

SPECTRUM

Northern Cross Science Foundation Newsletter

February 2004

LOOKING UP

February 5 Thursday

NCSF Banquet

6:00 p.m. Cash Bar

7:00 p.m. Dinner

**Klug's Creekside Inn
Cedarburg**

February 14 Saturday

6:00—9:00 p.m.

Candlelight Ski

Pike Lake St. Park

February 19 Thursday

7:30 p.m.

Board Meeting

Jeff Setzer's Home

March 4 Thursday

7:00 p.m. 101 Class

8:00 p.m. Main Pgm

Carlson Tool & Mfg.

March 12 Friday

UWM Planetarium

Details on page 3

March 18 Thursday

7:30 p.m.

Board Meeting

Jeff Setzer's Home

March 20 Saturday

Messier Marathon

Harrington Beach St. P.

The Good Ol' Double Cluster

By Jack Kramer

From Lake County Astronomical Society <http://homepage.interaccess.com/~purcellm/icas/>

They're so famous and so well-observed that when we mention NGC 869 and NGC 884 in Perseus by their common name -- the Double Cluster -- almost everyone knows exactly the object(s) to which we're referring. Add to this the fact that these two rich and beautiful open clusters are a snap to locate, and it's easy to see why they're included in the rounds of just about every fall and winter star party. Many astronomers use the stars \square (27) and \square (37) Cassiopeia to roughly point to the Double Cluster, as shown below. Of course, in a dark sky, you don't need any help...the cluster is a naked eye object. Even with some light pollution, it's generally visible in a finder scope, and it's well-placed in the generally darker northern sky (from Lake County).

Although we speak of *the* Double Cluster, it's doubtful that the two clusters are physically related. For one thing, NGC 884 is about 7500 light years distant, while NGC 869 is at about 6500 light years. Also, 884 is somewhat older. There are similarities, however. Both are the same in actual size - about 70 light years in diameter. In comparison to other stellar groupings, they are both among the youngest clusters known, as evidenced by the dominance of large white and blue-white stars. Nonetheless, NGC 884 contains several older red super-giant stars embedded within the cluster. Through our scopes, these stars don't actually look bright red, but rather appear with a tinge of orange. Moreover, in terms of their brightness, I would say they are of average

magnitude for the cluster members, so they don't stand out markedly. The colors of stars will show up better in larger aperture telescopes, thus these orange-hued stars are obvious in my 10" scope, but not in my 4". They are about the same size and luminosity as Betelgeuse in Orion. Of course, Betelgeuse is much brighter because it's only a little over 500

light years away. The stars of the Double Cluster are also believed to appear slightly dimmed because of intervening dust clouds in space.

You'll need a telescope/eyepiece combination with at least a 1° field in order to take in

both clusters at the same time, but it's also worth examining each one individually using higher magnification. As with all open clusters though, they lose a lot if you over-power them. An easy way to tell which cluster is which is to look for the orange-colored stars that appear in NGC 884.

Within NGC 869 is a small grouping of five stars arrayed in a "U" shape. The shape of these stars has earned them the nickname "The False Teeth"...and this little asterism does resemble a pair of shining choppers! One of the five stars is fainter than the rest, so in a smaller scope (e.g.: 4") there will appear to be only four stars and the "False Teeth" won't be quite so apparent.

One puzzling aspect is why Charles

(See Double Cluster on page 4)



January Minutes

By Kevin Bert

The January business meeting of the Northern Cross Science Foundation was held in the conference room of Carlson Tool & Mfg. Cedarburg. President Jeff Setzer opened the meeting at 8:35 p.m. to welcome 32 members and guests.

Jeff noted that the officer positions would remain the same for 2004 and that there would be no meeting for February due to the February 5th NCSF Dinner. Members were encouraged to

attend and see Treasurer Brad Plaumann after the meeting or to mail a check with the order slip to him by the January 22nd deadline. Jeff reminded members that Dues for 2004 should be paid ASAP. Information concerning dues could be found in the last Spectrum. Jeff confirmed the February 14th Ski and Stars night at Pike Lake State Park and had a list of other upcoming events.



