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## Your Daily Dose of Astonishment

by Diane K. Fisher

As a person vitally interested in astronomy, you probably have the Astronomy Picture of the Day website at [apod.nasa.gov](http://apod.nasa.gov) set as favorite link. APOD has been around since practically the beginning of the web. The first APOD appeared unannounced on June 16, 1995. It got 15 hits. The next picture appeared June 20, 1995, and the site has not taken a day off since. Now daily traffic is more like one million hits.

Obviously, someone is responsible for picking, posting, and writing the detailed descriptions for these images. Is it a whole team of people? No. Surprisingly, it is only two men, the same ones who started it and have been doing it ever since.

Robert Nemiroff and Jerry Bonnell shared an office at NASA's Goddard Space Flight Center in the early-90s, when the term "World Wide Web" was unknown, but a software program called Mosaic could connect to and display specially coded content on other computers. The office mates thought "we should do something with this."

*(continued on Page 3)*

## President's Corner

by Gordon Hansen

Spring is upon us - daylight savings time started - maybe the persistent cloud deck will get the hint and BE GONE! I probably complain every winter that this was the worst ever, but, this year was.

The clouds did finally part and in time to get a couple of nights clear enough to see comet C/2011 L4 (PanStarrs.) A group of 8-9 of us gathered on the hill of the Allen Park shopping center and it finally emerged from the glow of the setting sun at around 8:15. It definitely was not a naked eye object - binoculars or a scope were required despite some of the hype over the last few months. Several images are posted on the Yahoo message board it you missed them.

In case you hadn't heard by now, elections were held at the January meeting. Your four officers from last year were re-elected for another term: Jon Blum as Vice-President, Doug Bauer as Secretary, Chuck Jones as Treasurer, and yours truly as President.

*(continued on Page 2)*

# STAR STUFF

March 2013 - Vol. 23 No 3

STAR STUFF is published eleven times each year by:

**FORD AMATEUR ASTRONOMY CLUB**  
P.O. Box 7527  
Dearborn MI 48121-7527

PRESIDENT: Gordon Hansen  
VICE PRESIDENT: Jon Blum  
SECRETARY: Doug Bauer  
TREASURER: Chuck Jones  
WEBMASTER: Greg Ozimek  
NEWSLETTER EDITOR: Jennifer Zdanowski

## Club Information:

The Ford Amateur Astronomy Club (FAAC) meets on the fourth Thursday each month, except for the combined November/December meeting on the first Thursday of December - at Henry Ford Community College Administration Services and Conference Center in Dearborn. Refer to our website for a map and directions ([www.fordastronomyclub.com](http://www.fordastronomyclub.com)).

The FAAC observes at Spring Mill Pond within the Island Lake State Recreation Area near Brighton, Michigan. The club maintains an after-hours permit, and observes on Friday and Saturday nights, and nights before holidays, weather permitting. The FAAC also has use a private observing site near Gregory Michigan and Lake Erie Metro Park. See the FAAC Yahoo Group\* for more information.

Observing schedules and additional info are available on our website, or via the FAAC Yahoo Group.\* Or call the FAAC Hotline, for info and leave a message, or ask questions: 313-757-2582. or send email inquiries to [info@fordastronomyclub.com](mailto:info@fordastronomyclub.com).

Membership in the FAAC is open to anyone with an interest in amateur astronomy. The FAAC is an affiliate of the Ford Employees Recreation Association (F.E.R.A.). Membership fees:

Annual - New Members: \$30 (\$15 after July 1)  
Annual - Renewal: \$25 (\$30 after January 31)

Membership includes the STAR STUFF newsletter, discounts on magazines, discounts at selected area equipment retailers, and after-hours access to the Island Lake observing site.

## Astronomy or Sky & Telescope Magazine Discounts

Obtain the required form from the FAAC club treasurer for a \$10 discount. Send the completed form directly to the respective publisher with your subscriptions request and payment. Do not send any money directly to the FAAC for this.

## Star Stuff Newsletter Submissions

Your submissions to STAR STUFF are welcome! Send your story and/or images to the editor at [jenzdanowski@yahoo.com](mailto:jenzdanowski@yahoo.com). Email text or MS Word is fine. STAR STUFF will usually go to press the weekend prior to each general meeting. Submissions received prior to the 15th can be included in that issue.

