



# The Prairie Astronomer

November, 2010

Volume 51, Issue #11

The Official Newsletter of the Prairie Astronomy Club

November Program

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Featured Photo

### How to buy a Telescope

This time of year, people are often considering telescopes as gifts for the holidays. And members of the Astronomy Club will have a number of telescopes of varying sizes to explain what's available. For those wishing to buy a telescope, this is a good chance to compare different types and sizes of scopes. See pages 8 and 9 for more details!

### Arp 333/NGC 1024 - By Rick Johnson

Arp 333/NGC 1024 lies in Ursa Major near the bear's nose. It lies about 150 million light years distant. With the two galaxies to its east it forms a three galaxy group; WBL 082/KTG 09. Now while these three are considered a group NGC 1028 is small because it is over twice as far away as the other two at 380 million light years. Thus it is only a line of sight group member. It looks like it could have been included in Arp's One Heavy Arm category.



## Club Business - - Brett Boller

October 26<sup>th</sup>, 2010 PAC Meeting

Announcements:

Dan Delzell called the meeting to order.

The next PAC star parties will be on Oct. 29<sup>th</sup> and Nov. 5<sup>th</sup>.

There will be a lunar party on November 12<sup>th</sup>.

The next PAC meeting will be Tuesday November 30<sup>th</sup>, 7:00 PM at Hyde.

Upcoming Programs will be

November Meeting – at 7:00pm – How to buy a telescope.

December Meeting – Family night at Mueller Planetarium.

January Meeting – How to use your telescope.

Outreach upcoming events

Hyde Saturday nights.

Volunteer at Hyde

We are looking for Volunteers .

Why?

The Public is interested

It's fun.

Be a part of something that most cities don't have.

Observing Report

Stare parties

Oct. 1<sup>st</sup> 7 attendees and 7 scopes.

Oct. 8<sup>th</sup> 5 attendees 5 scope.

Oct. 12<sup>th</sup> 4 attendees 3 scopes.

Evening planets in November include Mercury and Mars.

Night Planets in September include Jupiter, Uranus, and Neptune.

Comet 103P/Hartey2 is in the sky also at night.

Diameter of 18.3" with a magnitude of 6.5

There is a Meteor shower that peaks on Nov 17<sup>th</sup> and Nov 18<sup>th</sup> with around 25 meteors per hour.

Eugene Lanning received his double star club award.

We held nominations for officers.

Dan Delzell – President

Jason Noelle – Vice President

Brett Boller – Secretary

Bob Kacvinsky – Treasurer

Dave Churilla – Program Chair/ 2<sup>nd</sup> Vice President

Jim Kvasnicka motion to close nominations and it was seconded by Jack Dunn.



Photo courtesy Rick Johnson

Sharpless 115

## Club Events

Newsletter submission deadline, December 15, 2010

PAC Club Meeting:

Tuesday, November 30, 2010 7:00pm @ Hyde Obsv.

Program: How to Buy a Telescope

PAC Club Meeting

Tuesday, December 28, 2010 7:30pm @ Mueller Planetarium

Program: Family pot-luck and Planetarium show at Mueller Planetarium on the UNL campus

PAC Club Meeting:

Tuesday, January 25, 2011 7:30pm @ Hyde Obsv.

Program: How to use your telescope

PAC Club Meeting:

Tuesday, February 22, 2011 7:30pm @ Hyde Obsv.

Program: Speaker John Rhienert, club member and engineer who was part of the Shuttle engine design team.

### 2010 PAC Star Party Dates

December 3<sup>rd</sup> & 10<sup>th</sup>

### Volunteer Activities

Hyde Observatory on Saturday nights

PAC Beginners Field Class: To be determined – likely in the spring of 2011.

New Club Member's Instructional Class: To be determined.

Please see the Outreach Report for more information and as always additional volunteer events will occur when they are scheduled.

