

# STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 21, Number 2

February 2012

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# The Hidden Power of Sea Salt, Revealed

Provided by: Nasa Space Place

Last year, when NASA launched the Aquarius/SAC-D satellite carrying the first sensor for measuring sea salt from space, scientists expected the measurements to have unparalleled sensitivity. Yet the fine details it's revealing about ocean saltiness are surprising even the Aquarius team.

"We have just four months of data, but we're already seeing very rich detail in surface salinity patterns," says principal investigator Gary Lagerloef of Earth & Space Research in Seattle. "We're finding that Aquarius can monitor even small scale changes such as specific river outflow and its influence on the ocean."

Using one of the most sensitive microwave radiometers ever built, Aquarius can sense as little as 0.2 parts salt to 1,000 parts water. That's about like a dash of salt in a gallon jug of water.

"You wouldn't even taste it," says Lagerloef. "Yet Aquarius can detect that amount from 408 miles above the Earth. And it's working even better than expected."

Salinity is critical because it changes the density of surface seawater, and density controls the ocean currents that move heat around our planet. A good example is the Gulf Stream, which carries heat to higher latitudes and moderates the climate.

"When variations in density divert ocean currents, weather patterns like temperature and rainfall are affected. In turn, precipitation and evaporation, and fresh water from river outflow and melt ice determine salinity. It's an intricately connected cycle."

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### **President's Corner**

By Gordon Hansen

This begins my second year as your club president. The elections, held during the January meeting, returned all of last year's officers.

Jon Blum is our Vice-president Doug Bauer is Secretary Chuck Jones is Treasurer

I'm sure I speak for the other officer's in thanking you for once again trusting us with leading FAAC!

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# STAR STUFF

February 2012 - Vol. 22 No 1

**STAR STUFF** is published eleven times each year by:

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

PRESIDENT: Gorvice PRESIDENT: Jon SECRETARY: Dou TREASURER: Chu WEBMASTER: Grev NEWSLETTER EDITOR: Jenr

Gordon Hansen Jon Blum Doug Bauer Chuck Jones Greg Ozimek 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 (<a href="https://www.fordastronomyclub.com">www.fordastronomyclub.com</a>).

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: 248-207-2075. or send email inquiries to fordastronomy@comcast.net.

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 <a href="mailto:jenzdanowski@yahoo.com">jenzdanowski@yahoo.com</a> 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.

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/

## **Presidents Corner**

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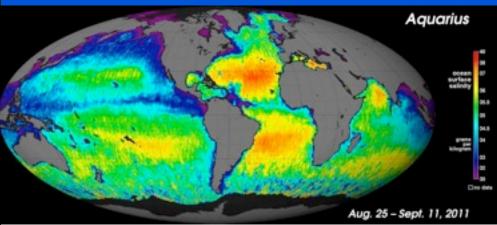
I need to also say a big thank you my fellow officers and to the those who show up regularly for board meetings: Dennis Salliotte, George & Pat Korody, Deanne Bauer, Bob & Holly MacFarland, John Schroer, Frank Ancona, Jim Frisbie, Greg Ozimek, Greg Knekleian, Don Klaser, and Ken Anderson. This is the group of people that make this club tick and my job a whole lot easier. Board meeting are open to all club members. If you'd like to get more involved – please join us. Board meeting are the first Thursday of every month, 5 PM, at Senate Coney Island at Rotunda and Evergreen in Dearborn.

The January FAAC general meeting was the highest attendance meeting in a long time, more than 50 people showed up (compared to the typical count of about 35.) I'm not sure what brought every one out: Dave Cinabro's talk – Doomed, Insignificant, and Ignorant, the elections, or the pizza and pop? Whatever it was keep coming! It was great to have a SRO only crowd.

REMINDER: If you haven't paid your dues, you are now late and the price went up to \$30. Hopefully, it was an over-site because we don't want to lose you.

I mentioned last month the tentative schedule for Beginner's Nights. The dates are now finalized: April 28th, May 26th, June 23rd, July 28th, August 25th (Club Picnic), and October 20th. At the January meeting I passed out cards asking for topics for the "How to" segment for each session. Telescope collimation, polar alignment, telescope transport, and star hopping were the big wants. If you have a good understanding of any of these topics and would like to pass on you knowledge please let me know. It would be good to get some insight on the topic of transport from people with a range of telescopes. The issues facing transport of a small wide field refractor and a big dob are unique. Multiple presenters for this topic would be in order.

