



Panhandle Astronomy Club

"Amateur Astronomy & Education"



THE SCOPE

Volume 2 Issue 6

July 2007

GENERAL MEETING DATE

Tuesday, July 10

PAC Meeting

7:00 pm

Gering Public Library

Join us each month as we explore this fascinating hobby we call astronomy!

Our meetings offer you the opportunity to meet other amateur astronomers, share your experiences, get advice and discuss opportunities to get together and view some of the wonders nature has to offer each month.

July Presentation

*Star Gazing
at the Wildcats*

Following the business meeting this month we will head out to the Wildcat Hills for an evening of Star Gazing. Bring your telescopes or binoculars for this event.



TELEPHONE CHANGE

The Mues will be using their cell phones as their primary phone line. If you have a need to contact them please call Bruce @ 308-641-5874 or Virginia @ 308-641-1201.

PANHANDLE ASTRONOMY CLUB

MEETING MINUTES

The June meeting was held on the 12th of June at the Gering Public Library. The meeting was called to order at 7:02. Three members were present. Bruce Mues, Jon Smith and new member John Escamilla. The May minutes were approved and it was reported that we have 1414.63 in the Treasury.

Bruce Mues will be working on getting an insurance quote from the Astronomical League. There was a brief discussion on the upcoming Star Gaze 07 with a rough draft of the literature to be distributed about the event passed out to those present.

An Astrobiology Teleconference recorded by the Night Sky Network on May 22, 2007 was shown to the members present.

The meeting was adjourned at 8:38 pm.

Fourteenth Annual Nebraska Star Party to be Held at Merritt Reservoir State Recreation Area July 15th through 20th, 2007

The fourteenth annual Nebraska Star Party will be held at Merritt Reservoir south of Valentine, Nebraska the week of July 15th through 20th, 2007. Sponsored by the Prairie Astronomy Club and the Omaha Astronomical Society, NSP14 is expected to draw over 200 registrants.

The Nebraska Star Party has gained a reputation as one of the nation's premier star parties due to the extremely dark skies of the Sandhills, as well as the many daytime recreational opportunities in the Valentine area. In addition to six nights of amateur astronomical observing, scheduled events include observational challenges, an astro photo contest, speaker programs, a Beginner's Astronomy Field School course, science-oriented activities for children, and a traditional Friday night viewing event for the public on the 20th. Attendees will also have the opportunity to canoe or tube the nearby Niobrara River as well as enjoy the many other vacation activities available to families in the Valentine area.

The signature event of the Nebraska Star Party, which sets it apart from other astronomical gatherings around the country, is its popular Beginner's Field School, to be held Monday through Wednesday. Each day the class will focus on a different observing skill which attendees can put into practice in the field that evening. The Field School is designed to help the newcomer to astronomy get started, or refresh the skills of those who may have set the hobby aside for a while. Participants will get hands-on learning while practicing the skills and techniques presented during the field school.

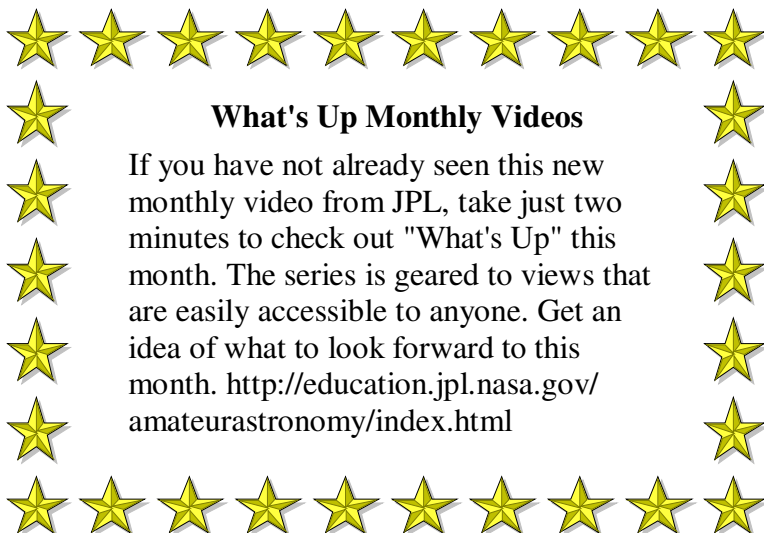
The Nebraska Star Party is open to anyone interested in astronomy, whether or not they own a telescope. Pre-registration is advised, however walk-in registrations are welcome during the week of the event. Registration forms are available in PDF form from the NSP website at www.nebraskastarparty.org. The cost of registration is \$45 per adult (free for children 12 and under) for the entire week.