\* FAAC Members are welcome to join our Ford Astronomy Club Yahoo!Group. Messages photos, files, online discussions, and more! URL: [groups.yahoo.com/group/FordAstronomyClub](http://groups.yahoo.com/group/FordAstronomyClub).

## President's Corner

(continued from Page 1)

I would like to thank all of you for the confidence you've placed in us. A big thank you needs to go out to all of the other's who make this club tick. The list of people who volunteer at events and actively support the club is too long for this space, but I do want to acknowledge those who come to the Board meetings on a regular basis and provide input and their efforts to keep this club functioning: Dan Barriball, Dennis Salliotte, Don Klaser, Frank Ancona, George Korody, Pat Korody, Greg Ozimek, Jim Frisbie, John Schroer, Ken Anderson, Greg Knekleian, Bob FitzGerald, and Tim Campbell. The Board meetings are held on the first Thursday of each month. All club members are welcome. If you like what we're doing come and join us and we'll do more!

We're still finalizing the program for the club banquet, but please mark your calendar. The event will be held once again at Karl's Cabin, 6 PM on May 4th. Cost is \$35/person (same as last year!) Our dinner speaker this year will be Matthew Linke from the U of M Planetarium.

*This months background photos of the moon Page 1 courtesy of John Kirchhoff. See more of John's photos at:*

<http://www.flickr.com/photos/33926475@N06/with/4311533997/>



*The January 20, 2013, Astronomy Picture of the Day is one that might fall into the “quirky” category. The object was found at the bottom of the sea aboard a Greek ship that sank in 80 BCE. It is an Antikythera mechanism, a mechanical computer of an accuracy thought impossible for that era. Its wheels and gears create a portable orrery of the sky that predicts star and planet locations as well as lunar and solar eclipses.*

## Your Daily Dose of Astonishment

*(continued from Page 1)*

Thus was conceived the Astronomy Picture of the Day. Now, in addition to the wildly popular English version, over 25 mirror websites in other languages are maintained independently by volunteers. (See [http://apod.nasa.gov/apod/lib/about\\_apod.html](http://apod.nasa.gov/apod/lib/about_apod.html) for links). An archive of every APOD ever published is at <http://apod.nasa.gov/apod/archivepix.html>. Dr. Nemiroff also maintains a discussion website at <http://asterisk.apod.com/>.

But how does it get done? Do these guys even have day jobs?

Dr. Nemiroff has since moved to Michigan Technological University in Houghton, Michigan, where he is professor of astrophysics, both teaching and doing research. Dr. Bonnell is still with NASA, an astrophysicist with the Compton Gamma Ray Observatory Science Support Center at Goddard. APOD is only a very small part of their responsibilities. They do not collaborate, but rather divide up the calendar, and each picks the image, writes the description, and includes the links for the days on his own list. The files are queued up for posting by a “robot” each day.

They use the same tools they used at the beginning: Raw HTML code written using the vi text editor in Linux. This simple format has now become such a part of the brand that they would upset all the people and websites and mobile apps that link to their feed if they were to change anything at this point.

Where do they find the images? Candidates are volunteered from large and small observatories, space telescopes (like the Hubble and Spitzer), and independent astronomers and astro-photographers. The good doctors receive ten images for every one they publish on APOD. But, as Dr. Nemiroff emphasizes, being picked or not picked is no reflection on the value of the image. Some of the selections are picked for their quirkiness. Some are videos instead of images. Some have nothing to do with astronomy at all, like the astonishing August 21, 2012, video of a replicating DNA molecule.

Among the many mobile apps taking advantage of the APOD feed is Space Place Prime, a NASA magazine that updates daily with the best of NASA. It's available free (in iOS only at this time) at the Apple Store.