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Aquarius produced this map of global ocean salinity. It is a composite of the first two and a half weeks of data. Yellow and red represent areas of higher salinity, with blues and purples indicating areas of lower salinity.

# The Hidden Power of Sea Salt, Revealed

(continued from Page I)

The atmosphere is the ocean's partner. The freshwater exchange between the atmosphere and the ocean dominates the global water cycle. Seventy-eight percent of global rainfall occurs over the ocean, and 85 percent of global evaporation is from the ocean. An accurate picture of the ocean's salinity will help scientists better understand the profound ocean/atmosphere coupling that determines climate variability.

"Ocean salinity has been changing," says Lagerloef. "Decades of data from ships and buoys tell us so. Some ocean regions are seeing an increase in salinity, which means more fresh water is being lost through evaporation. Other areas are getting more rainfall and therefore lower salinity. We don't know why. We just know something fundamental is going on in the water cycle."

With Aquarius's comprehensive look at global salinity, scientists will have more clues to put it all together. Aquarius has collected as many sea surface salinity measurements in the first few months as the entire 125-year historical record from ships and buoys.

"By this time next year, we'll have met two of our goals: a new global map of annual average salinity and a better understanding of the seasonal cycles that determine climate."

Stay tuned for the salty results. Read more about the Aquarius mission at aquarius.nasa.gov.

Other NASA oceanography missions are Jason-1 (studying ocean surface topography), Jason-2 (follow-on to Jason-1), Jason-3 (follow-on to Jason-2, planned for launch in 2014), and Seawinds on the QuikSCAT satellite (measures wind speeds over the entire ocean). The GRACE mission (Gravity Recovery and Climate Experiment), among its other gravitational field studies, monitors fresh water supplies underground. All these missions, including Aquarius, are sponsors of a fun and educational ocean game for kids called "Go with the Flow" at spaceplace.nasa.gov/ocean-currents.

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 February 9, 2012 By Chuck Jones

# Ford AmateurAstronomy Club Balance Sheet As of February 9, 2012

	Feb 9, 12
ASSETS	
Current Assets	
Checking/Savings	
CD 200599272	1,054.76
CD 89265268	1,099.56
Checking	2,029.89
FAAC Savings	458.67
Petty Cash Account	32.43
Total Checking/Savings	4,675.31
<b>Total Current Assets</b>	4,675.31
Other Assets	
Equipment	1,740.97
GLAAC	1,605.95
Scholarship	328.56
Total Other Assets	3,675.48
TOTAL ASSETS	8,350.79
LIABILITIES & EQUITY Equity	
Opening Balance Equity	8,439.30
Retained Earnings	-771.55
Net Income	683.04
Total Equity	8,350.79
TOTAL LIABILITIES & EQUITY	8,350.79

## Club Wear

To our "New and Current Members" Our club has "FAAC" Official Club Wear with our Logo Embroidered.

Anyone with an interest or need in FAAC Club Wear, I will be placing an order in the next few months, for more information please call me - Diane at 248 980-7832. The FILES section in the Yahoo group has a form noting each ITEM with PRICES. The listing name - "FAAC Club Wear" - please do not hesitate to call me.

Diane Worth

# Meeting Agenda - February 23th

HFCC – Berry Auditorium -Admin. Services & Conference Center <a href="https://www.fordastronomyclub.com">www.fordastronomyclub.com</a> 5:30

#### Opening/Introduction/Member Observing

## **Main presentation:**

HFCC Planetarium Dennis Salliotte

Club Projects/Committees/Member Support

- Swap Meet: March 10th
- March 31st: Lake St. Clair Metropark Sidewalk Astronomy 6:00pm – 12:00am
- March 31st: Kensington Metropark Nature Center (8 pm)
- April 14th Club Banquet
- April 28th Astronomy Day Kensington Metropark
- May 19th & 20th Kensington Metropark Heron Day. Daytime club solar observing
- June 5th Kensington Metropark East Boat Launch - Observe the Transit of Venus, 5:30pm – sunset
- Open Discussion