Twelve Month Tour of The Messier Catalog

June Messier Objects

This will be a light month as we wait for the summer Milky Way to rise into better view later this summer. Our quarry will consist of six globular clusters and one very bright galaxy. All of these objects are possible with binoculars, most are down right easy even with small binoculars.

- M3** This globular cluster in Canes Venatici is one of the brightest objects in the sky. In binoculars this object is definitely not star like, but more of a bright, small snowball easy to see. Small telescopes will begin to resolve M3 into individual stars. The hardest part of this object is locating it in a portion of sky that contains few bright landmarks.
- M53** Another globular cluster in Canes Venatici. While not quite as big or bright as M3 it is still an obvious binocular object. Resolvable in small telescopes, it's an easy object to find sharing the same low power telescope field as fifth magnitude Alpha Coma Berenices.
- M5** A big, bright globular cluster located in Serpens Caput. M5 is as nice as M3 but lies near a fifth magnitude naked eye star (5 Serpentis) making it an easy object to find.
- M68** An eighth magnitude globular cluster in Hydra. M68 is a difficult binocular object for Northern observers. It appears as a faint fuzz spot in binoculars, you may need to use averted vision or large binoculars to find this one. Appearing as a round fuzzy patch in an 8" telescope, you will need a much larger aperture to really resolve it.
- M83** A face on spiral in Hydra. M83 is fairly easy in binoculars as a faint, fuzzy patch of light. In a telescope look for a large patch of light with a bright center.
- M4** A big bright globular in Scorpius, easily located near Antares. This is an easy binocular object appearing as a round snowball. Partially resolvable in a telescope, the trade mark of this globular is a line of bright stars crossing the center.
- M80** This is the smallest and faintest globular cluster this month. Located in Scorpius, M80 is a very tough binocular object appearing as a faint star with slight fuzziness around the edges. This is confirmed with a telescope, M80 has a bright central condensation in the middle of faint fuzz. It is one of the Messier objects that even through a medium telescope still looks like a comet.



What's Up Monthly Videos

If you have not already seen this new monthly video from JPL, take just two minutes to check out "What's Up" this month. The series is geared to views that are easily accessible to anyone. Get an idea of what to look forward to this month. <http://education.jpl.nasa.gov/amateurastronomy/index.html>

The Scope

Virginia Mues, Newsletter Editor

The Scope is an official monthly publication of the Panhandle Astronomy Club.

Submissions to *The Scope* are due by the Fourth Tuesday of the month. Guest columns are welcome.

Subscriptions for *The Scope* are \$20.00 per year for Individual Membership, \$15.00 per year for Student Membership (under age 18) and \$30.00 per year for Family Membership. *The Scope* is printed year round, January 1 through December 31.

Contact the Panhandle Astronomy Club c/o Virginia Mues, Newsletter Editor at P.O. Box 987, Scottsbluff, Nebraska 69363-0987; 308-641-1201.

The views and opinions expressed in *The Scope* do not necessarily represent the views or opinions of any of the members of the Panhandle Astronomy Club. All mistakes are included for your entertainment!

The information printed and distributed by the Panhandle Astronomy Club is not intended as legal advice and should not take the place of legal counsel from a qualified, informed attorney.

