



The Guide Star



**Mingo Creek Park
Observatory**

Newsletter of the Amateur Astronomers Association of Pittsburgh, Inc.
Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon
Website: 3ap.org

February 2006

Vol. 40, No. 11



**Nicholas E. Wagman
Observatory**

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February Lecture:

John Pane on Digital Astrophotography

By Ann Norman



At the next AAAP meeting, Friday, February 10, 7:30 at the Carnegie Science Center, our own Brunelle Contest-award-winning John Pane will be teaching us how to take great digital astrophotos! He submitted this summary:

The newest digital single-lens reflex cameras (DSLRs) are producing some amazing images, and the costs of these cameras have fallen. As a result, over the past two years many amateur astrophotographers, including some of the most accomplished, have switched from film to digital. I will discuss the special demands astrophotography places on the camera and how well some current DSLRs meet those demands. The features and limitations of these cameras call for novel techniques, both during image capture and in post-processing. I will explain the techniques I use, and the more advanced techniques others are using, to capitalize on the capabilities of these cameras.

Below, find a shining example of John's astrophotography work:

Welcome, New Members

Welcome to all the new members who were voted in at the January 2006 meeting.

MICHAEL CIECHALSKI

JUDY HUFNAGEL

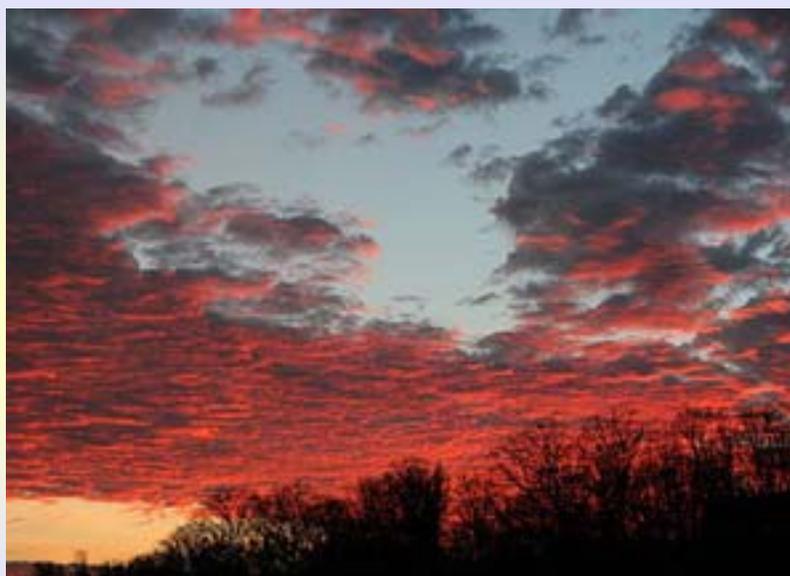
ALAINE NOSS

WILLIAM NUSIDA

BILL SHEERS

NEVIN ULERY

LEWIS T. WAGMAN JR



Intro to AAAP Forums

By Craig Lang

An **Internet forum** is a facility on the World Wide Web for holding discussions. The fundamental function of a forum is the ability for people to start threads and reply to other people's threads. Someone posts a message which is visible to everyone. You read it and then have the option to post a reply which will also be visible to everyone. Thus, a discussion can build up without all users having to be online at the same time.

How this works:

An AAAP member visits www.3ap.org/forums and registers for an account.

After registration your account will need a quick approval from the forum administrators, who simply verify your membership status and conformity to the few rules listed at the bottom of this page.

Once activated you are a member of the forums and are granted access to forum topic discussion areas such as: a *Newbies* area, *Observation Reports*, *Current Events*, *Astrophotography*, *Deep Sky Observing*, *Double and Variable Star Observing*, *Solar Observing*, *Lunar & Planetary Observing*, *General Astronomy*, *Telescopes*, *Hardware*, and *Accessories*, *Make Your Own Telescope*, *Books and Software*, *Marketplace: Items for Sale and Looking to Buy*, *Association Related*, and many more.

Forum Guidelines

In order to maintain a convenient and enjoyable experience for all members who participate on the AAAP Forums we require all registrants to respect the following...

