



Clear skies means cold weather in November for KOW.

by Gary Baier

November 12-13 was the fall observing weekend at Tony Kroes', south of Pulaski. An addition to this year's event was the newly graded observing ground on the east side of the observatory. This gave enough space for at least a half dozen telescopes with room to spare. Tony and his father have made great progress with the landscaping and will expand it further in the spring.

George McCourt and I arrived Friday evening between 7:30 and 8:00 pm. It was already cold but this meant clear skies. After parking and getting our winter clothes out of the back seat, George and I grabbed the binoculars and camera for the short walk to the observatory. Dick Francini's scope was already set up and the observatory was open, but everyone was gone! We walked back to the house only to find everyone just finishing a short warming break, so we walked back to the observing area. By this point, I was nice and warm.

While George and I settled into taking some constellation photos, Steve and Sue Wicker played with their 35mm camera. Tony's parents came out for a few looks through the telescope, and Tony and Dick continued their search for very faint globular clusters for a new observing program. The program requires a visual gauge of the compactness of each cluster. This often appeared to be a guess more than an estimate. Over the two nights some clusters were observed, some were not, and a few were glimpsed only after using an extreme form of averted imagination. It was a fairly good weekend for globulars, considering many of the objects were fainter than 12th magnitude or were located in other galaxies.

I returned on Saturday about 5:30 pm with my 8" Dobsonian. Dick was again set up and ready to go (perhaps he lives there). Over the next few hours Dan Sheber and Kevin & Beth Nasal arrived. Dan worked on the globular program with Tony and Dick while Tara and Beth watched for early Leonid meteors. Kevin had a few issues with his scope, and Gerry Kocken gave him a hand after arriving a bit later but that story belongs to them. I spent an hour showing off the fun summer objects to a group of children that Rob, a friend of Kevin's, brought out to observe. I then finished off the roll of film and looked at Saturn for a while before packing up around 1:00 am. It was a very good night and Tony always welcomes company, so don't wait until next November!

What's up:

Meetings,
Events and
Star Parties Pg. 2

Meeting Minutes . Pg. 2

Planet Watch . . . Pg. 3

November
Aurora Pgs. 4-5

Comet Watch . . . Pg. 6

Worthy of Note . Pg. 7

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.



NPMAS is a proud member of the

Night Sky Network

"Astronomy clubs bringing the wonders of the universe to the public"

Member Society



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Meetings, Events & Star Parties

December 7

Jupiter Occultation
around 3 a.m.

In the Eastern sky

December 8

NPMAS club meeting
7-9 p.m.

Gary Baier

The Cassini Mission to Saturn

December 10

**Monocerotid and Orionid
Double Meteor Shower Peak**

December 14

Geminid Meteor Shower
The best December shower!

Minutes of the November 10 Meeting

by Amy Hannon-Drew

We had some visitors to this meeting who found out about the club through the brochure at the museum. It has been a bit cloudy for observing so most members have been unable to observe much, but almost everyone was able to view the spectacular aurora we had! See pages 4 and 5 to see club member images.

Upcoming events include an observing weekend at the Cedar Drive Observatory (Tony Kroes' place) this weekend, November 12 & 13. We are also having a cleanup day at the Parmentier Observatory on Saturday the 12th. Gerry talked about the mirror grinding class and took a count of interested parties. It should take about 30 – 40 hours to complete the project. We will be meeting on Tuesday nights at Gerry's office.

Also coming up are the Holiday party and the Camp Unie weekend, both in January. Astronomy Day is going to be held on April 16 this year. We are looking for someone to chair the event! If interested, contact Gerry.

The NCRAL is in April as well, on the 22nd & 23rd. Plans are coming together and Gerry has secured some door prizes! In other NCRAL news, Katrina DeWitt is the new editor for the "Northern Lights" publication of the NCRAL. Her first issue will be out in January 2005.

Steve Mofle was able to show off his finished scope! He

put in a lot of work and ingenuity to finish this project.



An observing award was given to Dick Francini! Dick has completed the Caldwell observing program and was given certificate #71. Great job Dick! Do we have another Master Observer in the making?



Tonight's talk was about Radio Astronomy, its history as well as current accomplishments, by Amy Hannon-Drew and Lynn Ward aka the "Lynn and Amy Show". I am a bit biased, but I think it went well!