Secretary Kevin Bert went over the UWM Planetarium field trip options and the membership then selected the March 19th date. Two park and ride sites would be utilized for car-pooling. Kevin said that he would talk things over with Dave Schultz and details would be in the next Spectrum.

With no further business, Jeff closed the business meeting at 9:00 p.m.

Sol Searching

By Kevin Bert

Studying the sun is something I never get tired of. A dedicated Solar Dobsonian Telescope will be a safe and unique way to observe the sun and share the views with others. Things are just about in place for their construction. I have enough glass, tubes and components to make eight solar Dobsonians. I had a lot members contact me expressing an interest in making one after I announced the project in the November Spectrum. Seven have been spoken for and the eighth will be a loaner scope for the club.

There are three phases to the construction. The first two will run consecutively. First phase will be group grinding and polishing the primary glass at my home. I have a limited area to do the work in my basement and at this time that is all the people I can handle. Most sessions will take place on the second and fourth Thursdays of the month during the evening and last for 2 ½ hours. I am estimating that it will take a minimum of five of the Thursday sessions and at least one Saturday afternoon session, to complete the optics. The second phase will consist of purchasing and construction of all the other compo-

nents. Work will be delegated to members based on what skills and equipment they have. This work will be done in multiples on their own, not as a group. In other words the person who volunteers to make the mirror cell will make enough for all eight telescopes. Phase three will be the final assembly and painting by each of the participants some time in May at a location to be announced.

There will be one day of orientation for all of the participants. Other members not making a telescope that are curious about grinding optics are welcome to sit in too. Participants at that time will have a chance to do some preliminary work on the glass, see a prototype of the scope, sign up for making components, have a brief classroom presentation & receive informational handouts, and get a grinding demo. This way we can hit the ground running, (or should I say grinding), at the first ses-



sion at my home. Orientation is tentatively set to take place at 7:00 p.m. at Carlson Tool on Thursday, February 26th and should last no longer than 2 hours. I will contact each participant for confirmation. Other members wishing to sit in can call me prior to that date to make sure the 26th is a go.

Attention to the eight participants! This is your assignment. If you do not already have one at home, your job is to purchase a 5-Quart pail of your favorite Ice cream and finish it off. This will be the container to store your primary mirror in. Other things to accumulate by the end of February are one roll of paper towels, one spray bottle that will be used to spray water and a \$30.00 deposit toward the price of the scope. I would be surprised if the final cost of the scope ran over \$60.00.

I will keep the membership up to date with brief articles on the progress of the sun scopes in upcoming Spectrums.

Nametags for Monthly Meetings

By Kevin Bert

The January meeting was the first time nametags were worn in several years. All seemed to go well. Harold Rogers made a nice storage case years ago and it is being used again. There is however limited space and more members than it can hold. I thought I would review what I had said at the meeting for those members that did not attend.

The case with the pin on tags will be near the attendance clipboard. There will be a printed tag for all those members listed on the membership roster. If you are a regular attendee you should find it in the case in alphabetical order. If not, it will be in a box next to the case.

If you are a family member (not on the roster), of a member that attends regularly you can fill out a tag with the club logo on for repeated use. If anyone objects to pinning a tag to your clothes, around-the-neck lanyards with a clip will be available.

Guests that are not members will be encouraged to fill out and wear a simple "Hello my name is" adhesive back sticker. For now, all pinned tags can be returned to a designated pail after the meeting. Keep in mind that the reason to wear nametags is to make it easier for all members and guests to make conversation and feel welcome. Let's try to get into the habit of wearing them.