1. To use the forums, you must be a member in good standing of the AAAP. Should your membership lapse your forums account will be deactivated, although not removed. Upon membership renewal your forum account will be reactivated. No posts or settings will be lost during the downtime.
2. Usernames must be something easily identifiable with the name you are listed in the membership directory with. (First and last names are preferred).
3. Email address to be used with your forum account should be the same as the email address listed in the membership directory. Exceptions can be made in special circumstances.

Night Sky Network Update

By Chrissie Chojnicki

With Saturn returning to the evening sky, JPL's Saturn Observing Campaign is once again open for participation. Educational materials and special opportunities about the Cassini-Huygens Mission are provided to participants. For more details and how to sign up, visit <http://soc.jpl.nasa.gov/index.cfm>

Anyone interested in more information or becoming a participant of the Night Sky Network (NSN) for our Club, please contact me. I would like to start a training class within in the next month or so. Also, if you are an astronomy teacher and need additional educational resources, the NSN materials as well as the on-line Educator Resources are excellent tools.



Wagman Reminders

Posted to the AAAP Listserv by Tom Reiland

If members want the combinations to the gate and door for Wagman Observatory, they should have their dues and key fee paid up and have a record of when they paid them. I suggest that they call me at home at (412) 487-8326 on weekday evenings, especially on cloudy nights. If it's clear and I am at Wagman Observatory, they can call me there for the numbers. I am not a fan of sending important information via email; too many spybot viruses on the computers.

If anyone plans on using the telescopes in the building, they should call me to let me know before they head up to the observatory. They can email me, but I prefer to have contact with humans. That's why I suggest that they call. Also, I can inform them of any changes or problems that they might run into when they open the building.

Up & Coming Events

Almost Heaven Star Party Spruce Knob, WV

By Dave Smith

I just found out from a friend who does the astronomy week at The Mountain Institute on Spruce Knob, WV (4862'), The Northern Virginia Astronomy Club is planning their "Almost Heaven Star Party" at TMI from August 24th-27th, 2006. Here is the site, although at the moment it still has last year's information.

<http://www.novac.com/AHSP/index.php>

Wagman Winterfest Star Party Saturday, March 4, 2006

The days are getting longer, and now in February an alarming number of amateur astronomers are suffering from chronic cases of CCD (Cloud Cover Disorder, a seasonal malady characterized by irritability, restlessness, and a compulsive habit of stepping out the door to peer wistfully at the sky).



Thank goodness for Winterfest!

The event will start at 4:00 p.m., weather permitting (last year, Winterfest was the clearest night of the season). Contact Director Pete Zapadka for more information.

Astronomy Weekend 2006 Saturday & Sunday, April 1-2

By George Guzik

This year's Astronomy Weekend event will be held at the Carnegie Science Center on April 1st and 2nd. As in past years, we're looking for AAAP volunteers to bring their favorite astronomy subjects to the visitors at the CSC. Our theme for this year's event is "Moon, Mars, and Beyond."

Astronomy Weekend is an important event for us because it affords us an opportunity to "repay" the CSC for the support they provide to us during the year. The CSC provides a meeting facility to us for our business meetings. They provide the use of their audio visual equipment at those meetings and they even hold special planetarium shows for us. Let's show the CSC that we appreciate their support by supporting Astronomy Weekend! Please contact me if you can be a part of this event.

PAEE Conference: Request for Volunteers, March 24

The Pennsylvania Association of Environmental Educators (PAEE) has scheduled their annual conference for this March, and has requested our assistance for the evening of Friday, March 24th. The site is at Antiochian Village, a 300-acre site 6 miles outside Ligonier. Any member interested in setting up a stargazing session for participants should contact Ruth Roperti at rroperti@zoominternet.net. More information is available at the organization's Website at www.paee.net.

Thanks to Bill Moutz for giving the PAEE information about the club, and to John Close for posting this request to the AAAP Listserv.

Member Observations

Not Cassini...Phil Hughes!

Phil Hughes took this photo of Saturn. Simply beautiful! The image is a stack of 958 frames of 1520 using Registax.



Sidewalk Astronomy

By Fred Klein

Had a wonderful night on the South Side last night showing Saturn to many-many people.

