

# THE Eyepiece

January 2005  
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Monthly Publication of the Neville Public Museum Astronomical Society



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### NPMAS Club Loaner Telescopes

NPMAS members may use, free of charge, for a one month, one of the two club telescopes available. For more details, please contact Gerry Kocken, *Properties Chair*, at 920-336-8594.



## Holiday Party Wednesday, January 12, 2005

The NPMAS Holiday Party will be held at the Rock Garden Supper Club in lieu of our regular scheduled meeting. Cocktails will be at 6:00pm which is a cash bar in the main bar, and dinner at 7:00 pm in one of the private rooms.

Meal selections are:

**Salmon**  
\$13.95

**Tenderloin**  
\$15.95

**Chicken Oscar**  
\$12.95

All are invited. Hope to see you there!

## Booyah Inspires Star Gazing

by Gerry Kocken

It was Saturday, November 6, and I was working a Booyah for Our Lady of Lourdes in DePere. I showed up at midnight to start the booyah. There were 5 guys already preparing the soup when I arrived. We were to make 250 gallons of soup to sell after Masses the next day. We got 4 kettles of soup going with 500 pounds of chicken. Now we had to wait for about 4 hours for things to cook so we can bone the chicken. As usual, we set up our chairs and started to drink our coffee and other beverages.

About 1:30 in the morning, Dan Castelic started asking me questions about the night sky and what was up. I pointed out Saturn, Orion, M42 and other objects that we could see. The 6 of us had about a 30-minute conversation about the night sky, constellations, and the moon. Then Dan asked me if I would mind getting my scope. I guess it didn't take much persuasion because by 2:30 in the morning I had my scope set up and operational.

The six of us started out looking at Saturn, then moved on to some Messier objects. About 3:30, Jupiter and Venus rose together about 1 degree apart (see Member Photo on page 2). Even with the bright lights, and rising just above the houses across the street, they were clear. The skies were very stable.

These guys knew I loved astronomy, and now they knew why. Two of the guys had never looked through a scope before. They sure enjoyed themselves because they wouldn't let anyone else even look. At about 5:00 in the morning, we had another group of about 15 people show up to help clean the chicken. I had a number of those people viewing also. I left the scope up until daylight, and had it trained on Jupiter as the last object. Even when I took it down at about 9:00 am in the morning, it was still on Jupiter. I went home at about 1:00 in the afternoon after helping serving all the soup. What a night.



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## Meetings, Events & Star Parties

### January 7

**Quadrantid Meteor Shower**  
Fairly fast, most are blue. Best viewing before midnight

### January 12

**NPMAS Holiday Party**  
socialize 6 p.m., dinner 7 p.m.  
Rock Garden Supper Club

### January 14

**Coma Berenicid Meteor Shower**  
Only a few per hour, but among the fastest known!

### January 14 - 16

**Camp U-Nah-Li-Ya Winter Weekend 2005**  
Cabins #11 and #12

## December Meeting Minutes

by Amy Hannon-Drew

The last meeting of 2004 took place on December 8 at the Neville Public Museum. The business meeting started at 7pm, chaired by Gerry Kocken. We had one new guest, Brian, a transplant from Phoenix. This is his first Wisconsin winter! Welcome Brian.

The first order of business was to go over the new calendar. Our January meeting set for the 12th will be held at the Rock Garden and will be our Holiday Party! The party starts at 6pm. A complete calendar can be found online, or a brochure can be picked up at the museum. Gary Baier shared some photos he took from a recent observing session at Parmentier's during the last POW.

Steve and Julie Mofle filled the position of Astronomy Day Chair! Thanks to both of you! We are also co-hosting this year's NCRAL with DPAS. We will need volunteers for both events and they both will be held in April. Gerry was able to get 400 copies of the Night Sky magazine to distribute at both events. There will also be some great door prizes at the NCRAL, including a digital camera and more!

Coming up in January is our annual Camp Unie event. The Messier Marathon is coming in March. We are looking for a new location, however Neshota Park is still a possibility. The mirror grinding class is starting on Tuesday December 14th at Gerry Kocken's place.

## Astronomy Photo of the Month



Photo by Peg Zenko

Jupiter and Venus

Peg Zenko captured this digital image of a close meeting of Jupiter and Venus back in early November. The pre-dawn cloudy sky adds a nice atmosphere, and the tree frames the shot nicely. Venus is the brighter of the two (mag -4 vs. mag -1.7) and the star just peaking out from the leaves to the left is Porrima (gamma Virginis) one of the toughest doubles in the A.L. Double Star observing program.

