



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



Nicholas E. Wagman
Observatory

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COMET MCNAUGHT WEBSITES

<http://www.space.com/php/multimedia/imagegallery/iqviewer.php?imgid=4539&gid=325&index=0>

<http://skytonight.com/community/gallery/skyevents/5129766.html>

<http://news.yahoo.com/photos/ss/events/sc/011107cometmcnaught>

COMET MCNAUGHT

Dan McKeel of Upper St. Clair, PA took this fantastic image of Comet McNaught on the evening of January 8, 2007. Camera - Canon 300 D. with 300mm lens at f-5. Exposure was 1/6 sec. ISO 800.



COMET OBSERVATION

Flaccus Stifel: Tom Reiland and I arrived at Wagman at about 5:10 on January 8, opened the Brashear, and acquired the comet at about 6:20 or so. It had a faint tail. The altitude was about 8-1/2 degrees. The sky was very good in just the right direction. As the sky darkened, more of the tail and its structure were visible. Terry Trees stopped by about 5:30.

The comet remained naked eye until only 1 degree above the horizon!! It was in the landing pattern for the airport, so there were at least two very close AMME's on it.

We actually watched it set behind the distant horizon through a smattering of nearby tree twigs, but the comet was distinctly visible right down to the horizon. Tom estimates the magnitude at about 0.

ASTRONOMY WEEKEND

By George Guzik

This year's Astronomy Weekend event will be held at the Carnegie Science Center on March 31 and April 1. As in past years, we need AAAP volunteers to participate in the event to bring their favorite astronomy subjects to the visitors at the CSC.

Astronomy Weekend is an important event for us because it affords us an opportunity to thank 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 audiovisual 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 at 724-863-8008 or GeorgeGuzik@aol.com if you can be a part of this event.

BLACK FOREST STAR PARTY

By James Schultheis

Just a heads up on when the BFSP is going to happen: The tentative date for BFSP 2007 is September 14-16. Registration will open in late spring. The star party workers are taking a break until the spring of 2007, so not much planning will happen until then.

PROGRAM AT JENNINGS ENVIRONMENTAL CENTER

By John Holtz

AAAP members are invited to attend and participate in a program at Jennings Environmental Education Center on Sunday, February 18. Center naturalist, Will Taylor, will give a talk about astronomy folklore starting at 7 p.m. After the talk, AAAP members are invited to set up scopes and binoculars outside for visitors to see the winter sights. (If the weather is not suitable for observing, then we were asked to give a 10-15 minute presentation on using optics.) Since this is the week before Wagman Winterfest, it will give us an opportunity to promote it as well.

Jennings is located on route 528, just off of route 8 between Butler and Slippery Rock (2951 Prospect Rd, Slippery Rock 16057). The Center can be contacted at 724-794-6011. AAAP'er John Holtz will be coordinating our participation. Please contact John at 724-352-7596 or JWHoltz@aol.com if you are interested in attending.

SIDEWALK ASTRONOMY AT SARRIS CANDY

By Craig Lang

Gene Kulakowski and I were talking and we thought that a great time for us to hold another Sidewalk Astronomy session down at Sarris Candies in Canonsburg would be the weekend before Valentines Day. Those that have not been to Sarris yet, Valentines Day, Easter, and Christmas are their busiest times of the year. So we stand to net a decent amount of visitors this time.

I've checked the sunset/moonrise/moonphase information for Saturday, February 10th and it seems like a really good candidate evening to do this. It is the night after our February meeting.

Any and all that are interested in stopping down and helping out are welcome. Please let me know if you intend on coming, as it will be helpful in planning where outside the building we setup. Even if you don't have a telescope to bring, we'd love to have you. We'll take all the help we can get. And it seems that if there are more of us, we look a little less like "some crazy, mad scientists ready to blow up Washington County with oversized spud guns".

Also, you shouldn't depart this sphere without tasting some Sarris chocolate covered pretzels. So even just stop down for that. If you need directions feel free to ask.

You can reply with your intentions to me or feel free to call me at the number listed in the club directory.

Astronomy and chocolate to all!