Was joined by Dave Smith who said he could just stay for a minute because he had to fix his building's elevator. He ended up staying for two hours (most of it double parked!). Also, Phil B. joined us for a good while. Dave took the picture below with my camera (I think that's Phil behind the scope).

It was really rewarding to hear the many exclamations when seeing Saturn. I think about 80% said something like "Oh wow" or "My God". Later, as the seeing got better and the image at 200x became really sharp, we got many comments: "That's not real!" or "That looks just like the pictures in the text books". Response to the last: where do you think they got the pictures from? A scope like this!



North Allegheny Star Party

Hello everyone,

My name is Dennis Morton and I am a string teacher at North Allegheny. I also enjoy astronomy when I can find the time. I've attended two Star Cruises and several star parties since I became a member in 2003. Since I enjoy this hobby and have access to hundreds of students, I thought it would be fun to share astronomy with the students at North Allegheny.

I recently applied for a grant through the N.A. Foundation to purchase a Schmidt-Cassegrain Meade Telescope LXD 75 SC-8. The grant was approved for a school telescope, and after months and months of waiting for an eyepiece holder, it arrived at the end of October. (Side Note: I have had the telescope out several times and can get everything to work except the Reticle Light for Polar alignment. It lights up but never moves. Maybe someone with a Meade LXD 75 mount can provide some suggestions regarding what it is for and how it should work.)

I have taken my personal telescopes to Camp Kon-O-Kwee in Zelienople for the past three years when the 5th grade has gone on their yearly field trip in the fall. I share my telescopes with the students during the day and provide them with hands on opportunity to navigate the telescopes through a field to find various objects. At night I show them the night sky and they are amazed at what they can see. It is always fun to see a student look through a telescope for the first time. Please check my Web site for more information:

http://teachers.northallegheny.org/dmorton/exploring_with_a_telescope.htm

Due to the interest at our school and my access to the students, I want to set up a few evening star parties for the students and their families within the North Allegheny School District. I know that kids are more than welcome to attend the A.A.A.P. star parties at Wagman, but I thought it would be nice to have an easily accessible star party close to the district schools.

I've set up two evening star parties on **Tuesday, April 4th** and **Thursday, May 4th** (a few days before the AAAP star parties). Students can come to the designated location (500 Cumberland Road, Pittsburgh PA, 15237—an open field behind the McKnight Elementary School) and view the Moon and any other celestial objects.

I want to invite any AAAP members who would be interested in helping out to these events. This could be a wonderful opportunity to share your knowledge with the community and an opportunity to pass out flyers about the 2006 AAAP star parties.

I have a feeling that these events will be big! After emailing teachers, parents, parent organizations and students, I've gotten a positive response from all groups. Everyone said that they would be willing to help spread the word and assist with the evening events. If there is an AAAP member willing to give a small introduction about the night sky, that may be helpful, depending on how many students and family members attend.

- Parent organizations are willing to provide hot cocoa in the evenings, talk about these events during their monthly meetings, and add information in their monthly bulletins to promote these events.

- Science teachers will be passing out small flyers with directions and times to these events. There will also be help from other faculty who have an interest in astronomy. There were over 20 that had signed up to participate.

- Secretaries will be adding information to the weekly school bulletin to inform students/parents of these evening events.

- And of course, it will be highlighted on the North Allegheny Website.

Please let me know if this is something in which the AAAP would be interested in participating. Even assistance from a few members that live within the district would be helpful. Ideas, suggestions and/or comments are also welcome!

Thank you,

Dennis R. Morton
North Allegheny School District
String Specialist
McKnight Elementary
500 Cumberland Rd.
Pittsburgh, PA 15237
(412) 369-5509
dmorton@northallegheny.org

Special AstroEvents for February

By Al Paslow

Did you know the moon will briefly enter into the constellation of Auriga this month on February 8th?

Conjunction of Mercury & Uranus

Elusive Mercury, magnitude -1.1, and Uranus, magnitude 5.94 will be in the same field of view of a small telescope on February 14th, in the early evening sky. The planets should be within about ½° of each other, making quite an interesting combination. Sunset occurs at about 6:00 p.m. on this date.