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*

## Treasurer's Report March 6, 2013

By Chuck Jones

5:23 PM  
03/06/13  
Accrual Basis

Ford Amateur Astronomy Club  
Balance Sheet  
As of March 6, 2013

Mar 6, 13

### ASSETS

#### Current Assets

#### Checking/Savings

CD 200599272	1,056.86
CD 205196033	1,002.01
CD 89265268	1,102.84
Checking	1,556.51

#### FAAC Savings

Equipment	1,247.08
Scholarship	303.06

Total FAAC Savings 1,550.14

Petty Cash Account 130.20

Total Checking/Savings 6,398.56

#### Other Current Assets

GLAAC 1,863.35

Total Other Current Assets 1,863.35

Total Current Assets 8,261.91

**TOTAL ASSETS 8,261.91**

### LIABILITIES & EQUITY

## Club Wear

You can purchase clothing with our FAAC club logo on it from either one of two sources. You can buy from Diane Worth, by calling her at 248-980-7832. Or you can order online from LL Bean, using the instructions contained in a file that you can view on our club Yahoo Group website Club Wear file folder at

<http://tech.groups.yahoo.com/group/FordAstronomyClub/files/Club%20Ware/>

## Meeting Agenda - March 28th

HFCC – Berry Auditorium -Admin. Services & Conference Center [www.fordastronomyclub.com](http://www.fordastronomyclub.com)  
5:30

### Opening/Introduction/Member Observing

#### Main Presentation:

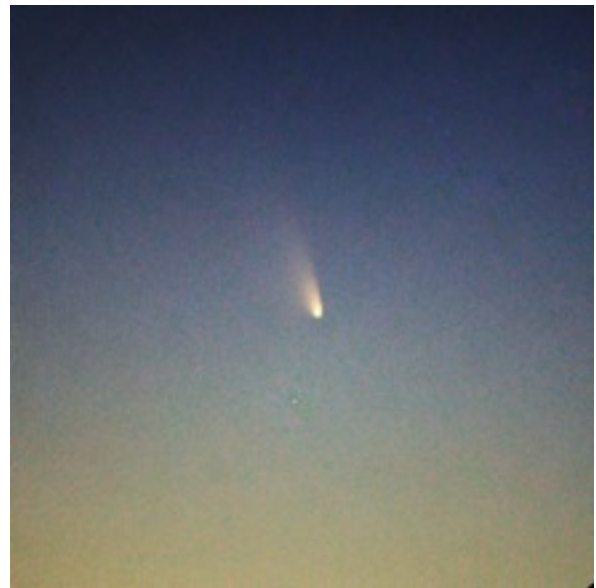
Planetarium-Spring Show

Steve Murrell

### Club Projects/Committees/Member Support

### Club Business/Secretary/Treasurer/Equipment Reports

## Member Photos



Above, photo taken by Brian Kutscher of Comet PanSTARRS on March 14th at 8:34 pm from "The Hill" in Allen Park, MI. It was made with a Canon EOS 30D digital camera, fitted with a 70-300 mm Canon zoom lens, set at 300 mm. It was a single five second exposure, with the lens set at f/5.6. Because the Canon 30D is not a full frame sensor camera, the effective focal length of the lens is 500mm. Because the image is cropped, the field of view is about what a very "fast" 875mm lens would show to a viewer. The camera was piggyback mounted on an 8 inch Celestron telescope with an Orion equatorial mount, which kept the camera pointed at the target for the five second exposure.



## Astro Imaging SIG

Gordon Hansen

All are invited to join us in the Astro Imaging SIG meetings, to share and discuss images, experiences, and techniques.

We always have a good time, with lively discussion, and sharing of valuable information.

Next meeting is **April 11th**. The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

## FAAC Events 2013

**Saturday, May 4th - Club banquet**

**Friday April 5th & Saturday April 6th - Lake Hudson – Dark Sky Observing and Messier Marathon**

**Friday April 12th - Lake St. Claire: Sidewalk Astronomy**

**Saturday April 20th - Astronomy Day (Beginner's Night)**

**Day: Mich. Science Center & Kensington**

**Night: Island Lake**

**Saturday May 4th - Club Banquet**

*Background Photo from Lunt Solar Scope Image taken at the Hector J Robinson Observatory, June 28, 2010*

## One FAAC members blog

<http://hjrobservatory.blogspot.com/>

A few updates on the observatory, quick articles and photos. I'll try to improve my writing on this blog. Also, I try to keep daily updates on this blog. - Greg Knekleian, HJRO volunteer.

## Topics, Topics? Meeting Topics

by Greg Ozimek

Frank Ancona is one of our "behind the scenes" members who keeps part of our club rolling along. For the past 2.5 years Frank has volunteered to find, vet, and schedule speakers to present a main topic and a Tech Talk for all of our monthly meetings.