## ON THE NET

**PAC:**

[www.prairieastronomyclub.org](http://www.prairieastronomyclub.org)

**PAC E-Mail:**

[info@prairieastronomyclub.org](mailto:info@prairieastronomyclub.org)

**NSP:**

[www.nebraskastarparty.org](http://www.nebraskastarparty.org)

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[info@nebraskastarparty.org](mailto:info@nebraskastarparty.org)

**OAS**

[www.OmahaAstro.com](http://www.OmahaAstro.com)

**Hyde Observatory**

[www.hydeobservatory.info](http://www.hydeobservatory.info)

**Panhandle Astronomy Club**

[Panhandleastronomyclub.com](http://Panhandleastronomyclub.com)

**PAC-LIST:** You may subscribe to the PAC listserv by sending an e-mail message to:

[imailsrv@prairieastronomyclub.org](mailto:imailsrv@prairieastronomyclub.org).

In the body of the message, write "Subscribe PAC-List your-email-address@your-domain.com"

For example:

Subscribe pac-list me@myISP.com

To post messages to the list, send to the address

[pac-list@prairieastronomyclub.org](mailto:pac-list@prairieastronomyclub.org)

PAC can also be found on Twitter and Facebook.

Buy club apparel through the club website. Shirts, hats, mugs, mouse pads and more.



# December Observing: What to View--Jim Kvasnicka

This is a partial list of objects visible for the upcoming month.

## Planets

Venus: Rises 3 hours before the Sun at a brilliant magnitude of -4.9.

Saturn: Rises around 2 am in Virgo. The rings have opened up to 10°.

Mars: Very low in the southwest only visible in a telescope.

Neptune: In Capricornus, look for a small blue disk at 8<sup>th</sup> magnitude.

Jupiter: Fades to magnitude -2.4 with a disk at 40".

Uranus: 3° east of Jupiter at magnitude 5.8.

Mercury: Low in the SW to start the month, by December 28<sup>th</sup> it is a morning planet.

## Meteor Showers

Geminids: Peaks on the morning of December 14<sup>th</sup>. Expect a Z.H.R. of 120.

## Lunar Eclipse

A total Lunar eclipse will take place the night of December 20-21. See page 61 in the December issue of Sky & Telescope for the time and details.

## December Messier List

M2: Class II globular cluster in Aquarius.

M15: Class IV globular cluster in Pegasus.

M29/M39: Open clusters in Cygnus.

M31: The Andromeda Galaxy.

M32/M110: Companion galaxies to M31.

Last Month: M27, M30, M56, M57, M71, M72, M73

Next Month: M33, M34, M52, M74, M76, M77, M103

## NGC and Other Deep Sky Objects

NGC 246: Bright planetary nebula in Cetus.

NGC 247: Elongated galaxy in Cetus.

NGC 869/884: The Double Cluster in Perseus.

Mel 20: Open cluster in Perseus, use binoculars.

## Double Star Club List

Eta Cassiopeiae: Yellow primary with a rose colored secondary.

Sigma Cassiopeiae: Yellow and light blue stars.

Theta Aurigae: Bright white and pale blue stars.

1 Camelopardalis: White primary with a pale blue secondary.

32 Camelopardalis: Equal white pair.

Gamma Ceti: Bright white and pale yellow stars.

Chi Tauri: White primary with a pale blue secondary.

118 Tauri: White primary with a yellow secondary.

## Focus On Constellations - Jim Kvasnicka

### Cetus

Cetus the Sea Monster or Whale is the fourth largest constellation covering 1,231 square degrees of the sky. It contains the star Omicron Ceti, named Mira “the Wonderful” prototype of the red giant long-period variables. Cetus is well off of the Milky Way and is in a rather blank part of the sky. It contains no open clusters or diffuse nebulae and has one Messier object in the faint galaxy M77. Being off the Milky Way it contains a number of galaxies. Cetus is best seen in the month of December.