Uranus sets a few minutes before 7:00 p.m. and Mercury shortly afterwards; hence, the skies may be dark enough, providing we have good transparency, to view much dimmer Uranus close by. Keep in mind this could be a difficult feat, as the planets are probably only 7° high at best! Find an area having an unobstructed western horizon and see if you can witness this event! (It is amazing to note that earlier this day the pair were only 0.003° apart!)

Moon and Spica Occultation

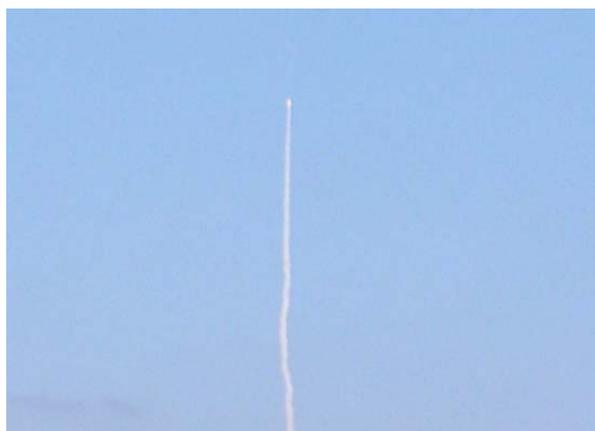
February 17th the Moon rise will be just before 10:30 p.m. and the occultation will be already in progress. The bright star Spica in Virgo will return to sight on the Moon's dark limb at 10:59:14 p.m. Watch the event as the Moon rises. Spica will reappear when the Moon is only 5° above the horizon in the east-southeast skies, so it will be another low one!

Iridium flares are spectacular bursts of light that appear star-like and can attain a brilliance of up to -8 magnitude—or 30 times brighter than the planet Venus! Short lived because they are here and gone within a moment, the view can make quite an impression to observers on the earth. The flares are from satellites launched by Iridium Satellite LLC, and are caused by sunlight reflecting off the satellites' highly-reflective rectangular antennas. The flares can occur with great predictability. Times for some flares for the weekends of February 4th through the 26th are listed. Predicted times are accurate within several minutes of real times, so give your self some leeway. Watch for them in the constellation listed—believe me, you'll know when they happen!

New Horizons Launch

Compiled by Ann Norman

Mary Jean Kancel: The launch went off. What an amazing and exciting sight to see. I had no clouds on my horizon and low humidity so we were able to watch it for quite awhile. Even after the main burn stopped we could still follow it. As I whooped and hollered and probably frightened the neighbors, my Mom tried to take some photos from the backyard but with the sun it was difficult. Here's a picture:



Jeffrey Miller: Wow! They finally launched the Atlas V / New Horizons rocket to Pluto. It was very clear skies down here in Lakeland, Florida. I've seen Space Shuttle launches from here, but I was not sure if I would be able to see this one. I almost missed it. I watched it on the Internet here at work, and when I went out 30 seconds later, all I could really see was the plume of smoke left behind, but it was very easy to see. Now I know exactly where in the sky to look (from work) when they launch the next Space Shuttle!

Eric Fischer: Watched the launch on TV. Makes drag racing look like snail racing!

Editorial Apologies to Nova 2005 Winner

Nothing like bringing in the New Year on a major faux pas.

There were, in fact, *three* (3) winners of the Nova Award this past year. My apologies for not listing the third *Nova Award* winner, **Kathy DeSantis**, in the January issue.

Our thanks and recognition to Kathy for all the hard work and effort she's devoted to making every AAAP event a success.

AAAP Financial Statement 2005

As is traditional, each year we make an accounting of the AAAP's finances for the last year. The following analysis has been condensed for space, but a more detailed version is available from John Holtz.