Meeting photos by Ed Smith.

Astronomy Photo of the Month



Photo by Ed Smith

Waxing Gibbous Moon

Image by club member Ed Smith. Ed used his Olympus Brio D-230 digital camera held by hand to the eyepiece of an 80mm finderscope for this shot. He says that it was 'a simple point and shoot' and that 'It mainly just shows that one can get some neat photos with very simple equipment and no expertise' Great job Ed!

Planet Watch For November

by Wayne E. Kuhn



Mercury brightens as it slowly emerges in the morning twilight late in the month in the southeast. It is in inferior conjunction on the 10th and reaches greatest elongation west on the 29th. It shines at magnitude 0.3 on the 21st and is 8.2" in size.

Mercury is in conjunction with Venus on December 29th.

Venus rises about 2 hours before the Sun and is visible low in the southeast during morning twilight. This poor showing is due to the shallow ecliptic angle. It shines at magnitude -4.0 and is 11.5" in size. **Venus is in conjunction with Mars on December 5th and with Mercury on December 29th.**

Earth's Moon: Last Quarter Moon is at 7:53 PM CDT on the 4th. New Moon is at 8:29 PM CDT on the 11th. Moon reaches perigee (222,440 miles from Earth), on the 12th at 4:00 PM CDT. First Quarter Moon is on the 18th at 11:40 AM CDT. Full Moon is on the 26th at 10:06 AM CDT. Moon reaches apogee (252,580 miles from Earth) on the 27th at 2:00 PM CDT.

Mars move from Libra to Scorpius late in the month and its visibility continues to improve. By months end it stands about 10 degrees high in the southeast at the beginning of morning twilight, shines at magnitude 1.7 and is 3.9" in apparent size.

Mars is in conjunction with Venus on December 5th.

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 soon after the end of evening twilight in the east-northeast and stands about 40 degrees high in the west-southwest at the beginning of morning twilight. It shines at magnitude -0.1 and is 20.1" in size.

Uranus is in the constellation of Aquarius all night, shines at magnitude 5. 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.

Newsletter Mailings

by Dick Francini & Anthony Kroes

Club members: Just a friendly reminder that we are trying to reduce newsletter costs, so we have implemented the recent board decision to make the newsletter available in an online format only. Our thinking being that this cost savings would allow us to keep membership dues at the current \$15 & \$25 rates.

If you originally requested a printed copy, this is the reason you have not received one. You should be getting a monthly email notice letting you know that the new issue has been posted to the web site. That email also includes a link directly to it. The online version is in 'PDF' format, which means that you will need to have the free software 'Acrobat Reader' installed on your computer to read it. The current version is 6.0, and is available free on the Internet. The older version 5 will also work.

If you are still getting a mailed copy, it is because we are trying not to leave our members in the dust of progress! We are still mailing copies to a few members that do not have email, or for other reasons, are unable to view the issue online. If you get a printed copy, and have since updated your Internet or gotten an email address, please let us know! We will add your email address to the list and send you a monthly notification instead of the printed copy. Although 37 cents doesn't sound like much, with printing costs and everything else figured in, it does add up!

Viewing the newsletter online, downloading it, or printing a copy has been made easier. Even on dial-up Internet service it downloads quite quickly. There was a time, not too long ago, that it took forever to accomplish this task. If you have not tried it recently, just go to the NPMAS web site (www.npmas.com) click on "newsletter" and then on the month you are looking for.

We hope this change in policy will not cause you any difficulties. If you have any questions or comments, please get back to us.

Thanks,

Dick Francini (NPMAS Treasurer)

Anthony Kroes (Newsletter Editor)

November Aurora

by Anthony Kroes

Sunday November 7th turned from ordinary to extraordinary with the flip of a piece of chicken. Around 6:30 Sunday night I went out to finish grilling dinner and noticed that the clear sky had a tinge of green to it. The western sky was still aglow from sunset, so I thought it odd. After a few moments watching, I realized we were having an aurora of very good intensity.