### Mythology and History

In Greek mythology, Cetus is the Sea Monster of the Andromeda myth, turned to stone when Perseus exposed to its sight the severed head of the snake haired Medusa. Anyone who looked upon the Medusa was turned into stone.

### Objects Magnitude 12.0 and Brighter

Galaxies: M77, NGC247, IC1613, NGC936, NGC908, NGC720, NGC157, NGC584, NGC1052, NGC19, NGC45, NGC1055, NGC578, NGC596, NGC210, NGC864, NGC1087, NGC988, NGC1042, NGC1073, NGC779, NGC1022, NGC533, NGC836, NGC428, NGC450, NGC337, NGC615, NGC153, NGC151, NGC1016, NGC1032, NGC895, NGC991, NGC521, NGC1090, NGC255, NGC309, NGC1070, NGC357, NGC681, NGC271, NGC955

Open Clusters:

Globular Clusters:

Planetary Nebulae: NGC246

Bright Nebulae:

SNREM:

Dark Nebulae:

Named Stars: Menkar (Alpha), Diphda (Beta), Kaffaljidhma (gamma), Baten Kaitos (Zeta), Dheneb (Eta), Deneb Kaitos Shemali (Iota), Menkar (Lambda), Mira (Omicron)

### Number of Objects in Various Observing Clubs

Messier Club: 1 object

Double Star Club: 1 object

Herschel 400 Club: 13 objects

Globular Cluster Club: 0 objects

Open Cluster Club: 0 objects

Planetary Nebula Club: 1 object

Urban Club: 1 object

## ANNUAL MEMBERSHIP

**REGULAR MEMBER - \$30.00 per year. Includes club newsletter, and 1 vote at club meetings, plus all other standard club privileges.**

**FAMILY MEMBER - \$35.00 per year. Same as regular member except gets 2 votes at club meetings.**

**If you renew your membership prior to your annual renewal date, you will receive a 10% discount.**

**Club members are also eligible for special subscription discounts on Sky & Telescope Magazine.**

## Club Telescopes

To check out one of the club telescope contact **Jason Noelle**. If you keep a scope for more than a week, please check in with Jason once a week, to verify the location of the telescope and how long you plan to use it. The checkout time limit will be two weeks, but can be extended if no one else has requested use of a club scope.



## Focus on Outreach–Dave Churilla

This will be my last Outreach Report as I'm stepping down from the Outreach Coordinator's post to concentrate better on the Program Chair duties.

The Homestead National Monument's Howling Halloween was held on October 23<sup>rd</sup> with Dan Delzell, Jared Delzell, Jim Kvasnicka, Bob Kacvinsky and John Lammers working the event. The skies weren't the clearest but most of the over 200 participants were able to get views through the telescopes. Thanks to all who helped out.

Here's what's coming up for Outreach in the future. Remember that if for some reason you can't make it to an event DON'T just assume we've got plenty of people and not show up. Please let someone know so the event organizer can be kept informed and if necessary find a replacement.

Hyde Observatory: Saturday nights. If you are not already volunteering, please consider doing so. It's not hard and can be a lot of fun and we really do need the help. So contact Steve Lloyd today and start volunteering.

PAC Beginners Field Class: To be determined – likely in the spring of 2011. With the MSRAL Convention behind us we'll once again be holding our Beginner's Field Class next year, likely in the spring of 2011. This class is open to the public and we try to hold it on two consecutive Friday's at Hyde Observatory in hopes of getting a clear night on at least one evening. While we do try to cover some basic "classroom" astronomy, the emphasis is on field observing such as identifying constellations, how to use binoculars, how to read star charts, a basic introduction to equipment and an introduction to using telescopes. We can use lots of help such as speakers, setting up scopes for students to learn with, working with students outside, etc. We'll be working with Jack to coordinate this class with Astronomy Day so they don't conflict.

New Club Member's Instructional Class: To be determined. As mentioned above we hope to hold informal instructional "classes" for new members who are interested in field observing to help them get started and to answer questions they have. More information to come.

