your visual sensitivity to the limit.

The featured constellation will be Lyra.

The topic for the Main Program will be announced at the meeting, as information was not available at the time of printing.

## Brat Fry Fundraiser

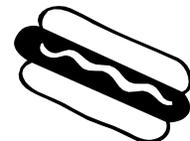
### By Joyce Jentges

On July 2nd, members of the NCSF gathered at Piggly Wiggly in West Bend to host our very first brat fry. Traffic at the store was slower than normal due to the July 4th holiday, but we still walked away with \$194.00 in profit from this venture. This was a unique opportunity to combine fundraising efforts with outreach and public education. Solar viewing was popular, and we were able to hand out public viewing night schedules and invite people to our next PVN on July 8 and 9.

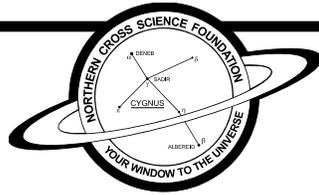
I would like to thank the following people for their help with the brat fry: Gene and Charlotte DuPree for doing the legwork to arrange this opportunity, Rick Poulin for grill clean up, Jeff Setzer, Kevin Bert and Gene DuPree for contributing telescopes for solar viewing. Georgine Poulin and Carol Nelson assisted with selling food, and handling money. Thanks to Tony Marek and Becca Sher for assisting as needed by running for supplies or helping with grilling. Special thanks to Don Miles for being in

charge of the grill and cooking all of our food.

I am checking into another brat fry at the Piggly Wiggly in Saukville. More to come on this note!



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*(Globulars from page 1)*

that they hardly look like globulars. M71 in Sagitta is so loose that it appears fainter than you'd expect and it lacks the typical dense central condensation. In fact, there have been questions whether it's a true globular. M5 in Serpens is very rich and has a bright central hub, but is fairly loose throughout. For this reason, it's one of the most beautiful clusters in our sky. From New Mexico, NGC 288 in Sculptor actually gave the impression of being richer at the edges than at the center. And Omega Centauri is so large and dense that it's almost beyond words...but it's only visible from more southern latitudes.

**Shape** - As the name implies, globulars are...well...round. But not always! NGC 6934 in Delphinus appeared to have roughly the shape of a gibbous moon in my 10" - this may have been due to a large star-poor area on one side of the cluster. M56 in Lyra and M92 in Hercules also give the impression of irregular shape. In fact, it's quite common for globulars to appear oval, perhaps due to stellar distribution at the edges.

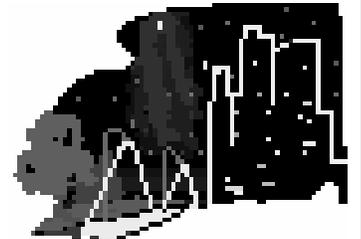
The globulars referred-to here have all been bright and easy objects; of course, many of those in atlases such as the Tirion 2000 are so small that they appear as nothing more than fuzzy stars. But don't be reluctant to hit them with your highest magnification, if conditions permit...you just may be able to break them apart ! What about seeing the globulars in other galaxies? Believe it or not, this is possible with the very largest amateur telescopes. They would appear as very faint stars near the hub of a galaxy such as M31, but they would be fainter than 14th magnitude.

## SPECTRUM

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<http://www.ncsf.info>