MESSAGE TO SIDEWALK ASTRONOMY ENTHUSIASTS REGARDING AAAP'S STANDING WITH NIGHT SKY NETWORK

By Kathy DeSantis

FYI, if you are registered participants in NSN, you have online access to download toolkits. Therefore, should you care to do so, you could at any time download a monthly star map (Planet Quest Toolkit), and make some copies to use with your sidewalk astronomy, and thus qualify your event as NSN logable for our club. Events logged by January 3, 2007 where NSN resources were used will count toward:

1. Your club's qualification for the annual Award Pins. To see the list of clubs that have already qualified, log into the Night Sky Network, select "Discussion Board" then choose the "Announcements" forum.
2. The quarterly drawing. This quarter's prize: five clubs will be awarded ten Miller Planispheres. Each logged event held October 1 through

NSN (continued)

December 31 where NSN resources were used counts as a "ticket" in the drawing to be held January 8th. For more information, log into NSN and read the lead story.

3. Receiving new ToolKits. For those who have not yet received all released ToolKits, if you have logged two or more qualifying events since receiving your last ToolKit, we will be shipping out your next ToolKit in the series in January. To see the list of released ToolKits, log into the Night Sky Network and then go to: http://nightsky.jpl.nasa.gov/club/faq.cfm#q7_10

May I encourage members interested in Sidewalk Astronomy to register as participants in AAAP's NSN, to use NSN materials and to log events!

2007 MINGO PUBLIC STAR PARTY DATES

March 3 - Total Lunar Eclipse
 April 20-21
 May 12
 June 8-9
 July 6-7; 20-21
 August 3-4; 17-18
 September 7-8
 October 6, 20

2007 WAGMAN PUBLIC STAR PARTY DATES

February 24 – Winterfest
 March 3
 April 20-21
 May 18-19
 June 22-23
 July 20-21
 August 17-18
 September 15, 29
 October 20, 27

FROM THE TREASURER

By Michael Meteney

As of January 20th, we have 336 of 505 memberships paid up through December 2007. If you haven't sent in your invoice by the time you read this article, please do so ASAP. If you lost or cannot find your invoice, please contact me at: treasurer@3ap.org

It is very important that this process is completed soon so I can move on to doing the tax return for the association. Don't forget that this fall everyone will be renewing their memberships, magazine subscriptions, and key fees all at the same time for 2008. We are planning on having a renewal form published in the October Guide Star. You will be given more information about this in upcoming editions of the Guide Star.

I want to thank everyone who has already sent in his or her renewal. So far we have had only a few problems that were easily resolved.

WEB CALENDAR

By Craig Lang

In order to better serve the club members with an active calendar of events, an email address has been set up for submission of events: calendar@3ap.org

Club officers, Observatory Directors, and AAAP members are welcome to send their astronomy related events to this email and the information will be posted on the calendar. Events can even be mentions of external star parties not sponsored or hosted by the AAAP.

Let us make this calendar application work for us, submit your events! Thanks.

ALUMINUM CAN COLLECTION

Please bring your aluminum cans to Winterfest on February 24, 2007 at Wagman to the attention of Ray Lahet. Wagman will receive 60 cents per pound. Thanks for your help.

SATURN

On February 10 Saturn will be at opposition magnitude 0.0, 762 million miles from earth; 1.227 billion kilometers.

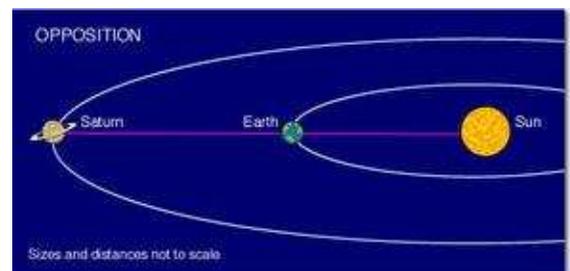


Photo from: <http://soc.jpl.nasa.gov/viewing.cfm>

A VISIT TO OBSERVATORY MOUNTAINS IN HAWAII

By Dave and Helen Houggy

This past November we were able to visit two mountaintop observatory areas, one on the Big Island of Hawaii and one on Maui.