## Planet Watch For January

by Wayne E. Kuhn



**Mercury** remains visible during morning twilight low in the southeast until about midmonth. It shines at magnitude  $-0.3$  and is 5.5" in apparent size. **Mercury is in conjunction with Venus on January 14th.**

**Venus** is very low in the southeast during morning twilight and is lost in the glare of the Sun by month's end. It shines at magnitude  $-3.8$  and is 10.6" in apparent size. **Venus is in conjunction with Mercury on January.**

**Earth's Moon:** Last Quarter Moon is at 11:46 AM CDT on the 3rd. Moon reaches perigee (221,562 miles from Earth), on the 10th at 4:00 AM CDT. New Moon is at 6:03 AM CDT on the 10th. First Quarter Moon is on the 17th at 12:57 AM CDT. Moon reaches apogee (252,553 miles from Earth) on the 23rd at 1:00 PM CDT. Full Moon is on the 25th at 4:32 AM CDT.

**Mars** moves from Scorpius to Ophiuchus early this month and rises less than 3 hours before the Sun. It is very low in the southeast at the beginning of morning twilight. Mars will be in opposition later this year, which is the best time to observe it. It shines at magnitude 1.5 and is 4.3" in apparent size.

**Jupiter** is in Virgo, rises before 2 AM in the east and stands about 35 degrees high in the south-southeast at the beginning of morning twilight. It shines at magnitude  $-1.9$  and is 33.9" in apparent size.

**Saturn** is in Gemini, rises in the east-northeast at sunset and sets in the west-northwest as the Sun rises. It will be at opposition on January 13th. It shines at magnitude  $-0.4$  and is 20.5" in size. During the first quarter of 2005, the tilt of the rings increases slightly from 22.5 degrees to 24 degrees. It will then decrease to 17.4 degrees by mid-October.

**Uranus** is in the constellation of Aquarius all night, shines at magnitude 5.9 and is 3.4" in size.

**Neptune** is in the constellation Capricornus, shines at magnitude 8 and is 2.2" in size.

**Pluto** is in the constellation Ophiuchus, shines at magnitude 13.9 and is 0.1" in size.

## A Humbling Night at the Scope

by Kevin Nasal

At K.O.W. this year (11/13/04) a bunch of us gathered for observing. As the sun set, the chilly night looked good for observing, with clear skies and very light wind. I own one of those cheered (and sometimes jeered) Meade go-to telescopes, a 10" LX200 GPS. I brought it along and was looking forward to observing. I will be first to tell you that technology is nice but it has its drawbacks too. At the urging of others, I am writing about some of the issues I had that night.

My night started with one bug right away – my red flashlight went so dim I couldn't use it. Dick and Gerry helped me with a spare light and later a spare 9v and I was back in business. I set up the scope, then entered the Lat / Long where I was observing from, the date, and the time (although you'd think you wouldn't have to do this every time, pointing accuracy does improve with this data entered before a GPS fix is obtained).

I setup for an "automatic alignment" during which time the scope figures out where it's at on the Earth via GPS, how level it is, and where North is. After the scope does a 2-3 minute dance, the computer picks 2 stars and instructs the user to center each in the eyepiece. You then get the "verdict" of whether you can now use the go-to or whether you have to start all over (prospective go-to buyers: not everything is easy & quick with technology!)

Well, I knew I was in for an interesting evening when the scope picked Arcturus and Capella for alignment stars (neither one is up in mid-November at 6:30pm.) My wife showed up to offer encouragement at this point: "You don't have this thing working yet?" I do enjoy her sense of humor! Some friends I had invited from Green Bay made the drive out and also showed up around this time for "the big night", only for me to tell them I didn't have a working telescope. Luckily, my NPMAS friends kept 4 elementary school-aged kids and their adult chaperone busy while I cursed under my breath!

I tried all the tricks I knew – a "calibrate sensors"

CONTINUED ON PAGE 6

# Fighting Eyepiece “Steam Up” on Binoculars

by Dick Francini

Let me first set the scene that inspired this article. Gary Baier and I were out observing at Ron’s observatory a few weeks back, and it was fairly cold. Gary brought his 8" scope and I setup my 20X80 binoculars, as I’m currently working on the AL Deep Sky Binocular program. Cold weather observing has its own specific set of problems, and in my opinion, eyepiece “steam up” is one of the worst. If it’s really cold this can become eyepiece “frost up”!