When I spoke with Frank he said he'd like to know more of what our membership would like to hear presentations on at the monthly meetings. He's looking for astronomy topics. Just topics.

Personally, I don't know how he does it or how he has been doing it for our monthly meetings, every meeting, for so long.

Jim Frisbie held the reins for two years and Frank volunteered alongside Jim, overlapping one year. Both members worked together, learning as they went along, locating, and interviewing potential speakers, then scheduling them.

Would you take a few days and write down ideas for topics for speakers then send them to Frank. It would be a welcomed assist. Just come up with a few topic ideas you'd like to know more about. That's it. Just topics.

I've set up a special email address to make it easy to send all of your topic ideas to Frank: [meetings@fordastronomyclub.com](mailto:meetings@fordastronomyclub.com).

If you have a topic and can suggest a speaker/presenter, that'd be awesome. If you would like to volunteer to talk for 45 minutes for a main presentation, or 10-15 minutes for the Tech Talk, that would be sweet. Let Frank know.

And if you liked a particular presentation, take a few minutes to thank Frank next time you see him.

# FAAC General Meeting Minutes February 28th, 2012

By Jim Frisbie

## Opening:

The meeting was called to order in the Berry Auditorium at 5:30 pm by President, Gordon H. All attendees introduced themselves. Members contributed their observing experiences. George K. talked about the Comet PanSTARRS. Gordon welcomed new members & guests.

## Whats Up in March?

President Gordon H. presented interesting objects for viewing in March.

## Main Speaker:

"The Light Fantastic" by Prof. Claud Pruneau, Department of Physics & Astronomy, Wayne State University.

## Business Meeting:

- Secretary's Report in Star Stuff
- Treasurers Report in Star Stuff

There was concern raised about approving both reports due to late posting of Star Stuff prior to the meeting.

## Projects and Events:

- Mar. 16, 9 am-3 pm.: FAAC Swap Meet (see flyer on Club sites).
- Mar. 23: Seven Ponds Event with NASA Representative.
- April 12: Lake St. Claire: Sidewalk Astronomy
- April 20: Astronomy Day (Beginner's Night)
  - Day: Michigan Science Center & Kensington
  - Night: Island Lake
- May 4, 6 pm-?: FAAC Banquet, at Karls' Kabin, (See flyer on Club sites).
- May 5: Sean FitzGerald's Memorial at the Gaelic League in Detroit
- May 10 & 11: Point Crescent State Park in the Thumb

President Gordon opened the subject of having a Dark Sky Observing Session around the new Moon during the warm weather months. Discussion will be continued during a future meeting.

George & Pat Korody requested prize donations to be presented at the Club Banquet.

The meeting was closed by President, Gordon H. at 7:40pm.

## FAAC Equipment List 3-13-13 provided by Dennis Salliotte

Item	Currently Held By:	Date Last Verified
<b>Telescopes</b>		
4" Dobsonian	George Korody	2/7/13
4 1/2 " Galileo Alt/Az Reflector	James French	3/7/13
8" Orion 8XTi Dobsonian	Matthew Kehoe	1/19/13
<b>Presentation Tools</b>		
Projector	Gordon Hansen	2/7/13
Projection Screen	Bob MacFarland	1/10/13
Speaker System w/wireless mic	Bob MacFarland	1/10/13
Bullhorn	Gordon Hansen	2/7/13
DVD Player	Gordon Hansen	2/7/13
<b>Demonstration Tools</b>		
Weight On Planets Scale	George Korody	2/7/13
Lunar Phase Kit	Bob MacFarland	1/10/13
100 ft Scale Model Solar System Kit	Bob MacFarland	1/10/13
<b>Display Items</b>		
Astronomy Event Sign (3' X 6')	Greg Knekleian - HJRO	1/7/13
PVC Display Board - Folding	Gordon Hansen	2/7/13
Banner - Large (32" X 16')	Bob MacFarland	1/10/13
Banner - Medium (24" X 48")	Bob MacFarland	1/10/13
Banner - Small (24" X 32")	Bob MacFarland	1/10/13
Tri-Fold Presentation Boards	Don Klaser	1/13/13
Tri-Fold Poster Board (Early Club Photos)	George Korody	2/7/13
<b>Other</b>		
Sky Quality Meter	Syed Saifullah	3/8/13
Canopy (10' X 10')	Greg Ozimek	2/7/13
Equipment Etching Tool	Dennis Salliotte	2/14/13