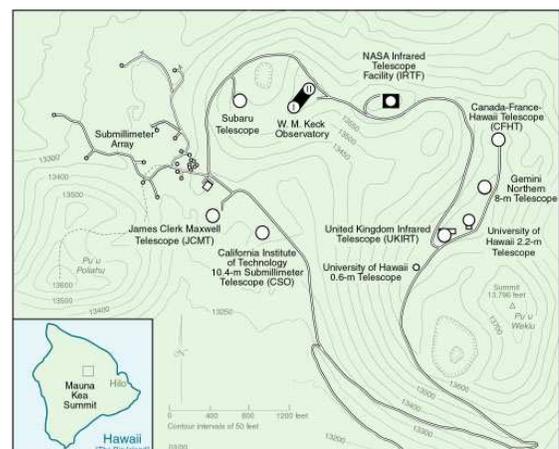
Mauna Kea, on the Big Island of Hawaii, elevation 13,946 feet, is sacred in Hawaiian culture. This peak was chosen for observation for numerous reasons including the fact that at the peak one is above almost 40% of the earth's atmosphere and the air is very dry. There are very few clouds at night and the atmosphere is extremely stable. All of the northern sky and much of the southern sky is visible. Base support facilities for the observatories are in Hilo or Waimea. The Mauna Kea Discovery Center in Hilo offers pre-trip orientation (we didn't know about this).

As we ascended via paved and unpaved roads in a 4WD van, our Hawaiian driver related the lava-strewn terrain to the culture of his immediate family and his ancestors. We stopped for a half hour or so to acclimate at the Onizuku Visitors' Center at 9200 feet, which is also the area where there is a conference center for scientists. Because this is a shield volcano, the slopes are relatively gentle. Nearing the summit we saw a VLBA antenna, one of ten in a worldwide network operated by the NRAO in Socorro, NM. At the peak we drove by Caltech's Submillimeter Observatory, the James Clerk Maxwell scope (joint project of UK, Canada, and Netherlands), the Submillimeter Array (joint US and Taiwan), Japan's Subaru (optical infrared, Corning lens polished in Wampum, PA), Keck I and II (where we were able to go inside to look up at the scope and dome), the 1979 NASA infrared scope, the University of Hawaii 0.6-meter scope (the only scope on Mauna Kea operated by astronomers exposed to open air conditions), UK's infrared, the University of Hawaii's 2.2-meter scope (with visitors' gallery), the international "Gemini North" scope, and the Canada-France-Hawaii scope. Although we were prepared for the very cold wind, precautions such as drinking lots of water and exhaling deeply did not prevent lightheadedness.

The ascent up to the Haleakala Crater on Maui was an easy drive in a rental car. The "crater" is actually a huge saddle between two peaks that has eroded into a basin displaying subtle gradations of color and form. Nearby Science City is not open to the public. Its observatories, owned by the U.S. Air Force and run by the University of Hawaii, track satellites. The only public facilities on this road were a visitors' center (this is a National Park) and an enclosed observation deck at the top. The effects of the altitude (about 10,000 feet) were noticeably less than on Mauna Kea. On distant Hawaii

we could see Mauna Loa and Mauna Kea's observatories shining like white dots.

According to the *Hilo Advertiser* of November 5, the three largest and most powerful scopes on Mauna Kea had not then returned to normal operation after the October 15 quakes (6.7 and 6.0) jolted the islands, especially Hawaii. The entire 400-ton Gemini North scope was displaced off its base by 1/8th inch. Astronomers there and at the Keck had to try to rebook valuable observation time. Missing time might have meant missing recording data in one night that can "keep a research team busy for several years" or that in the missed hours someone else might discover a new phenomenon. The damage to the Gemini scope required "major surgery" but resumed operations on November 11, according to its website. The two Keck scopes (each 300 tons, 80 feet tall) suffered damaged brake pads and seismic restraints. Bearing wheels under the 700-ton concrete domes of Keck I and II have been realigned. All software and all pointing and control systems had to be updated. According to its website, as of November 15, not all repairs had been completed. The Subaru also suffered from misalignment by the quake. Several offices at the Keck HQ in Waimea, about 39 miles away, were also significantly damaged. Check out the website <http://www.ifa.hawaii.edu/mko/> for photos and details on each observatory and see below.



SOUTHERN HEMISPHERE EXPERIENCES

Fred Klein: I took a trip on the Amazon River in the early 1990s before my introduction to astronomy. That's really dark. We spent one evening in a small boat away from the lights of our main boat on a small pond set off from the river. First, all the frogs entertained us and we heard other jungle sounds, as it got dark. Then the Milky Way came out along with the Magellanic Clouds. Spectacular! The sky looked full.