INFLOWS

50/50 raffles	412.00
Donations	164,240.26
Interest	483.62
Memberships	16,398.80
Rebate	1,646.00
Sales	1,118.57
Stock	533.66

TOTAL INFLOWS 184,832.91

OUTFLOWS

Awards	202.92
Bank Fee	50.35
safe deposit box	160.00
Food Christmas	70.54
Gifts	501.28
Guide Star printing	4,017.71
Mailing expenses	958.00
Meeting expenses	523.75
Merchandise	2,329.44
Mingo Observatory	111,485.10
NEWO security system	240.00
Officers	1211.08
Promotion	173.38
Stamps	323.89
Star Party: NEWO	70.00
Magazine subscriptions	8,240.89
Tax (financial review)	2,212.88
Utilities/Insurance	8,328.96

TOTAL OUTFLOWS 141,100.17

OVERALL TOTAL 43,732.74

ACCOUNT SUMMARY (Dec 31)

Checking	105.81
PA Grant	33,290.10
Savings	128,084.76
Cash awaiting deposit	947.05

TOTAL Cash/ Bank Accounts 162,216.10

OTHER FUNDS (part of savings)

Mingo Observatory	5,742.96
Valley View 2	32,116.60

TOTAL Other Assets 37,859.56

STOCK

Symbol	Shares	Last/NAV	Value	Purchase	Gain/Loss
DD	65	42.5	\$2,762.50	63.09	(\$1,338.35)
JCP	93	55.6	\$5,170.80	64.75	(\$850.95)
K	164	43.22	\$7,088.08	33.97	\$1,517.00
MMM	130	77.5	\$10,075.00	38.53	\$5,066.10
TOTAL			\$25,096.38		\$4,393.80



February AstroEvents

By Al Paslow

Mercury: You may glimpse this tiny world very low in early western evening skies about a half an hour after the sun in Aquarius by midmonth. This is a good time to find the mysterious planet as it reaches great eastern elongation on the 24th. The planet fades somewhat from -1 magnitude to -0 as but it climbs higher in the sky being easier to see around elongation date. The planet also decreases from 85% illumination at midmonth to 31% by the end of February, and the diameter grows from 5.6 to 8 arcseconds. A close conjunction of Mercury and Uranus occurs on Valentine's Day evening when the two planets are within ½° of each other. This can be worth seeing! Also, look for a thin crescent Moon to lower right of Mercury on the early evening of the 28th.

Venus is a brilliant "morning star" at -4.5 in Sagittarius after being visible in the early evening of a good portion of last year. The planet grows from a large thin crescent only 10% illuminated to about a third of the disk being lit by month's end. Look just before sunrise on mornings of February 24th and 25th; the thin crescent Moon will be close to Venus for a dazzling view!

Mars travels from Aries the Ram and moves into Taurus after the first week in February. Although not as bright as it was towards the end of 2005, it will still be a notable and distinctly orange object. It should appear to be just slightly brighter than and similar in color to Aldebaran (mag 1.0, the brightest star in Taurus), which will be above the planet perhaps in late February.

**The Red Planet continues to shrink and dim during 2006. The disk is rapidly decreasing in size from 8.8 to a tiny 7 arcseconds at month's end, rendering poor telescopic surface observations. Apparent magnitude drops from 0.20 to only 0.73 during this time and it is rapidly heading towards the Pleiades. Watch Mars as it passes the Seven Sisters during the week of February 12th to about February 20th. On the 17th the Red Planet will be within 2.5° south of the famous cluster, in Taurus the Bull.

Jupiter is an early morning object in Libra at mag -2, and rises before 1:30 a.m. in the beginning of the month, and about 11:46 a.m. by the 28th. By the end of February, Jupiter will have moved a little to be about 3.5° from the double star Alpha Librae. It's a beautiful sight in the sky just before sunrise along with Venus. For a portion of 2006, Venus and Jupiter rule the morning skies!

Saturn is approximately mag 0.5 in Cancer, is in the northeast by sunset being past opposition, last month and is visible all night long. The ring appearance is somewhat flatter and more narrow than in previous oppositions, as our planetary orbits move towards upcoming edge-on presentation that will occur on September 4th, 2009. This year Saturn will still put on a grand and impressive display.

**This is another good month to observe Saturn's moon Iapetus, which becomes very difficult at times to locate. This moon has such a large orbit it is often far outside the telescopes field of view. Strangely, it is 5 times brighter, at western elongation (magnitude 10.1) than during eastern elongation (mag 11.9), as one side of the moon is much darker than the other. Iapetus (sometimes called Japetus) is brightest when it is about 12 ring diameters away from Saturn. Iapetus reaches inferior conjunction on February 20th and then can be found in the same field of view with Titan, Dione, Rhea and Tethys. Positions are often found on the *Sky & Telescope* website for the brighter moons but not Iapetus, due to its long 79-day orbit. All 5 of these moons can be found in a 6-inch telescope or less.