NIGHT SKY NETWORK TELECONFERENCE

The Dawn Mission: Exploring the Asteroid Frontier

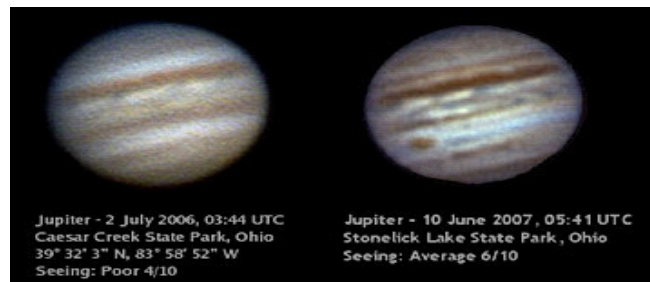
The Dawn mission is unique in many ways and should bring us numerous new findings about the asteroid belt. Dawn covers a lot of firsts. It will be the only spacecraft to orbit two bodies, it will have the highest speed of any spacecraft, and this is due to the innovative technology of its ion thruster engine. No it's not science fiction. This spacecraft is headed to some of the last places in the inner solar system that remain unexplored. Dr. McFadden will tell us about the science behind this mission.

Dr. Lucy McFadden is an astronomer working on the Dawn mission. She will look at the protoplanets and asteroids in the asteroid belt, peering back in time to what the solar system looked like when the planets were forming. She has also worked on the NEAR science team, interpreting the mineral composition of the asteroid's surface. We last heard from Dr. McFadden when she told us about the Deep Impact mission, where she was involved in interpretation of imaging acquired by the flyby spacecraft and understanding both natural and man-made outbursts of the comet. She has studied the surface composition of asteroids, the Moon, Mars meteorites, the Galilean satellites of Jupiter and comets in her career. We are thrilled to have her fill us in on the latest news about Dawn and the asteroid belt.

To find out how to log onto the Teleconference attend our meeting on Tuesday July 10th, 7:00 p.m. at the Gering Public Library or contact Bruce or Virginia Mues at 308-641-5874 or 308-641-1201.

A VERY DIFFERENT JUPITER

The planet Jupiter is just making its appearance in the evening skies, and now dominates the southern horizon most of the night. For anyone who follows Jupiter closely, the giant planet presents a rather different face in 2007 than we've seen in recent years.



Credit: D. L. Sharp

The two images above, made by D. L. Sharp with an 8-inch Newtonian, clearly show the changes which have taken place since this time last year.

All we ever see of Jupiter is the top of its thick gaseous atmosphere, and it's easy to forget that what we are seeing is clouds and that, as on our own planet, cloud patterns can change.

In recent years, the most obvious features have been two dark belts, known as the North Equatorial Belt and the South Equatorial Belt, with a lighter zone, the Equatorial Zone, in between, marking the planet's equator. Bright Tropical Zones appeared north and south of the two main belts. This is shown in the image on the left; north is at the top in these images. The result was a fairly symmetrical array of belts and zones relative to the equator.

Fast forward to 2007

The most striking change is that the southern half of the South Equatorial Belt has faded, changed from dark to light. At the same time, the normally bright Equatorial Zone has darkened, and the North Temperate Belt, to the north of the North Equatorial Belt has also darkened. The visual effect of this is that Jupiter's cloud belts have become noticeably asymmetrical: the whole northern half of the planet having become one dark complex belt, and the whole south of the planet becoming a broad bright zone.

These changes in the background colors of the belts and zones have had a striking effect on the appearance of Jupiter's famous Great Red Spot. In recent years, the GRS has been buried in the dark hued southern component of the South Equatorial Belt, making it difficult to see in small telescopes due to the lack of contrast. In some years, it has actually been lighter than its background Belt, and has been visible only as a brighter area in a dark Belt, known as the Red Spot Hollow.

But now, in 2007, it is immersed in a broad white zone, and stands out clearly from its background, as can be seen in the image at right above. As a result, the Great Red Spot is easier to see in a small telescope than it has been for many years.

On the night of 2007 June 17/18 I was able to see it readily with my 100mm Orion ED refractor at 180x, which was next to impossible last year. No color was visible; that requires a larger aperture: on June 9/10 it appeared a pale salmon pink in my 11-inch Newtonian.