## Northern Cross News: Renovation at NCO

By Doug Bock

On September 29th, a small crew of enthusiasts from the Warren Astronomical Society, the Ford Amateur Astronomy Club and some "members at large", joined us here at NCO, for a renovation of the observatory. This weekend event even included a gentleman (Brad) from Canada with construction skills that were much needed for the activities. Brad arrived on Friday the 28th, since his trip was the longest, about 4 hours. The following morning (Saturday the 29th) we headed out to breakfast at the local Coney Island, and returned just in time to meet up with several others whom had arrived. The first order of business was to take down the trees, bushes and brush that had accumulated over the past couple of years.



This took most of the morning, with chainsaws, a tractor, pruning shears and a bit of muscle power to complete. But once cleared, we could finally get into the building.

The next piece of work was to determine the condition of the roof, and decide how to repair what was needed. The Foreman (Brad) made the decision that we would remove the old roof (28 years), and put all new in place. The trusses would have the rotted portions removed, and replaced with new supports, and all new sheathing and shingles.

The supply officer then had to make the run to Home Depot, to purchase all the materials, while the demolition crew started in. While they were cutting out the roof, we purchased 5 sheets of plywood, 5 bundles of shingles, nails, screws, 2x4's, 2x6's and some work gloves. By the time we returned from the store, the roof was off, and ready for new components. BTW, for those that were there, don't tell the reader that it wasn't necessarily just one trip to Home Depot. I'm merely summarizing the net collection of assets that were purchased.



The work team then started in on the bracing cuts of

2x4's for reinforcing the trusses. Once that was done, we broke for lunch.



Now it was time to put up the sheathing.



This was the end of Saturday's work, since we lost daylight.

The next morning, breakfast was served. Doug made pancakes and bacon for the team.



We continued with the roofing of the observatory. Once all the shingles were up we called it a day. This was mid afternoon on Sunday, and our work group headed home. Brad made it home in 3 hours and 15 minutes. Hmmm, he must not have had any traffic or patrols along the way.





## Northern Cross News: Renovation at NCO

By Doug Bock

(continued from Page 7)

The next task was taken on the following Thursday, where we painted the observatory. It had been about 15 years since the last coat was applied.



We then had to remove the pier that the 10" wedge was on, to allow us to put the new 14" telescope in place, which was previously purchased in July. The photo below is with the observatory in the open position.



Dale and I now contemplate what to do next. Oh, that's right; the scope needs to go in.

The following Saturday my son and I moved the 14" into place. One other item that I did was meet with Clay Kessler about putting a low profile mount in place. We talked about some possibilities, took some measurements, and Clay left with a good idea of what I was looking for. That upgrade will be done in the next few months I would suspect, once Clay has some time. In the meantime, the scope will merely sit on the observatory floor, and I'll have to deal with the "flex" of the floor showing up in the eyepiece.



This is the current telescope located in the observatory. It is the Orion XX14g Dob.

### The Telescopes @ NCO

Although we've had several telescopes through the years, the 12" f/6 Newtonian, the 20" Obsession Dob, and the LX200 10", the latest is an Orion XX14g Dob, delivered on July 3rd, 2012, and has already been used at the Great Lakes Star Gaze, and at the Cadillac West Fall star party. The NCO will be its home when not travelling.

This telescope is an alt-az dobsonian, with dual motor drives, 2 pairs of encoders, and a computer hand controller. This setup allows the user to either move the scope with computer control, or by hand, without losing sky positioning. In addition there is a wireless hub for connection to an IPAD, and with control software called StarSeek 3, this allows wireless control with a very nice GUI. All objects are at ones fingertips. I also "modified" a Kendrick Dew zapper, which was initially for the 10" lx200, but has been repurposed for this scope. The setup also has a Glatter 2" laser collimation tool set, a battery pack for powering the telescope, heaters and the hub, and there are carrying cases for the components when we travel.

The optics are very nice, the pointing accuracy is good, and the tracking works well, which enables a very enjoyable night of observing at the eyepiece.