# Club Business/Secretary/Treasurer/Equipment Reports

# **Items For Sale**

**Celestron** 6x30 finder scope-\$25 **Starter scope** (similar to the Celestron power seeker) D=60mm F=700mm with tripod, and 3 lenses-\$50

For more information on these two items, please contact Lynn Spielman at: lynnscats@wowway .com

**Orion** 100 mm Achromat refractor, F6, with older CG4 equatorial mount. Diagonal and finder included. Asking \$250

Miscellaneous eyepieces and filters for beginners also available. Ask for \$\$

Call Tom Blaszak at 313.585.3351. key\_string\_guy@yahoo.com

**Meade Lightbridge Deluxe 12"** – F/5, 1524mm focal length. Purchased new last year. Perfect condition mechanically, optically and cosmetically. Big, clear deep sky views. Built-in battery powered cooling fan, two-speed Crayford focuser (1.25 / 2-inch). Easy to transport, set up collimate and use smooth as silk. Upgraded with Bob's knobs and heavier collimation springs. Includes shroud, cover, Telrad and secondary mirror heater. Over \$1000 invested, will sell for \$650.

Contact John Johnson at jjohnsonpub@yahoo.com or (248) 515-0014.

# **Astro Imaging SIG**

Gordon Hansen

The August meeting was held at HFCC in the Berry Amphitheater in Dearborn

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 12th.** The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

# FAAC Events 2012

February 28th-Plymouth Astrophotography

**March 1st-FAAC Board Meeting** 

March 10th-Ninth Annual FAAC Astronomy
Show and Swap Meet

March 10th-FAAC Swap Meet

March 22nd-FAAC General Meeting

March 31st-Lake St. Clair Metro Park, sidewalk
Astronomy

**April 12th-Astro SIG Meeting** 

April 14th- FAAC Banquet, at Karls' Kabin

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.

# **Items For Sale**

(continued from page 4)

**MEADE Telescope** and Tripod 6 years old - in excellent shape **LXD 75** - Series Schmidt - Cassegrain 8" f/10 SC-8AT (Super Coated, Autostar Guided) - Focal Length 2000 mm Telescope weight = 24 lbs - with MEADE EMC Super Multi-Coatings and with optional Ultra-High Transmission Coating Tripod weight = 45 lbs - Die cast Aluminum German-Type Equatorial Mount with Variable-Height Field Adjustments Autostar Controller guides to 30,223 objects

Includes a Sun Filter, Overnight Protective Cover, Transportation Containers. Contact phone no. 248-851-5053, e-mail robertboswell@comcast.net

### **Presidents Corner**

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Our next major event will be the Astronomy Show & Swap meet on March 10th. If you have some astro gear that's gathering dust why not turn them into cash. You can buy a sales table for \$20 at the door. I know there's something missing from your equipment list. Come on out and see if you can find a great bargain - admission is only \$5. I mentioned last month that we were having a silent auction. Unfortunately, logistics issues have forced us to pull the plug on this idea.

Once last item for those who attend the Astrophotography SIG meeting: HFCC is closed the second week in March for their break. Therefore, we will NOT have a meeting in March. The meeting in April will go on as scheduled.

# FAAC General Meeting Minutes January 26th, 2011

By Jim Frisbie-for Doug Bauer Secretary

# 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. Gordon welcomed new members & guests, discussed the Mentoring Program, and suggested interested individuals contact a Board Member.

# What's Up In December/January:

 John S. presented interesting objects for viewing in February

## **Main Program:**

Dave Cinabro, Professor, Wayne State University presented "Cosmology: Doomed, Insignificant, and Ignorant"

## **Business Meeting:**

Secretary's Report as published in StarStuff was approved.
Treasurer's Report was presented by

Chuck J. and approved.

#### **Election:**

Bob F. introduced the slate of officers for 2012 which included a re-up by each existing officer. The proposed slate of officers was approved by acclimation.

## **Upcoming Project and Events:**

Feb. 7, 6:30-7:30 pm: HJRO will be open on for a Science Fair.

Mar. 10, 9 am-3 pm.: FAAC Swap Meet (see flyer on Club sites).

Mar. 31, 6 pm-Midnight: Lake St. Clair Metro Park will present Sidewalk Astronomy. Mar. 31, 8 pm.: Kensington Metro Park, Nature Center Astronomy Program.

Apr. 14, 6 pm-?: FAAC Banquet, at Karls' Kabin, (See flyer on Club sites).