Anyone who has done any observing during cold weather is familiar with the problem of a cold eyepiece steaming up when you look into it for any extended amount of time. The combination of the cold eyepiece and your warm face in such close proximity results in the eyepiece fogging up. This is a somewhat different issue from the eyepiece dewing up, but it is equally frustrating and puts just as fast an end to an observing session (unless of course you have access to a hairdryer). The binoculars I was using have fairly short eye relief, making the situation that much worse. With a telescope you can keep the eyepieces in your pocket so they don’t get so cold; with binoculars this is a bit impractical. Binoculars this size DON’T fit into any pockets that I have! I have tried putting a towel over the eyepieces during periods I’m not observing, but that turns out to be a more effective solution to a dewing up problem than to a steaming up problem.

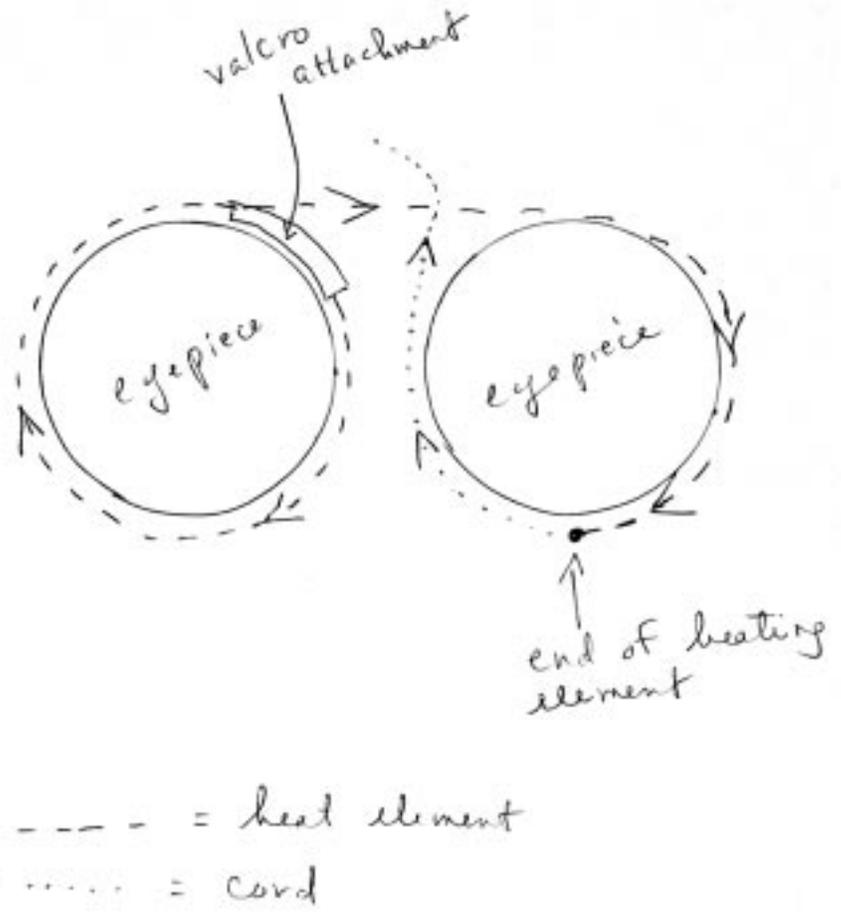


Gary and I tried attaching a heat pack to the binocular eyepieces with a huge twist tie Gary found in the observatory. This worked for the short period of time the heat pack put off heat, but they never last anywhere near the amount of time advertised, especially when they are out in the open air. On the way home I got a brain storm that maybe I could somehow attach the Kendrick dew heater I use for my telescope eyepieces to my binoculars. Here is what I came up with.

I have included a photo and a hand drawn picture of my solution to the problem. I am fortunate that the Kendrick dew heater I currently own is the larger version that fits 2"

eyepieces. The smaller one for 1 1/4" eyepieces would have been too small. The dew heater has a Velcro attachment at one end, a heating element that is long enough to wrap around one eyepiece and most of the way around the other eyepiece, and a cord. All three parts come into play. If you refer to my drawing, you can follow how this works. I started on the upper inside of the left eyepiece with the Velcro fastener and wrapped the element clockwise all the way around it until I could fasten the element to the Velcro piece (the element also has Velcro on one side of it). From there I

continued around the right eyepiece as far as the element would go. I continued working my way clockwise around the right eyepiece using the cord, going behind the element and then over the top of the binos. I secured the cord to the binoculars with a twist tie (not exactly a real high tech solution, but effective). It is important to leave the space below and between the eyepieces open, as your nose needs to fit into this space, especially if your binos have very short eye relief. The photo shows that I have also added a foam dew guard/light baffle to the front lens of my binoculars. This is actually a dew guard for a refractor, which has been cut in half. These are very effective in keeping dew off the objective lens, as long as you don't leave the binos pointed straight up for too long a period of time. The photo also shows a small red dot pointer on the binoculars. This is actually a rifle sight. This is Velcroed on, and is a "must have" accessory when trying to point a pair of large binoculars mounted on a tripod. Is "Velcroed" a real word? If not, it should be.