The giant planet will be within a degree of M-44, the Beehive Cluster in Cancer, and still is a beautiful sight this month—take a look with binoculars! A view in a small telescope will reveal the dark shadow of Saturn's disk against the rings and the moon Titan

Uranus and Neptune: Both planets are in unfavorable positions for good telescopic views. Uranus sets before 7:30 in early February. Neptune is too close to the Sun to be seen, and is in conjunction with Sol by the 5th. A rather odd conjunction of Mercury and Uranus also occurs on Valentine's Day evening; see detail under special events below. Uranus is in the constellation of Aquarius.

Pluto is a morning object rising at just after 4:00 a.m. early in the month and is currently located in Serpens /southern Ophiuchus area. Be advised when observable; it is extremely dim at magnitude 14 and must be examined with large instruments and star charts to be located.

Selected Dates

February 3: 40th Anniversary (1966) of Russia's *Luna 9* landing on the Moon (1st spacecraft to achieve soft lunar landing). Tonight look at Saturn ½° from M44 (Beehive Cluster).

February 4: Clyde Tombaugh's 100th Birthday (1906). Pluto was discovered in 1930. Iridium Flare at 7:47:20 p.m. Magnitude -2.7; look towards Auriga (Saturday evening).

February 5: First Quarter Moon - Moon rises at noon and sets at midnight. Mars 2.2°S of Moon. Neptune in conjunction with the Sun. Occultation of Pleiades, but not visible from our location, favoring instead Hawaii and the west coast of North America. *Apollo 14* lands on the Moon in 1971 (Remember the famous lunar golf ball?). Iridium flare at 7:41:17 p.m. Magnitude -0.9; look towards Auriga.

February 11: Saturn 3.9°S of Moon. Iridium flare at 7:15:25 p.m. Magnitude 0.4; look towards Eridani (Saturday evening).

February 12: Full Moon. Also referred to as the "Snow Moon" by Native Americans. Iridium flare at 7:09:24 p.m. Magnitude -6.5. Wow—look towards Eridani!! (Sunday evening).

February 13: Moon 3° north of Regulus.

February 14: Moon at Apogee. Valentine's Day. Try to find Mercury ½° north of Uranus in the evening twilight.

February 14-28: Watch the planet Mercury climb to greatest elevation above the horizon and sink again around this time.

February 17: Mars about 2½° south of the Pleiades tonight. Occultation of Spica. Moon will rise at 10:27 p.m. with Spica already behind the Moon's disk. Watch the star return to the sky at about 10:59 p.m. Find a good low eastern horizon for this one! Iridium flare at 6:48:0 p.m. Magnitude -3.1; look towards Eridani.

February 18: Jupiter transit of the Great Red Spot at 0:41:8 p.m. Look for Jupiter's moon Io shadow on the planet beginning at 2:28 a.m. and ends at 4:38 a.m. Venus at greatest illumination in the morning sky. Iridium flare at 6:42:01 p.m. Magnitude -1.9; look towards Eridani.

February 20: Jupiter 5.7° north of Moon. Saturn's moon Iapetus, magnitude 10.9, at inferior conjunction visible above the planet in the morning sky. Iapetus is also visible above Saturn but near the brighter moon Rhea magnitude 9.5 around 9:00 p.m. or so the same evening. On this date in 1963 John Glenn orbited the Earth!

February 21: Last Quarter Moon. Moon rises at midnight and sets at noon.

February 23: Mercury at perihelion 28,590,076 miles. Vesta resumes direct motion in Gemini. Moon liberation north at 11:56 p.m.

February 24: Mercury at greatest elongation 18.1° east of the Sun. Great time to find the planet! Look low in the western sky after sunset. Venus 10.3° north of Moon. Iridium flare at 7:59:08 p.m. Magnitude -3.1; look towards Canis Minor (Friday evening).