I just looked up the sky from there in July and I did not see the Magellanic Clouds. I had mistaken the Sagittarius Milky Way, which was big and bright overhead.

From the top deck of the main boat, I had my first sighting of the moons of Jupiter in 7x35 binoculars. I had tried for that with them from home before (and also after) and failed. Maybe it worked because Jupiter was directly overhead? The only southern star formation I could recognize was the Southern Cross.

Tom Reiland: I got a chance to observe from the Equator to Peru in 1986 on a Halley's comet cruise. The southern Milky Way was spectacular. It took me about two nights to become familiar with the shift in star positions, their latitude and a new group of constellations. Several star clusters rivaled the Pleiades in size and brightness. The Coal Sack is the largest and most distinct dark nebula you will ever see. The first night on deck I mistook Canopus for Sirius because of the difference in latitude. Omega Centauri is an easy naked-eye object and it makes the Hercules Cluster look like an average globular. I did all of my observing naked eye and with 10 X 50 and 7 X 50 binoculars. The large, bright open clusters are what impressed me the most. I hope to get down south again someday. If I could spend a year observing the southern sky, I could probably add another thousand objects or more to my logbooks.

Gene Henderson: My son (15) and I just got back from a weeklong mission's trip to the Dominican Republic. The camp we stayed at was three miles west of Hato Mayor. The rest of the countryside was mostly sugarcane fields with no intrusive lights. The weather was perfect and the night sky was spectacular every night. The winter Milky Way was easily seen and Orion was riding high in the sky, as you would expect. I decided Friday to get up Saturday morning at about 3:00 AM to see the Southern Cross. Well, at 3:15 I did so and was very glad I did. Also, Omega Centauri was an easy naked-eye object. Oh how I wish I had my 10" Dob to see that baby! I had to settle for my cheap 7X35 binoculars, which showed it to be a bright, grainy, round patch. I also noticed Cassiopeia was nowhere to be found because of being below the northern horizon. It is

amazing how much things change just from going south 20 degrees. On the bus going back to the airport Saturday evening, I pointed out to everyone the crescent moon and Venus, which many of you got to see also. Well anyway, we are back in cold and cloudy Pittsburgh and can't wait for warmer weather.

WORLD'S LARGEST RADIO TELESCOPE

By Pete Zapadka
From the Associated Press

Perched at 4,600 meters (15,000 feet) on a cold, spent volcano, the Large Millimeter Telescope (LMT) will use radio waves to look into the dawn of the universe when it begins a two-year testing period which began on Wednesday, November 22, 2006

At 2,000 tonnes and 115 million dollars, its 50-meter (164-yard) dish--the world's largest--is the result of a joint effort of Mexico's National Institute of Astrophysics, Optics and Electronics (INAOE) and the U.S. University of Massachusetts. "This telescope is capable of observing conditions prevalent when the first stars and galaxies were formed 13,400 billion years ago", INAOE astrophysicist and project manager, Emanuel Mendez, told AFP.

Eight years in the making, the German-designed LMT will be the most precise radio telescope of its kind in the world and will be used to study the composition of comets, the atmospheres of planets beyond our solar system, and the origins of the universe. "Microwave astronomy is still in its infancy and promises to unveil fascinating secrets", Mendez said. "Short millimeter wavelengths will give us precise measurements of speed, temperature, density, magnetic field and physical composition of our targets", he added. The steel-and-cement structure will be officially inaugurated on Wednesday, after which the telescope will be put through rigorous testing before it is deemed fully operational in 2008.

Its base on the Sierra Negra volcano, 350 kilometers (217 miles) southeast of Mexico City, ensures near optimal conditions for its operation: very low humidity and a vantage point giving it an excellent view of both southern and northern skies.

"Microwaves crave water vapor, so if we want to see faint, distant objects, it is imperative the surrounding atmosphere be as dry as possible", Mendez said. The only problem the LMT has to contend with is the very high winds buffeting the mountain. "It was designed to withstand wind speeds of up to 200 kilometers (1,240 miles) per hour", he added. The INAOE and the University of Massachusetts will share the annual cost of running the LMT, estimated at 4.5 million dollars.