(continued on page 12)



## HJRO Update

by Greg Knekleian

### NEW COMPUTER SETUP

Hector J Robinson Observatory has a new computer thanks to Tim Campbell who donated a Mac Mini to the school system. Tim Campbell, Tim Dey and George Korody also worked on installing and setting up software so this computer can run both Windows 7 and Mac OSX. The Mac OSX partition will be used to run streaming video of activities which the school or others might watch for special observing events.

During the install the telescope mount was losing it's connection to the computer. The problem was a low battery in the Losmandy goto controller. Tim also replaced that as well.

We had a successful math night at the middle school, but the event was somewhat undermined by poor event planning. Tim Campbell and Sandra Macika both prepared and gave presentations, but the school changed the format and had some prize winning contests in a general area, with games and prizes running during the entire event. A lower turnout occurred as well, likely because free food and snacks were not offered as in the Science night. Kids didn't want to miss the chance at winning prizes and money by attending the presentations away from the general display area.

Due to good turnout and interest in viewing Comet Panstarrs in Allen Park, I missed the Math night event on Thursday March 14.

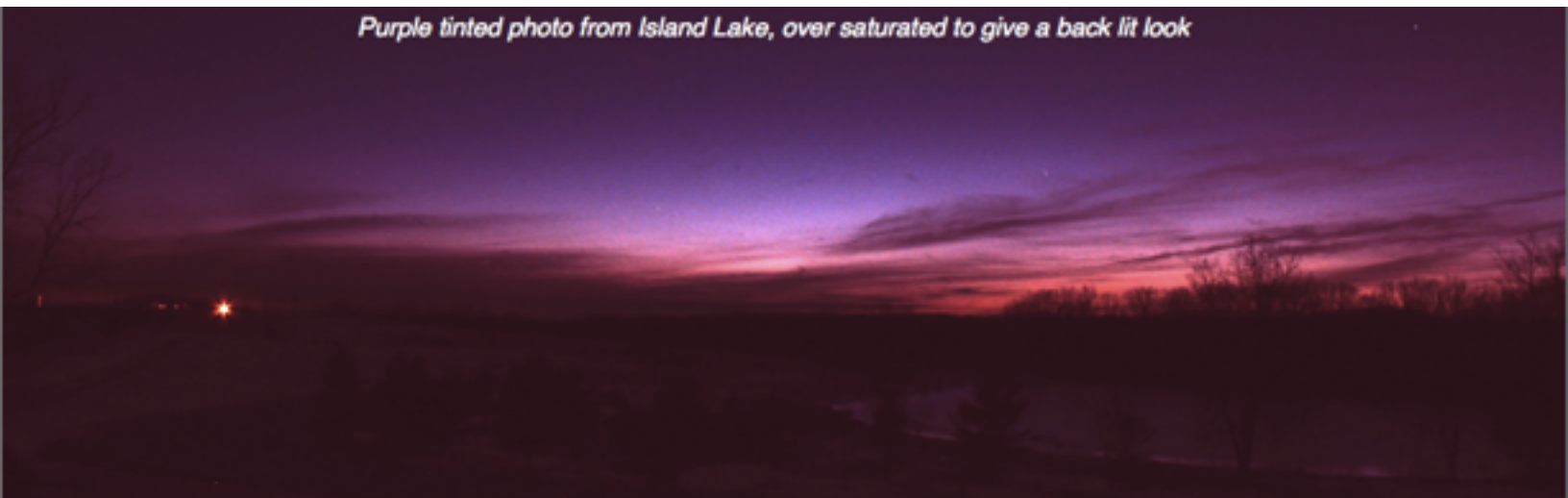
We had some viewing at HJRO, but most of my viewing this month has been at remote locations looking at Comet (2011 L4) Panstarrs. Panstarrs is a compact bright comet with a short 2 degree tail. (On Sunday March 17 2013, the comet's tail looked brighter than the cloud surrounding M42.)

The comet was visible from urban skies, but we needed a low horizon. In Allen Park, on a hill near Meijers, there is a low western horizon. Planes from Metro Airport provide interesting traffic and at times contrails which may create interesting sights for photography or live viewing. Using binoculars, many saw Panstarrs in the same field of view as a passing jet aircraft from the Allen Park location.