Now it's on to the testing phase of this experiment. The next night turned out to be a perfect testing night, it was clear, cold enough (low 40's), and very dewy (fog rolled in around midnight to put an end to any observing). I setup my binoculars on the tripod with the power source placed nicely out of the way between the tripod legs. I use a 12 amp hour battery charger, the Mity Mite from Sears, as my power source. My solution worked like a charm! Without the dew heater you could only take brief looks through the binoculars, if you took any time to really study an object you ran into the "steaming up" problem. With the dew heater in place you can look as long as wanted, without any worry of steaming up the eyepieces. There is one additional unexpected benefit to this setup. It feels really nice to stick your cold nose into the warm spot between the eyepieces! You certainly tend to spend more time studying an object, even if it is not really worthy of much study.

If you have a 2" dew heater for your telescope eyepieces, try out this setup as a method to defeat both dew and "steam up" on your binocular eyepieces. Total cost of this project, one twist tie!

One more comment on binocular observing from someone who has always been almost exclusively a telescope observer. This can be a very interesting experience, especially if you have access to a relatively dark sky site. The AL Deep Sky Binocular program is full of objects you would rarely point a telescope at due to their large size, but turn out to be very interesting objects in large binoculars. Some of the heavy star fields in Cygnus, Sagittarius, and Scutum can also be very interesting binocular targets. It's a completely different type of observing experience that yields some surprising rewards.

## Comet Watch by Anthony J. Kroes

This month's target is comet C/2004 Q2 (Macholz). You may remember reading about it back in our October issue when it was a dim mag 9.5 object in the southern sky. Things have improved a bit since then! Comet Macholz should attain naked eye status in January and be easily viewable under dark skies. It won't rival Hale-Bopp or Hyakutake, but any comet you can see with no equipment is worth the time. If you didn't catch it as it brightened over the last few months, now is a perfect opportunity.

Comet Macholz will have its closest approach to Earth on the 5th, but should be a naked eye target throughout January. It will be dominating the Eastern skies and will pass near the Pleiades (M45) on January 7. It will be close for a few days before and after, so watch the skies for a (rare this month) clear night and take a look for a (noticeably green?) fuzz ball. This should make a great photo opportunity, especially with a wide-angle lens. The comet will move through Perseus around the 20th and then moves on, passing through Cassiopeia and Cepheus to a 'close encounter' 5 degrees from Polaris by early March.

CCD images and telescope views are currently showing a nice dual tail. While this is pretty standard among comets, the tails will be pointing in wildly different directions as the comet 'rounds the sun this month. The solar wind can push the lighter ion tail around quite easily, but the dust tail is heavier and resists the pressure, trailing more behind the comet as it moves. This is why ion tails are straight and the dust tails often show a curve.

California amateur Donald Macholz discovered the comet in August 2004. He found it with an old 1968 model 6-inch reflecting telescope! It is his 10th comet since 1978, but don't let that fool you into thinking they are easy to find – he spent almost 1500 observing hours searching for this one since he found comet #9 back in 1994!

In any case, with your unaided eyes, binoculars, or a telescope, check out comet C/2004 Q2 (Macholz) during the next month or two. There haven't been any really bright comets with good structure recently and this one won't be back for 119,000 years!

## Humbling Night CONTINUED FROM PAGE 3

routine, re-entering my location, a shut-down and re-try of the alignment procedure (2 more times) and the use of different alignment procedures. No dice. I moved the scope 20 feet further away from Tony's observatory thinking that I might have been too close to a structure for the GPS antenna to receive data properly. I was willing to try anything at this point just to humor myself into a better mood! No Effect.

Gerry Kocken broke out his tool set and we took one of the baseplates apart to prod and pry. Nothing. It was after 11pm at this point. I was getting cold - temps were dropping to the upper twenties, the wind was picking up, and I had been at it for 4 hours and still hadn't seen a thing. Gerry, Tony, and I deduced that the scope's internal clock battery had failed, thus throwing off calculations of what time it really was when comparing signals to the GPS. We will try this theory out soon.

I learned a lot in this failed observing session. First, I have great friends: thanks to each NPMAS member there that night who, at some point or another, offered assistance with advice, tools, or radio calls to track folks down when I needed their help. Second, I think we all come to realize as some point that Astronomy can be a very humbling hobby, especially when you combine technology with it. I know Tony has had a lot of nights with gremlins in software or wiring, and Gerry shared stories of a recent scope purchase gone bad. Even if we don't use "technology" in our observing sessions, maybe we can't seem to find that faint fuzzy, or we lose our way starhopping the heavens some nights.