SPEAKER AT NEXT BUSINESS MEETING

By Ann Norman

Ken Coles from the Geoscience Department of Indiana University of Pennsylvania will be speaking on student observations of the 1994 Annular Solar Eclipse in the Midwestern U.S. at our next business meeting on February 9, 2007 at 7:30 p.m. at the Carnegie Science Center.

School students throughout the state of Indiana measured various effects of the annular solar eclipse of May 10, 1994. Several hundred teachers got specific training for the eclipse through the science outreach program at Purdue University. During the eclipse, their students measured changes in air temperature, light level, and plants. Their data, along with that of the National Weather Service, are archived in an HTML database published by Purdue University. In this talk, he will give an idea of the project, what students saw, and share some of their observations and anecdotes.

UPDATE ON LES JOHNSON

By Dave Smith

At Friday's meeting at least five people asked me how AAAP member Les Johnson was doing. This even included a waitress at Max & Erma's. I just talked with him on the phone and he is still in the Aspinwall VA Hospital but has changed rooms. The new phone number is 412-784-2763 and I am sure he would appreciate a call. He has an infection in his foot that is slowly healing and a small bone has been removed near his toes. He still expects to be there another month. He thinks he may be in need of an ADA accessible apartment when he gets out. If anyone knows of one, he would be interest in hearing about it.

RYERSON STATION STATE PARK STAR PARTY THANKS

By Pete Zapadka

Thanks to all who made the trek to Greene County for the program and star party we held last night at Ryerson Station State Park! We had about 35 visitors in all, and nine or 10 members.

Again, many, many thanks to all the volunteers who participated. Who knew it was going to clear off like that and, as Ed mentioned earlier, this could be the beginning of a beautiful friendship between the park and AAAP.

BOOK RECOMMENDATIONS

By John Cheng

Arthur Koestler's *The Sleepwalkers*
Owen Gingerich's *The Great Copernicus Chase*
William Sheehan's *Epic Moon*
Celestial Mechanics (non-mathematical)

James Kaler's *The Ever-Changing Sky*
Our Galaxy

Ken Crowell's *Alchemy of the Heavens*
Stars (Well grounded intro)

James Kaler's *The Hundred Greatest Stars*
Intro to Modern Cosmology and Biography of Cosmologists

Dennis Overbye's *Lonely Hearts of the Cosmos*
Timothy Ferris' *The Whole Shebang Mars*

William Sheehan and Stephen O'Meara's *Mars Jupiter*

John Rogers' *The Planet Jupiter*
Solar System

J. Kelly Beatty's *The New Solar System*

←—————→
About James Kaler, I think he is one of the better astronomy authors. *The Hundred Greatest Stars* is a Scientific American publication and an excellent introduction to stellar physics in general. While meant for a popular audience, it is akin to a textbook; meaning it presents a lot of material, topically divided and is not a casual read. It is written well, is profusely illustrated and is a great intro, but it is not a book for dipping.

Much more demanding is Kaler's "*Stars and their Pectra: An Introduction to the Spectral Sequence*". This is a hard-core discussion of stellar astronomy and while there is not any physics or math that would stump the average reader, it is definitely a bit deeper than most readers would want to go.

His "*The Ever-Changing Sky: A Guide to the Celestial Sphere*" is a no-nonsense treatment of general astronomy—minus deep sky—with a heavy emphasis on spherical astronomy—the geometry of the sky. Like all of his books, it is not overwhelming, but it assumes a certain level of reader enthusiasm.

Kaler, who is a professor at the University of Illinois, maintains an informative website at:
<http://www.astro.uiuc.edu/~kaler/sow/sow.html>

BOOK RECOMMENDATIONS (continued)

By Al Paslow

A few of the libraries had a copy of *Norton's Star Atlas* when I was younger. Today, the book is much more complex but offers a wealth of information, still having nice star maps. It can be used as straight forward reference or as good reading material filled with astronomical definitions. I highly recommend it.

Another excellent book to consider is the *Planet Observer's Handbook* by Fred Price; published by Cambridge University Press. I recommend this without reservation. The book deals with telescope selection; history of observation from ancient times to the modern spacecraft, Discovery; surface and cloud features as well as planetary satellites are well documented from a historic standpoint. Other topics touch CCD work and photometry. In my opinion, with the mix of historic observations and good solid information, this book reads like a novel. No need to keep a pencil in hand with a clean sheet of paper to understand anything in this one!