Spring Creek Prairie's Twilight on the Tallgrass: A Saturday evening in September 2011. This annual event is held at Spring Creek Prairie out west of Denton. Traditionally club members set up on the trail at night for groups on the trail walk to observe various celestial objects. The event attracts as many as 400 people. More information will come in late summer.

Homestead National Monument's Howling Halloween: Late October 2011. This is the Federal Park's Open house and is geared toward kids and their parents and is usually held the Saturday before Halloween. This event is usually held the Saturday prior to Halloween and attracts about 400 people but in small groups of 15 to 20 and is west of Beatrice. We'll usually gather about an hour ahead of time for this one so that we can fill out their volunteer forms then be led to the viewing area and set up.

What if you're contacted for Outreach? If you are contacted for an Outreach Activity and want to handle it yourself, that's great – we don't need (nor want) to be involved with every event that we do. We do, however, ask that you let us know about it and afterward send us information about the event so we can track and log it. We need:

Event Name  
Event Location  
Organization  
Contact Name and Information (phone, email, etc)  
Volunteers (and who organized)  
Event Date & Time – include set up time – so we can track volunteer hours  
What you did (i.e. Set up scopes, did presentation or a talk, etc.)

# Challenge Observing Objects for December

As the new editor for the newsletter, I have decided to add a new monthly feature. Each month I will have two objects, one for the more seasoned observer and one for the beginning observer. Each object I hope will challenge you just a little bit. I will provide you with a little bit of information about the object. It is your job to find it and if you would write a little report or draw what you see. The first person to report back on each object will have their report published in the next issue of the newsletter. Happy Hunting!

## Advanced Object

### NGC 2158

An open cluster in the constellation of Gemini. It is located southwest of open cluster Messier 35. Located about 15 arc minutes to the southwest of M35. It is seen at the lower right of the photo. NGC 2158 contains more stars and is more compact than M35. It is located 4 or 5 times more distant than M35 and is estimated to be about 1 to 1.5 billion years old. At this age, most of the hot blue stars are gone, leaving only older yellow stars.

Apparent Diameter: 5. arc min

Magnitude: +8.6



## Beginner Object

### The Double Cluster

Naked-eye open clusters NGC 884 and NGC 869, which are close together in the constellation Perseus. They are at distances of 7600 and 6800 light-years away, respectively, so they are close to one another in space as well. One of the finest set of cluster to look at in the sky. They are relatively young clusters, with NGC 869 5.6 million years and NGC 884 at 3.2 million years.

Size: 30.0' arc min each

Magnitude: +6.1, +5.3



## PAC Program “How to Buy a Telescope” By: Dave Churilla

A telescope can be your window to the universe.

But it's just a telescope right? How hard can it be to buy one? Well, it really isn't hard but there are a lot of choices and a few pitfalls to look out for. So how do you choose the right one for you?

For a number of years now PAC has presented a program in January to help people learn how to use their telescope. Many times they've bought junk (mostly the mounts) or they've bought equipment too advanced for beginners. So it only made sense that we present a program in November to help people learn how to buy a telescope. It was very successful last year. For November's program we'll be doing just that and would like to ask everyone's help that night talking to visitors and answering their questions. We could use telescopes for display as well.

Club members will be presenting the program. Brian Sivill – “Telescope Basics”, Dan Delzell – “What Can You Get for Your Dollar”, Bob Kacvinsky – “Accessories and Resources” & Dave Churilla – “What Can PAC Do For You” will be heading the list of celebrities giving the presentations.

We'll also be giving away door prizes to our guests. The first 20 kids will get a free Galilean Starter Telescope and we'll be giving away a number of door prizes donated by club members. Only one scope per family and only non-PAC members or first-year PAC members are eligible for door prizes.

So come out and join us on November 30<sup>th</sup> at Hyde Observatory and learn more about owning your own telescope if you don't own one already and enjoying the night time skies for yourself. If you're an experienced member come out and join us in helping our guests learn more about buying a telescope.