Geoff Gaherty

Geoff has been a life-long telescope addict, and is active in many areas of visual observation; he is a moderator of the Yahoo "Talking Telescopes" group

Astronomical League Mid-States Region Business Meeting

As you probably already know the 2007 Mid-States convention scheduled for June 8th and 9th was cancelled by the Omaha Astronomical Society, the hosting club, at the last minute. I hope this didn't cause you or any of your membership undue inconvenience.

Even though no convention was held we still need to have a business meeting. Because of time and distances I've decided to host the business meeting here in Kansas City on August 25, 2007. Since K.C. is centrally located in the Mid-States Region this should make it easier on all of you so no one will have to drive an excessive distance to attend the meeting.

You might wish to make this a weekend trip and bring the family. The business meeting will be held at 2:00 p.m. in Room 111 of Royall Hall, on the campus of the University of Missouri at Kansas City, located one block west of 52nd and Rockhill Road. The general meeting of the ASKC will be held in the same room at 7:00 p.m. Our meetings are free to the public.

Linda Hall Library is located about two blocks from Royall Hall and is well known for its collection of very old star charts and astronomy works. They are currently featuring the "Out Of This World: The Golden Age of the Celestial Atlas" exhibition. Located at 5109 Cherry Street, Kansas City, MO 64110-2498, you can call (816) 363-4600 for information. The Library is open 10:00 a.m. to 4:00 p.m. on Saturday and closed on Sunday.

The National World War I Museum at Liberty Memorial is now open! Located just across the street from historic Union Station the WWI Museum opened last December and is a must see when you visit Kansas City. The museum is open 10:00 a.m. to 5:00 p.m. on both Saturday and Sunday. Museum admission is \$8. Add \$2 if you would like to ride the elevator to the top of the tower.

The Steamboat Arabia Museum is another interesting place to visit. After the sunken Arabia was discovered and its cargo exhumed from the Missouri mud the museum was constructed to tell the amazing story of river commerce in the 1800's. Located at 400 Grand Boulevard, Kansas City, MO 64106, the museum is open 10:00 a.m. to 4:00 p.m. on Saturday and 12:00 p.m. to 3:30 p.m. on Sunday. Tour admission is \$12.50. Call 816-471-1856 for further information.

ASKC's Powell Observatory, housing our 30" Newtonian Reflector will be open Saturday evening in case you don't wish to attend our meeting. The observatory is located near Louisburg, KS which is roughly 40 minutes south of Overland Park, KS.

And of course The Plaza shopping area is about ten blocks Northwest of UMKC for those who enjoy the shopping experience.

Please relay this material to your membership. We require a forum to conduct business and all region members are welcome to attend the business meeting, voice their opinions and vote. I hope you and many of your members can come and enjoy a weekend here in K.C.

Clear skies,

Gary R. Pittman
Secretary/Treasurer Mid-States Region

Astromart Alternative By Roger Leafgreen

Astromart has been a web site with which most members have experienced a love/hate relationship. Herb York, the owner operator of the site, has operated it with his arbitrary set of rules and strange methods of enforcement. He has always been autocratic, inflexible, and unsympathetic to any member difficulties or hardships. His membership fees are higher for dealers and he classifies members as dealers at his whim.

He has suspended people for remarks they have made in the forums; a member just recently told me he was dropped from membership for saying that he didn't feel that Chinese eyepieces were equal in quality to Japanese and domestic made models. I have been removed from his site twice and he is impossible to reason with if he replies at all.

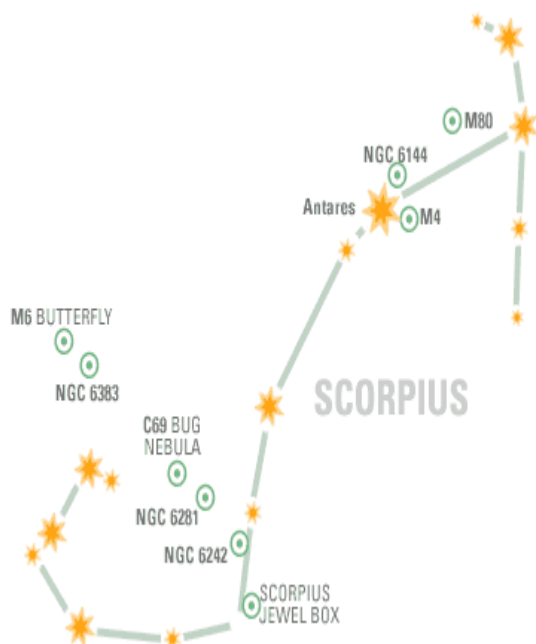
GREAT NEWS !!! OPT, Adirondack, and BT Technologies have developed a site with a very similar format to that of Astromart. There are classified ads, forums, chat rooms, etc. - the great news is, there are no fees at all. These guys are great, they are asking for member feedback in an effort to constantly improve the quality of the site, and they are absolutely dedicated to client satisfaction.