Allen Park is about ten minutes from HJRO, we can leave the Allen Park site and quickly continue observing at HJRO. Another nice thing about the Allen Park site is plenty of visitors pass by and some will stop and view or ask questions. The flow of visitors is moderate allowing for a good mix of observing and sidewalk astronomy. Forget viewing faint objects at this location, bright street lights and sky glow reduce the locations usefulness for normal viewing. We have looked at the moon, M45, M42 and Jupiter from this site. Some have also viewed Mercury and a partial solar eclipse from there in the past.

**Panstarrs Update:** The comet is getting twice as dim each day now. Perhaps suitable for imagers in dark skies. It's much worse for visual observers in urban skies now.

*Purple tinted photo from Island Lake, over saturated to give a back lit look*



## HJRO Update (continued)

**Allen Park:** The first time I tried to view the comet was on Friday, March 8, 2013: I had three telescopes which I setup. We had a large turnout, but the comet was not high enough above the horizon and low clouds to view. We showed visitors brighter objects which were easy to view.

**HJRO:** On Thursday(3-13): Tim Dey, Timothy Campbell, Sandra Macika and Jim Barnes saw the comet through 10 by 50 binoculars at HJRO after the math night presentation. Some regular visitors and plenty of new visitors have looked at the comet as well.

**Allen Park:** Wednesday(3-13) and Thursday (3-14) some of us successfully saw the comet in Allen Park on the hill. FAAC members visiting the Allen Park site in March include: Rick Arzadon, James French, Art Parent, Brian Kutcher, Timothy Dey, Gordon Hanson, Greg Ozimek, Matthew Kehoe.

The hill was partially covered with snow. Walking up the hill a few times with a reduced setup took some time and energy. The Allen Park location for low horizon viewing has a small parking lot that holds only eight cars, but you can unload immediately and view near your car.

Visitors at the Allen Park site will often stay around a chat a while, but don't hog the eyepiece views. We get 10 to 20 visitors per hour when we have more telescopes setup at the Allen Park location.

One visitor, Erin, followed Rick and I out to HJRO to get a tour of the observatory. Erin seems to have a budding interest in Astronomy and asks questions about astrophotography via email. He's visited the Allen Park site a couple of times now while we were observing.

## Observing Panstarrs from Island Lake

Sunday March 17: Forecasts were mixed for the Allen Park location. Ken Anderson and George Korody were mentioning plans to view the comet near Island Lake. Clouds and weather seemed thick in the downriver area, so I decided to change plans and go to Island Lake.

I was running a little late, arriving shortly after sunset. Ken Anderson was up on the hill behind the parking lot, which overlooks the pond and tree line in the distance.

From the Mill Creek pond parking lot we have only a six degree horizon to the west. Climbing the hill is a chore, but we can see much further down at Island lake. Allen Park's, western horizon is lower, but brighter. I was able to view the comet when it was only .48 degrees above true horizon in Allen Park. At Island Lake the comet looked awesome through my BT-80 binoculars, while viewing it low behind the trees one could see the foreground, middle ground branches and the comet hanging far off behind them.

Clouds moved in quickly Sunday at Island Lake, so we only stayed about 30 minutes after the comet hit the tree line. George ended up staying at home, trying to see the comet from his house, but trees ruined his viewing attempt.

## Many FAAC members have seen Panstarrs

Some others have reported seeing the comet from other locations. Some club members have taken and posted or emailed photos from local Panstar viewing experiences. So far I've seen photos from comet adventures from: Tony Licata, Brian Kutcher and Jim Kulfisyk forwarded some photos a friend took from a farm in Whitmore Lake. Syed Saifullah also sent some wide screen photos of locations where he's seen the comet.

*FINDING PANSTARS: Obviously, with an early alignment, a goto mount might find the comet. A well aligned Alt/Azimuth mount with setting circles might work if you have the location of the comet. Mounts requiring a two star alignment may not work well, because there are no stars to "align on" before sunset.*

## HJRO Update (continued)

### PANSTARRS MOVES NORTHWARD

Late March Comet 2011 L4 Panstarrs will be about ten degrees above the true west horizon at sunset. It's moving further north each day from the solar ecliptic. It's getting fainter each day as it's moving further away from the sun.