February 25: This evening look for a pass of the International Space Station. Should appear in the southwest skies at about 7:08 p.m. and pass under Orion and disappear well under the Big Dipper by 7:14 p.m. This is a nice fast-moving evening object to watch traverse the heavens!
*Iridium Flare at 7:53:11 p.m. Magnitude -1.2. Look towards Canis Minor; seconds later at 7:53:36 p.m. another flare is visible quite a bit fainter at magnitude 2.6 in the same area! This is a nice Saturday night project!

February 26: Iridium flare at 7:47:45 p.m. Magnitude -3.6; look towards Canis Minor (Sunday evening).

February 27: NEW MOON rises at sunrise and sets at sunset. Moon at perigee only 217,000 miles distant!

February 28: If you can look for the thin crescent Moon very low in the west below the planet Mercury tonight! Wonderful sight.

March 1: Uranus in conjunction with the Sun and cannot be seen.

March 6: First Quarter Moon. Moon rises at noon and sets at midnight. Mars 3° south of Moon..

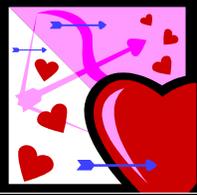
March 10: Saturn 4° south of Moon.

March 12: Mercury at inferior conjunction with the Sun and cannot be seen.

March 1: Moon at apogee.

That's all for now, see you next month! Clear skies!

February 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5 	6	7 	8	9	10 AAAP Meeting 7:30 PM CSC	11
12  Snow Moon	13	14 Valentines' Day	15	16	17	18
19	20	21 	22 	23	24	25
26	27 	28				

Looking ahead... **Winterfest is MARCH 4, 2006!!!**

AAAP Long-Range Meeting Schedule

Mar. 10, 2006 Summer Break
 Apr. 7, 2006
 May 12, 2006

Classifieds

With authorization from the Executive Committee, the MCPO Committee would like to sell the second large Dobsonian telescope that we have at Mingo Creek Park Observatory. You may have seen it used several times at a Mingo starparty on the front parking pad. It is a traditional style heavy-duty homemade design, built using a Coulter 17.5" f 4.5 primary mirror. Note that the base is mounted on a trailer that is supported by 11" diameter wheels for mobility. Another feature is a built-in Compass and Clinometer that can be used in conjunction with a computer program in pointing the telescope. (pre digital setting circles).

Here is a side profile of the instrument:

<http://home.comcast.net/~lemaaap/mingo-construction/dob17a.jpg>

Another photo with the new dob alongside the 17" club truss dob at Mingo:

<http://home.comcast.net/~lemaaap/mingo-construction/dob17b.jpg>

Two more profile photos:

<http://home.comcast.net/~lemaaap/mingo-construction/dob17c.jpg>

<http://home.comcast.net/~lemaaap/mingo-construction/dob17d.jpg>

Finally, a photo looking down the tube.

<http://home.comcast.net/~lemaaap/mingo-construction/dob17e.jpg>

We are asking \$995 for the telescope as is. (no eyepieces included). If you are interested in seeing the telescope and making an offer, please contact one of the following:

Mike Meteney (724) 348-9087 mmeteney@comcast.net
 Ed Moss (412) 734-0255 edward.moss@verizon.net
 Al Paslow (412) 969-8000 alpaslow@yahoo.com
 Larry McHenry (412) 884-4924 lsmch@comcast.net

* Amateur Astronomers Association of Pittsburgh, Inc. *

Founded June 9, 1929 by Chester B. Roe and Leo J. Scanlon

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Guide Star Editor:	Kelly Fletcher	724-316-8480
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AAAP Member Dues*:

AAAP Dues:	\$18.00
Junior Member (under 18):	\$13.00
<u>Sky & Telescope Magazine:</u>	Add \$33.00
<u>Astronomy Magazine:</u>	Add \$34.00
<u>Night Sky Magazine:</u>	Add \$18.00

***Basic Procedure for Paying Dues:**

1. Make check payable to "AAAP Inc."
2. Send check to John Holtz, Treasurer,
310 Barnes Street, Pittsburgh, PA 15221-3301

NON-PROFIT ORG.
 U.S. POSTAGE
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 PERMIT NO. 394

RETURN ADDRESS:
 Amateur Astronomers Association
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 Sarver, PA 16055-8907