Lastly, to shift gears into the colorful and exciting, you might try "*Touring the Universe: A Practical Guide to Exploring the Cosmos Thru 2017*" by Ken Graum.

I enjoyed the simple reading and overall design of this big, spiral-bound paperback. Monthly Star charts providing a list of M and some NGC objects are nice additions. Planetary locations are given from 2002 through 2017 as well as dates of solar and lunar eclipses.

Other areas covered include very basic observing of planets, the moon and sun, as well as deep sky objects by separate sections. I feel it is a good beginner's book and the bright colors, beautiful charts and pictures should easily win over the younger crowd looking for something exciting and new.

FOR SALE

By Frank Pastin

I have a Meade 8" Star Finder on an equatorial mount for sale and a J M I motofocuser and rotating rings for the scope. I can be reached at home at 724-457-7048. I can sell the scope with or without the extras.

COOL WEBSITES<http://www.namnmeteors.org><http://www.aip.de/groups/galaxies/sw/sdf/index.php>http://www.space.com/businesstechnology/technology/technovel_sedna_050128.html<http://www.spacetoday.org/SolSys/KuiperBelt/Quaoar.html#Planetoids><http://simbad.u-strasbg.fr/Simbad><http://antwrp.gsfc.nasa.gov/apod/astropix.html><http://hubblesite.org/newscenter/><http://www.astrochannels.com/>http://www.cloudynights.com/item.php?item_id=1520<http://spaceflightnow.com/news/n0610/06marsrover>http://nightsky.jpl.nasa.gov/news-display.cfm?News_ID=130http://nightsky.jpl.nasa.gov/news-display.cfm?News_ID=168http://web.mac.com/jay_reynolds_freeman/iWeb/My/Astronomy.html<http://www.stellarium.org>http://home.comcast.net/~mjkancel01/Mercury_Transit.html<http://hubblesite.org/go/blackholes><http://astrotips.com/Downloads-index-req-viewdownloaddetails-lid-613-ttitle-NightBar.phtml><http://video.google.com/videoplay?docid=5058529870025933880&q=star&hl=en>http://science.nasa.gov/headlines/y2003/20jun_TMAclou ds.htm<http://climate.gi.alaska.edu/Curtis/astro1.html><http://www.supernovae.net/snimages/>

OBSERVATIONS

Fred Klein: I did get a chance to see the crescent moon and Venus tonight before tennis. I found them at 5:24 with binoculars and once located, I could see them easily by eye. They were higher than I had expected. Later at 5:45, they were obvious and nice. The slender crescent moon seemed to be quite large in diameter - nice. They were in and out of clouds.

I could not yet locate Mercury but there were some clouds where I expected to see it. Friday night, from the North Side, I saw a very long solar spike. I think it was 25 degrees high. It was not very strong (slightly enhanced image) at about 5:15:

<http://www.fredkleinastro.com/images/SolarSpike1-19-07.JPG>

Al Paslow: Last night I returned to a favorite observation place I frequently visit in South Park. The site over looks a sprawling western horizon. Here last week, my daughter, Stormie, (then 5 years old) and I saw the magnificent Comet McNaught on January 8th in the twilight skies.

Then, this beautiful object was maybe 20 degrees away and 7 degrees south of the planet Venus, which served as our guidepost. Last night, nine nights later, the evening star, Venus, still remains; but the "Great Comet", brightest in 30 years is long gone.

For me, some things are the same but different about last night. Last week Stormie and I arrived to this observational vantage point in my own automobile and stood in awe to view a wonderful "starry interloper".

Returning last night to the same area, I arrive in a rented vehicle, as my own had been mortally wounded in an auto accident. Where my daughter and I once stood tonight I stood alone; Stormie happily watching television at home (now 6 years old!).

But last night good old Venus was there with me; reminding me of the grand "Comet - Planet" spectacle previously seen here just a short time ago. Like an old friend it was comforting!

Despite a sprained neck, I had to shoot an image for the old times sake of the evening star.

Goodbye "Great Comet"; may you inspire us again in the distant future, should you make such a return and may mankind survive to witness another truly stellar event!