Planetarium Field Trip

By Kevin Bert

Based on my conversation with Dave Schultz we will be changing the date of the field trip to the UWM Planetarium from Friday, March 19th to March 12th. With five naked eye planets visible in March the program will probably be on the solar system. To guarantee that you have a seat, we will take a count at the March 5th meeting to know how many tickets we can have set aside. Please call me on or before that date if you can not make the meeting and would like to reserve a seat. Car-pooling will take place at two sites for those that are interested. The park and ride at the I-43 and Pioneer road exit will be the east site. The west site will be at the park and ride in Menomonee Falls at Hwy 45 and Pilgrim road. Cars will leave for UWM at 6:00 p.m. Tickets will be purchased when we arrive and cost \$1.00 per person. The Program will start at 7:00 p.m. and will last about one hour. I hope you can attend.

There will not be any programs for the February meeting because of the banquet.

Celestial Events For February

By Charlotte DuPree

In February, Venus is the bright evening star in Pisces; Mars is in Aries. Saturn is in Gemini and Jupiter is in Leo. On the 1st of February, sunset will be at 5:04 p.m. By the 15th of the month, sunset will occur at 5:22 p.m.



From The Editor

By Joyce Haussler

Is it ever going to warm up? I am tired of being cold. I hope February will be a bit warmer, because I really do want to get a glimpse of Saturn and Venus. For seven years now, I've been poking along with 7 objects to find for my binocular messier certificate. Guess what? They are all primarily in the winter sky. I guess if I want that certificate bad enough, I will shiver and bear the cold weather.

Speaking of warm weather, at our board meeting this last week, the board of directors put together our

public viewing schedule for the year. There is one thing that should stand out to you immediately. That is the fact that most of our public viewing nights will be at Harrington Beach this year. The board felt that this would be appropriate, being that this may be the future sight of our observatory. It is my understanding that the park would like to have us come out more often anyway, so this makes sense.



If you are a member and would like to host a members night at your

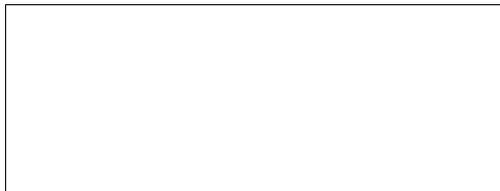
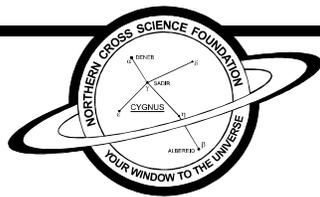
home in 2004, please contact a board member to choose your date and time.

I am in need of some member written articles for Spectrum. Please consider writing something

I hope to see you all at our 2nd annual dinner on Feb. 5th. I am looking forward to good food and wonderful fellowship with all of you.



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**Monthly Meeting Location—
Carlson Tool & Mfg. Corp**
W57 N14386 Doerr Way
Cedarburg, WI 53012
(enter from south parking lot)

(Double Cluster from page 1)

Messier never included the Double Cluster in his list, especially considering some of the other relatively insignificant objects he chose to record. Perhaps he concluded that it would be impossible to mistake the good ol' Double Cluster for a comet. Well yeah, I guess it *would* be pretty hard to mistake it for a comet!

Software you can really use!

By Joyce Haussler

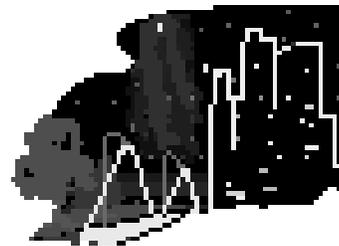
Those of you who are computer enthusiasts, have an opportunity to buy a computer program that will make your astronomical life easier! The program is called SkyTools2, by CapellaSoft. The program is useful because it allows you to see the moon phases and sunset/sunrise times for an entire month. It will allow you to enter your observing data into the observing logs and print them off for submission for the observing club certificates through the Astronomical League. If you were to buy it outright, the program would cost \$99.00. However, they are offering a deal for astronomy clubs. As a club, if we order 2-9 copies of the software, we will pay \$74.96 for each copy. For an order of 10-24 copies, the price drops to \$59.97 each! If you are interested, you can go to the website for more information.: www.skyhound.com/skytools.html If you are interested in buying this program, please contact a board member, and we will see about placing an order.

SPECTRUM

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Www.ncsf.info