My photos were all taken using a fixed tripod without tracking. Fixed mounts will limit the exposure time, tracking mounts will provide more detail with longer accurate tracking. A four second exposure was used for my "wide" photos. (Canon T1i at 1600 ISO F5.6 or F7.1). Lens was set to 55mm (equal to 88mm for a 35mm camera). Using a 3200 ISO setting should show a brighter comet. Greg Ozimek shared a tip of using a smaller aperture settings: F7.1 for the Canon EOS T1i. It will provide a "deeper depth of field" and "better chance at a sharp focus". Full frame modern DSLR sensors "may get away with F11 aperture settings".

The close up view (inset photo) was taken with the Canon T1i mounted on a Nexstar 4SE. The Canon T1i (3/4 frame sensor) gives 42x when mounted on the Nexstar 4SE. The photo was cropped for the insert. At 42x my photos had to be a second or less to remain sharp.

Some FAAC members have better photos of comet Panstarrs, thanks to tracking mounts and longer exposures. On paper, the comet would seem to be easy to view with the naked eye, but sky glow has limited actual viewing and few see it without optical aids. Later in the month, the comet will be visible in the morning and in the evening. The comet is moving toward the pole star, so it's moving toward a more circumpolar position. This means it will be visible before sunset and also before sunrise near the end of the month, but it will be much fainter.

**Panstarrs fades fast:** We were unable to find it visually at the Allen Park Site 3-22-2013 without the aid of a computer monitor and Canon EOS camera. At Mag 3 in bad dusk skies, gave much poorer views. "C14 equaled 10 by 50 bins at mag 1.1"

### Photos vs. "naked eye".

My photos were processed to show the comet. (You will want binoculars at least to get decent views of the comet.)

The first (purple tint) photo was over saturated and is more "artistic" than accurate, the other photos have more color accuracy. Visually, Ken Anderson was surprised how bright the comet looked. It seemed brighter to us than the predicted magnitude 1.7 for Sunday. It's difficult to judge the comet's magnitude, against bright dusk sky glow.

Processing stacked images may be more challenging, because the comet is moving and sky brightness is changing with each exposure.

Others in the club have taken brighter photos. One visitor, Erin, claimed to have shot a timed exposure using a basic digital still camera on a tripod. I didn't review his image.

With 80mm binoculars, I could see the comet as early as 8PM about a half hour after sunset, Wednesday (3-14-2013). The comet was difficult to see or find with 10 by 50 binoculars until the sky was much darker. Most of the time we have not seen the comet until nearly 8:30PM. With a group of people together you have more eyes looking for the comet and may find it more quickly.

On Thursday 03-14-2013 we had the exact location of the comet, via Sky Safari, but could not locate it at 8PM. Many of us were scanning the skies. After several minutes, I wondered if anyone would actually find it. Finally at about 8:20PM, Gordon found it using 10 by 50 binoculars and directed us to it's location.

### Another Tip: Imaging as a finder

A laptop and a EOS utility program to control a DSLR should work as a great digital finding aid.

With a laptop/Canon EOS, you should find it before your friends can with their binoculars. You'll need a big screen to spot the faint comet on from a wide field exposure. *(Don't use the back of your camera to "find the comet".)*



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## Northern Cross News: Renovation at NCO

By Doug Bock

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Even though I've spent 40 years star hopping, I do like the idea of scrolling around the sky on my iPad, select an object on screen, and pressing the go to button and watching the scope just slew to it. I'm now spending much more time looking at things, than hunting them down.

Some recent observations, were of Comet 168P/Hergenrother, which brightened to about 10th magnitude for some time. Of course there has been the usual deepsky and planetary viewing. For example, one night in October, we looked at Neptune, Uranus and Jupiter, while hunting some DSO's (Deep Sky Objects) all night.

The renovation took about 4 days of work, and I'd like to thank the following for all their hard work with this project. If I forget someone, I apologize in advance.

Brad Wilson, Gary Billups, Joe Tocco, Dale Thieme, Jonathan Kade, Tom Jatkowski, Jason Capps, Stephanie Bock, Dan Bock, Robin Bock.

If you're interested in keeping up with what's going on @ NCO, checkout out any of the following links.

[Http://www.boonhill.net/](http://www.boonhill.net/) - our website

<https://www.facebook.com/BoonHill> is our Face Book page for NCO

<https://www.facebook.com/groups/369811479741758/> is our BoonHill.net "Group" with over 50 members thus far.

Cheers, clear skies, and keep looking up.

Doug Bock