I think the important thing is that all of these experiences, good or bad, make us better people and better observers. We work through it. I can't tell you the number of times that others have stopped their own observing sessions to help me. I've picked up the phone to call club members at home who have dropped what they were doing at the time. Hey, time under the stars (especially when living in NE Wisconsin) is precious but so is personal time! I'm grateful to be part of a club whose members have been through this sort of experience before, understand what I'm going through, and who are willing to take the time to help, even if it's only words of encouragement. Astronomy can be humbling, but I walk away from each session like this looking forward to that next clear night even more.

*Check out the February issue for the "Happy Ending."*

# Worthy of Note

by Anthony J. Kroes

During the month of December, the following club member was recognized for her achievements regarding things astronomical:

Amy Hannon-Drew received the 'Venus Transit 2004' certificate from the Astronomical League and NASA. Amy watched the transit back in June 2004, made some observations, did some research, and completed a number of extremely difficult mathematical formulae to complete the requirements for the award.

Please read next month's issue for her detailed write-up regarding her progress as she tackled the various pieces of the transit puzzle.

Congratulations Amy!



## NPMAS New Members

We added two new memberships to NPMAS in December:

Brian Davis

509 Mather Street  
Green Bay, WI 54303.  
920-737-7758

bdavis8232@new.rr.com

"I am 42, single, and no kids but I do have a cat. I'm from Phoenix and moved to Green Bay after a career change. I have always been interested in Astronomy but didn't pursue it as a hobby until 2 years ago. While in Phoenix, I belonged to the East Valley Astronomy Club [www.eastvalleyastronomy.org](http://www.eastvalleyastronomy.org). Unfortunately my work schedule then didn't permit me to participate in club activities much, so hopefully that'll be different here. I don't have a telescope yet but I'm part way through grinding a 8" mirror (which hasn't moved with me to Green Bay yet). I look forward to meeting club members and learning about astronomy."

Richard and Gail Sarnwick

426 S. Bartlett  
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715-524-4481

[richard.sarnwick@thedacare.org](mailto:richard.sarnwick@thedacare.org)

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ALCor Ron Parmentier

Website Don DeWitt

Night Sky Network Katrina DeWitt

Gerry Kocken

Steve Mofle

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Properties Gerry Kocken

Observatory Gerry Kocken

Public Outreach Katrina DeWitt

Messier Marathon Mike Monfils

Astronomy Day Amy Hannon-Drew

Lynn Ward

Club Picnic Katrina DeWitt

October Field Trip Katrina DeWitt

Ty Westbrook

## NPMAS Observing Sites

NPMAS members have access to three observing sites located on private land and belonging to members of our club.

**Parmentier Observatory** — largest private observatory in WI housing a 30" classical Cassegrain. Members may view through the 30" or bring their own scopes and set up in the field below.

Observatory Number: 920-845-5626

Ron Parmentier Home: 920-336-5878

**Crivitz Observing** — private residence of Dave & Carol Jorgenson. Located in the Northwoods of Wisconsin on 100 acres of land, this site offers some of the darkest skies around. The field is equipped with electricity and a cabin is available for use. Call ahead to make arrangements.

Dave & Carol Jorgenson Home: 715-757-3296

**Cedar Drive Observatory** — private residence of Tony Kroes and Tara Adsit. Located in Pulaski on 10 acres of land. Call ahead to make arrangements.

Tony Kroes Home: 920-822-4959

# January NPMAS Meeting

January 12, 2005

6 PM

## Holiday Party at Rock Garden



**The Eyepiece**  
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## January 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						<b>1</b>
<b>2</b>	<b>3</b> Last quarter moon Quadrantid Meteors	<b>4</b>	<b>5</b> Comet C/2004 Q2 (Machholz) Closest Approach To Earth	<b>6</b>	<b>7</b>	<b>8</b>
<b>9</b>	<b>10</b> New moon	<b>11</b>	 <b>12</b> Meeting Holiday Party at Rock Garden	<b>13</b> Mercury Passes 0.3 Degrees from Venus	<b>14</b> Huygens Probe Lands on Titan	<b>15</b>
<b>16</b>	<b>17</b> First quarter moon	<b>18</b> Coma Berenicid Meteor Shower	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
<b>23</b>	<b>24</b>	<b>25</b> Full moon	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>
<b>30</b>	<b>31</b>					

Camp U-Nah-Li-Ya Winter Weekend 2005