I called into the house to get Tara, Nick, and Noah out into the cold to check it out. After moving out into the yard, we were able to see quite a show emanating from the Northern horizon. We ran



Images above and to the right courtesy of Peg Zenko, taken with a digital camera near the Bay of Green Bay

Background photo at top of page courtesy Gary Baier - taken from Green Bay with a 35mm Pentax K1000 and 400 speed Fuji film, 40 sec exposure

All other images courtesy Anthony J. Kroes - taken from Cedar Drive Observatory with an Olympus OM-1 & 800 speed Fuji film, 30 sec exposures



around like crazy people pointing out features first on the Eastern sky, then a moment later on the Western, then back to the North again. It was wild! I ran in to grab the camera, and Tara and I called a few folks while we stood watching with awe. Our friends and club members Sharon and Cassie and Sharon's daughter Ashley came out from Green Bay to get a better view – they were able to see it in town also, but it was nowhere near as intense there.

I have seen major auroral storms before, but this one had a broad combination of features I have seldom seen all together in the same display. We had a soft green glow to the North, punctuated by tall 'spikes' of brighter green. We had rolling bright patches following the outlines of a sinuous green 'curtain'. There were pale areas that just lit up then faded away – these came in green, white, and most beautifully, in pinkish red. The capper to the whole night came when the aurora grew overhead and formed a classic 'corona' where all the streamers look like they were colliding or merging directly above us. This part also swirled and faded, then grew brighter again as we watched.

Over the course of the next few hours the display faded, then grew even brighter. Just when you thought it was dying down and over, it would flare back up again. At 4 the next morning it was still going strong – the reds had faded, and the spikes had dimmed, but the sky was punctuated by bright green flashes of energy like anti-aircraft artillery from a movie!

Please enjoy the images. They were taken by club members Anthony J. Kroes, Peg Zenko, and Gary Baier. Gary and I used 400 and 800 speed 35mm Fuji films, while Pat used a digital camera.



This month's comet target is Asteroid 2004 TU12. What? Did I say asteroid? Why are we spotlighting an asteroid for the Comet Watch? As it turns out, asteroid 2004 TU12 is quite an interesting object. Discovered October 10 by astronomer Rob McNaught from Siding Spring Observatory, the Near Earth Asteroid (NEO) sailed past us with a wide margin. At the time, it was the largest NEO discovered since March 2001. An 'Amor' type asteroid, it has an orbit that passes between Earth and Mars. The really interesting part happens in November when other astronomers with CCD cameras noticed that it had developed a tail!

So much for asteroid status! The tail was discovered in images taken less than a day apart by 2 separate imaging teams, one from Chile, and another from Spain. It is very thin and well defined, about the size and shape of the flame of a cutting torch. The object's new designation is P/2004 TU12 (or 162P Siding Spring) and is currently shining at magnitude 14.1 in Aquarius. Unfortunately, although moving toward Northern skies, it is traveling away from us and fading as it goes. It is really only an object for CCD cameras at this point.

So what is it? A comet that was quiet and then sparked to life? An asteroid with a layer of ice that is blowing off? No one knows for sure, but a few ideas include that it might be a mostly worn out comet or that the tail is dust thrown off the asteroid from an impact with some other object. Apparently this sort of misidentification does happen, albeit rarely: In the last few decades both comet 107P/Wilson-Harrington and 133P/Elst-Pizarro showed similar behavior. As we can see, there is a lot of grey area when it comes to deciding exactly what something is (and isn't!)

Comet web site of the month: The Bellatrix Observatory – Ceccano, Italy.

Go to <http://www.bellatrixobservatory.org> for a nice site that includes detailed observations and pictures of comets and asteroids, some animations, as well a lot of other general astronomy observations and information. Visit the NEO page for some details about the asteroid/comet mentioned above!

Camp U-Nah-Li-Ya Winter Weekend 2005

by George McCourt

As 2004 comes to a close we are already starting to look forward to our first big event for 2005. Our fifteenth annual Camp U-Nah-Li-Ya Winter Weekend. The dates are January 14th -16th. Arrive as early as 4-5 PM (please check in at the dining hall!) Late departure time is approximately 1-2 PM Sunday. We will be in cabins #11 and #12 again this year, on the girl's side of Camp near the sauna. The cabins have bunk beds so bring your sleeping bags. The cabins are heated and have a wood fireplace in each one (wood provided by UNIE). Gerry Kocken will be cooking meals on Saturday (breakfast and dinner) this year. Please let us know if you want to join us - Gerry needs to get the right amount of food. There also is a nice restaurant a few miles from Camp and, of course, the Doze Inn just down the trail.