James Schultheis: Upon reading one of my new books on astronomy (I got for Christmas), I noticed a constellation that I have never seen before. Upon further research on the Internet, I uncovered the following:

The constellation of Gloria Frederici represented a sword, feather, and some branches of laurel. The four stars in the hilt of the sword formed the 2° wide Y-shaped Gloria Frederici asterism, Ι (iota), κ (Kappa), λ (Lambda) and ψ (Psi) Andromedae. I guess it is a constellation that is no longer used and was gobbled up by the Andromeda constellation, but I found it interesting. I have seen other old constellations but I thought others might be interested in this bit of information.

James Schultheis: I have been reading all the posts on comet McNaught and sort of feel bummed out that the clouds were in the way down here in Scottdale and we were not able to observe it. Oh well, I guess that is how it goes sometimes. We (Sue, Ivan and I) did get to observe some GREAT objects last night, and one of them was Hind's crimson Star. I am not that much into observing stars, but when I observed R Leporis last night, I was amazed at how beautiful a star could be. It was a deep ruby red and just magnificent!! It was cold, about 19 degrees and I had to put disposable hand warmers on all of our finder scopes to prevent ice from forming on the objective, which by the way, works great. The next thing we observed was NGC 1535 "Cleopatra's Eye" with the 8-inch Orion XT Dob. It was a typical looking planetary in the 8-inch but then we tried the 15-inch f/4.5 on it and cranked up the power to 340x and it became an unbelievable image! It actually looked like it had two rings around the fuzzy central star, sort of like an eye.

Next, we observed NGC 2261 "Hubble's Variable Nebula" it looked like a comet with a fan-shaped tail (another great object). I then tried to observe MSH 04-12, a quasar in Eridanus but could not exactly identify where it was located with my information on hand, so I blew it off until I have more time.

Last but not least, we observed Hickson 44 in the neck of Leo and could make out all four member galaxies in the cluster. I am really looking forward to galaxy season!

OBSERVATIONS (continued)

John Cheng: Thinking of getting a few peeks in with the small refractor, I snatched a look at (1) Saturn: with seeing just fair, I saw one prominent band visible and Titan conspicuous to the west (2) Our moon, the terminator, approaching Messier and Messier A looking much like the comets that brought its namesake to fame and very prominent, Vallis Rheita, named for Anton von Rheita, a Czech astronomer and optician born in 1597 who (wonderful fact) made the telescope that was used by Kepler and (3) Thanks to James Schultheis. R Leporis (still relatively dim) and, therefore, still quite red even at low magnification is a beautiful sight. Catch it if you can. I was about to make a magnitude estimate for posting to the AAVSO site...and then the clouds came. I'll grab a snack and maybe catch a break, literally and figuratively.

Tom Reiland: I wasn't expecting to see the ISS tonight because of the local weather forecasts. They were wrong, again! It was fun watching it light up the thin clouds as it passed above them. I was able to watch from the time it broke through the clouds in the WNW at thirty degrees altitude until it disappeared behind the trees on the hill to my ESE at fifteen-degrees' altitude. It was easily brighter than Jupiter's average magnitude and maybe a magnitude fainter than Venus. There was no way I could have seen M31 under these conditions, especially in the moderately bright twilight.

Glen and Sheri Rockhill: It is nice to enjoy a clear, crisp morning or two and it is even nicer when there are bright objects, and summer constellations rising in the east.

For the last two days Sheri and I have noticed in the SE a pair of objects, a bright, bold one about 30-35 degrees' altitude and a dimmer reddish one about 2-3 degrees below and to the right. Initially, I thought it might have been Venus and Mercury, but that would make Mercury visible about four days earlier than projected and way above it's maximum altitude in the morning or evening sky.

So, curiosity finally got the best of me and I checked the sky map out on Heaven's Above. The two objects are either Jupiter and Antares or Jupiter and Mars. Both fainter stars are known to have a reddish tint. (Funny that huh?) I am still having trouble estimating distances from a paper chart to the night sky, but I'm leaning more towards the pairing being Jupiter and Antares rather than Mars based on the distance on the chart.



Comet Swan and M13 by James Schultheis October 2006



Moon Halo by Dave Smith January 3, 2007

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