I hope to put a small piece in each Newsletter and on the Non-Members area so you'll know about upcoming programs planned for the club meetings and to encourage the public to stop in and join us. In the immediate future we have the following programs planned you can look forward to:

December 2010: A Social and Holiday Fun at Mueller Planetarium. Jack Dunn has invited us to join him at Mueller Planetarium to view shows, enjoy some snacks (courtesy of PAC) and enjoy socializing with friends. This will be an entertaining evening (no meeting) that you can bring your whole family to. The fun will begin at 7 PM and we'll have more information in the December Newsletter and soon on the web site.

January 2011: Learn How to Use Your Telescope. To go along with buying a telescope, in January we'll invite the public to bring their scopes to the club meeting and learn to use them.

February 2011: Working on Shuttle Engines by John Rheinert.

We have some others we are planning like “Sketching Your Observations” by Jim Kvasnicka, “An Idiot's Guide to Filters” (hoping to twist Dave K's arm for this one), “Solar Observing” by yours truly, and a Swap Meet & BBQ Social (hopefully in May or June). So keep an eye peeled for these and other programs as we get them planned and scheduled.

The members of the PAC Executive Committee work together to plan the monthly PAC Programs. Our goal for the programs is to provide a good mix of information, entertainment, and to make them relevant for all experience levels. We'd love to have your comments and suggestions concerning what you'd like see in a program. In our discussions we realize that part of the allure of the PAC meetings is the chance to visit with other members. With that in mind we are trying to hold the meeting portion to a workable time frame, limit the presentations so that they can end around 8:30 – 8:40 PM so that there is time for people to visit before calling it an evening. Let us know your ideas.





**THE PRAIRIE ASTRONOMY CLUB INVITES YOU TO**  
**HOW TO BUY A TELESCOPE**

**Tuesday, Nov. 30th Hyde Observatory**

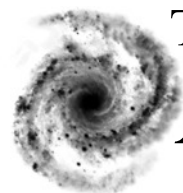
Have you been thinking of buying a telescope and could use some advice? The Prairie Astronomy Club can help. On Tuesday evening, November 30th from 7 to 8:30 p.m., there will be a FREE telescope help session for the general public. It won't be "high-tech," just friendly, knowledgeable help provided by the members of the Prairie Astronomy Club. The session will take place at Hyde Memorial Observatory on the south side of Holmes Lake in Lincoln, Nebraska.

This time of year, people are often considering telescopes as gifts for the holidays. And members of the Astronomy Club will also have a number of telescopes of varying sizes to explain what's available. For those wishing to buy a telescope, this is a good chance to compare different types and sizes of scopes.

The first 20 children ages 6 to 12 who attend will be given FREE, a "Galileoscope" starter telescope. (Only one scope per family and only non-PAC members or first-year PAC members are eligible for door prizes).

The members of PAC believe that Amateur Astronomy can be fascinating and fun. Let us help you get started. It's not as hard as you think.





# THE *Prairie* *Astronomy* *Club*

Amateur Astronomy --  
A Hobby as Big as the Universe

The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc. Membership expiration date is listed on the mailing label. Membership dues are: **Regular \$30/yr, Family \$35/yr.** Address all new memberships and renewals to: **The Prairie Astronomy Club, Inc., PO Box 5585, Lincoln, NE 68505-0585.** For other club information, please contact one of the club officers listed to the right. Newsletter comments and articles should be submitted to: **Jason Noelle at [oegrad2002@yahoo.com](mailto:oegrad2002@yahoo.com),** no less than ten days prior to the club meeting. The Prairie Astronomy Club meets the last Tuesday of each month at Hyde Memorial Observatory in Lincoln, NE.

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FIRST CLASS MAIL

**Next PAC Meeting**  
**TUESDAY**  
**November 30, 2010**  
**7:00 PM**  
**Hyde Observatory**