Apr. 28, 9 am-4 pm: Astronomy Day, Kensington Metro Park, Nature Center. Apr. 28: FAAC Beginners Night, Island

State Recreation Area, Spring Mill Pond. May 19-20: Kensington Metro Park, Heron Day, Solar Observing.

Jun. 5., 5:30 pm-Midnight: Kensington Metro Park, East Boat Launch, Venus Transit.

The meeting was closed by President, Gordon H. at 7:30pm.



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Telescopes • Lasers
Accessories

# The 9<sup>th</sup> Annual

# **Astronomy Show & Swap Meet**

Hosted by

Ford Amateur Astronomy Club (FAAC)

# Saturday, Mar 10, 2012 9:00 am - 3:00 pm

Holy Cross Church Gymnasium, 30650 Six Mile, Livonia, 48152

Included: ASTRONOMY PRESENTATIONS

At 10:00 am, 11:15am, 12:30pm, and 2:00

Planetarium Lectures @ 10am, 11am, 1pm, 2pm

# Earn Cash By Selling Your Extra:

Telescopes - Eyepieces - Cameras - Binoculars - Mounts Tripods - Software - Publications - Accessories, etc.

Or, locate that **special bargain** you might not otherwise find!

Admission: \$5.00 (children 15 and younger – Free /

must be accompanied by an adult)

**Sales Table:** \$15 in advance, or \$20 at the door as available, (one admission ticket included).

Advanced Registration ends Feb 15, 2012.

Doors Open: 8:00am for setup.

Make Checks Payable: to FAAC for advance admission or table registrations. Send payment to Ford Amateur Astronomy Club, P.O. Box 7527, Dearborn, MI 48121-7527

**Location:** Holy Cross Lutheran Church, 30650 Six

Mile, Livonia, 48152, north side of Six Mile, ½ mile

east of Merriman. See STAR on map.



For More Contact Jim via email: w8tu@comcast.net or call (734) 453-1422, or

Information: Frank Ancona via email: FrankAncona34@yahoo.com or call (248) 345-0176

# **HJRO Update**

By Greg Knekleian

## Large turnout highlights HJRO

Late January and early February 2012 was an exciting time at HJRO. The skies offered many good observing opportunities. The winter weather at times made longer sessions challenging.

#### **FEBRUARY 7th**

HJRO was the highlight of a science event at the middle school. We had ten FAAC astronomers show up. Ken Anderson, Tim Dey, Tim Campbell, Brian Kutcher, George Korody, Art Parent, Dan Barriball, Rick Arzadan, Ben Cline and myself.

The weather didn't cooperate, but the crowd still braved the cold temperatures to view the observatory and a few were able to look at Jupiter, Venus or the moon through the few hazy patch like breaks that were very briefly present. We had between 100 and 200 visitors and all of them were very impressed.

One visitor was only wearing a shirt and stayed inside the observatory for nearly an hour, He is a member of the Lincoln Park school board. He heard about the science event and came over after a meeting to check out HJRO.

Tim Dey let many know the next night we'd likely be open because we the forecast predicted clear skies. The next day, (Wednesday) we had eight visitors and a few HFCC/FAAC Astronomy club members as well. Then on Thursday, February 9th, we had more visitors arrive and a few FAAC members as well. On Thursday Venus and Uranus were 3/10th of a degree apart. Some visitors viewed both planets Wednesday and again on Thursday. I took a photo of both Planets in one field of view through the Meade refractor on Friday.



Above: Many visitors at HJRO, photo by Tim Campbell. Below: HFCC and FAAC members observed at HJRO, some saw Venus and Uranus in one FOV Feb 3rd 2012



## **CONCLUSION**

The Tuesday event would not be nearly the success it was without all the great FAAC astronomers who showed up. Although we had very poor, almost nonexistent viewing, teachers, students and parents really enjoyed the interaction and displays that FAAC members set up.

I had a couple of impromptu solar observing sessions at the observatory, but didn't widely announce these as they were last minute and members of the FAAC club and public would not have time attend those late day viewing sessions. We didn't have any student solar observing sessions, but one teacher mentioned she wants to bring an entire set of classes through HJRO very soon. That will be a nice day long observing project.