The site address is: astroclassifieds.com. It is growing rapidly, and the number of ads keeps increasing week by week. Please take the time to notify all of your astronomy friends and acquaintances about this site. The sooner the astronomy community moves their affiliation to this site, the sooner we can all again enjoy a vibrant site providing valuable information through the forums and chat rooms, we will again have a large and varied selection of astronomy equipment and accessories as well as non-astronomy items for sale or trade.

Herb could have dominated this service and would have had members more than happy to pay reasonable fees for the service, but his arrogance, callousness, and lack of respect for his members was surely to cause his eventual downfall, and alas, it has finally arrived. Do what you can to spread the word, for the sooner we do so, the sooner we will again enjoy having a site that fills the needs of the astronomy hobbyist.

If you would like to vent your frustrations with Herb, as many are doing - write to him at herbyork@mac.com. Feel free to let him know how little you will miss him and his antiquated policies. That kind of heavy handed treatment went out with the dark ages and unenlightened people such as Napoleon.

SCORPIUS



For those of us in mid-northern latitudes, it's probably best to start low; the underbelly of Scorpius skirts the southern horizon, making observation tricky.

The **Scorpius Jewel Box** is actually two open clusters in close proximity: the top one loose, and the lower one tight. A great binocular target.

NGC 6242 is an open cluster, and **NGC 6281** is an open cluster with nebulosity.

C69 or "The Bug Nebula" (aka NGC 6302) is an interesting planetary which looks, at first glance, like a galaxy. The western side of the nebula has a prominent lobe with a tapered end while the eastern side is noticeably blunt.

NGC 6383 is a dim, wide cluster with nebulosity.

M6 is a bright and obvious open cluster which makes for an easy binocular target. Telescopes show rich detail and M6 is seen to be aptly named, "The Butterfly Cluster".

Three globular clusters sit close to Antares. **M4** and **M80** are well known, but a challenge is **NGC 6144** because it sits so close to the 1st Mag red supergiant.

Antares itself is 600 lightyears away and glows with a luminosity 12,000 times greater than our own sun.

This area rewards binocular users generously. There are seemingly endless textures, patterns, star clusters and odd little clouds, all of which are well within the grasp of even basic optical aids.

Sean O'Dwyer
Starry Night® Times Editor

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The Scope



Panhandle Astronomy Club

PANHANDLE ASTRONOMY CLUB

The Panhandle Astronomy Club was founded in the Fall of 2005. Anyone with an interest in astronomy is welcome. Members are not required to own any equipment or have prior knowledge of astronomy. For more information on the Panhandle Astronomy Club log on to any of the following:

PAC Email: info@panhandleastronomyclub.com

PAC Website: www.panhandleastronomyclub.com

PAC Discussion Forum: groups.yahoo.com/group/PanhandleAstronomyClub

To Join the Panhandle Astronomy Club or Renew Your Membership

Please detach this form, complete the following information and submit it along with payment to:

The Panhandle Astronomy Club
c/o Virginia Mues, Secretary
P.O. Box 987
Scottsbluff, Nebraska 69363-0987

Name _____

Address _____

City _____ State _____ Zip _____

Phone # _____ Email _____

Mark One

Individual Membership \$20.00 Student Membership (under 18) \$15.00 Family Membership \$30.00

Memberships run January 1 through December 31.

All renewals are due on or before January 1.