What is the Winter Weekend? First of all, it means relaxation. The only phones are in the offices and there are no televisions or radios to be found. If you enjoy winter sports you will definitely like it here. The camp has an ice skating rink and there is gear for getting a game of broomball going. There is also an extremely large ice rink (known as 'the lake') not far from our cabin. The Camp has all sizes of ice skates or you can bring your own. Skating not your forte? the camp has over seven miles of trails in and around the Nicolet National Forest for your enjoyment. Camp UNIE has skis, boots and poles for your use, or you can bring your own.

Other activities include snowshoeing, ice fishing, and sledding. The camp has a variety of snowshoes, sleds, and fishing gear, including an ice shanty on the lake for our use. What? You are a warm weather person? Fine, bring your shorts along! The camp has a wood-burning sauna waiting to melt the icicles from your nose and we've got the keys! If you are brave, you can compete in the snow-rolling contest. Bring your telescopes in case the temp gets above 24 below zero.

The cost is \$25.00 for adults and \$20.00 for those 12 and under. A very reasonable price considering you get two nights lodging, unlimited use of facilities, cross country skis, ice skates, sauna, Saturday breakfast and dinner, and good company. If you are interested, please send your check made payable to the NPMAS to Dick Francini, 1805 Christie Court, De Pere, WI 54115. Advance payment is required by the Dec. 31, 2004. Please provide names and ages of all attending adults and children. You can also call Dick at 338-8504 if you need more information. We look forward to you coming along and making the Camp U-Nah-Li-Ya Winter weekend a weekend to remember!

The 2005 calendars and Observing Handbooks have arrived and will be passed out at the December meeting on December 8.

Thanks,

Dick

Worthy of Note

by Anthony J. Kroes

During the month of November the following club member was recognized for his achievement regarding things astronomical:

Dick Francini was awarded the Caldwell Club pin and certificate #71 for observing 70 objects from Sir Patrick Moore's famous list of 109 deep sky objects.

Congratulations Dick! Keep up the good work – Dick is now more than three quetters of the way to Master Observer status!

NPMAS Board Meeting - Nov. 3

by Amy Hannon-Drew

The meeting was held at Gerry Kocken's office. In attendance were: Julie Mofle, Tom Cashman, Dick Francini, Jim Vareka, Gerry Kocken, George McCourt, Ray Nancoz, Steve Mofle, Amy Hannon-Drew and Ron Parmentier. The meeting was called to order at 7 p.m.

The first order of business was voting for a new board member to fill Katrina DeWitt's vacant spot. Julie Mofle was nominated and voted in unanimously. Dick Francini went over the membership dues status and gave us an updated list of membership. He also provided a detailed financial statement of last year's expenditures.

The board has been discussing purchasing a projector to be used by members for presentations to the club, for use at Astronomy Day, and for use with the Night Sky Network presentations. This projector would be a great help in our many outreach events as well.

Final plans were made for our upcoming Holiday Party to be held in place of our regular January meeting. It will be held at Rock Garden. Gerry is taking care of the details and they will be announced the December meeting. George is coordinating next year's Camp Unie event. The dates are January 14 thru 16. Look for more information soon.

We also took some time at this meeting to look at the area Gerry has set aside for the mirror grinding class. More information on that will be coming soon. Gerry has to finalize some details as far as how many he can accommodate and the cost for the kits.

The meeting ended at 10 p.m.

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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

December NPMAS Meeting

December 8, 2004

Member Speaker

Gary Baier

**The Cassini Mission
to Saturn**

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Hardcopy items should be sent to:
The Eyepiece

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December 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 Last quarter moon
5	6	7 Crescent Moon Occults Jupiter	 8 Meeting	9	10 20th anniversary Mailbox in Claxton, Georgia struck by meteorite	11 New moon
12	13 Geminid Meteors Peak	14	15	16	17	18 First quarter moon
19	20	21 Winter Solstice	22 Ursid Meteors Peak	23	24	25 Christmas Day
26 Full moon	27	28	29	30	31	