# Black tube, Blue Tube and Big Bertha

By Greg Knekleian

## **Two Schools of Thought**

Sometimes I still find myself caught in an old school of thought. I'm using the word "old school" in reference to Astronomy equipment viewpoints. Old vs. modern. To me, "old school" harkens back to 1977 when I was in the student Astronomy club. The club couldn't afford to purchase a telescope. (Dues were 25 cents per week.) The Lincoln Park Astronomy club started out in 1971 and was a junior high club and until 1982.

#### **Another Old School thought**

In 2009 I talked to another old Jr. High club member. He was shocked at the upgrade at HJRO. He thought the best thing we could do for the students was to purchase "ten eight inch dobsonians". "Let students star hop and learn the sky". Old school thinking? In the 1970s, the skies were darker and we could see more in Lincoln Park. There's nothing wrong with star hopping and learning to read charts. There's nothing wrong with building a telescope or grinding a mirror. It's "old school"; fabricating the telescope. It harkens back to Midwest industrial roots and learning to do something productive in shop class.

There can be quite a difference between old school and new school thinking. New school is more like consumer thinking. We can purchase a scope and mount made overseas, often cheaper than building one here. No waiting or effort, just buy it and use it.

Most probably go through a "curve" of learning and financial capabilities as we age. As we progress through our hobbies our outlook changes. When we were young, and learning the basics, we were "old school". We'd build telescopes, slower and with more sweat.



Big Bertha - Someone gave it a nickname matching the large german gun of World War 1. This telescope looks imposing, like an old Parks ad from the good old days.. Some 12 inch telescopes like the original Black tube newtonian inside the observatory are much larger.

### **Everything is new to most students**

In 1977, it was difficult to build a telescope. Learning how to test and figure a mirror seemed daunting. In 1975 and onward, the Lincoln Park Astronomy Club had an outside sponsor, Mike Manyak Jr. of Wyandotte. Mike was a member of the Detroit Astronomical Society and became the curator of the HJRO observatory.

I recall going over to his house. He showed me how to measure the accuracy of the figure of one of the mirrors we ground with a focault tester and tools. We measured one of the mirrors, the calculations worked out to 1/24th wave accuracy! I thought we had a perfect mirror on our hands. Mike replied, "my equipment isn't that accurate". He guessed anything beyond 1/10th wave was beyond his test equipment.

I probably have a mix of old school and new school thinking, especially when I rejoined the hobby and the FAAC club back in 2009. It was like being dug out of the sediment from 1977. I was like an astronomical fossil. My equipment thinking was based technically on memories from Sky and Telescope circa 1977. I followed newer technology, but didn't read much about astronomy hobby advances all those years.

### Some rabbit trails

Sometimes I venture down mental wishful "rabbit trails" of planning. Dreaming of "what could be" at the HJRO site. Back in 2009, one such dream was along the lines of creating a separate observatory/multi-media meeting Something that would allow room. presentations for maybe 20 people and allow an area to display six to twelve telescopes of different types, ages and styles. Maybe we could have a mirror grinding table setup from time to time and do some old school fabrication of reflectors (if a new student club wanted to do this). Maybe it would be a two story building, "green", "off grid" and with two observing platforms. One with a roll off roof on one side. And all of our displayed telescopes would be functioning telescopes. For star parties we'd pull out the scopes and observe through the astronomy display show pieces.

(A Hands on Astronomy Museum?)

In 2009, I thought this "new school thinking" but it's actually a mix of different ideas and not really new school, but a mix. Tim Dey for example mentions the capabilities to do remote control and use the observatory over the internet and pipe video over cable tv, the internet, to share observatory views and time with other schools, etc. We've done tests with some internet software and can run sessions remotely, but we don't have an automated dome yet. (I think at a public site we'd still need on site staff while the dome was open.)

Tim's remote viewing is a "digital way" of viewing. Perhaps more "new school". Perhaps not better than the old school analog/visual way of doing things. It's a different way of doing things, more scalable for a larger reach.

I enjoy both the old ways and the news ways of observing.

#### Is one way better?

There are advantages to both the analog and digital way of observing. For the purpose of this article I'll call the "analog way", the visual way, because we are looking through glass at light that is arriving in waves. I know there are quanta of light arriving as packets, but it's more analog in it's experience when you look into an eyepiece and see a live view. Digital is more detached, it's often more colorful and can offer more details and more faint details, as in structure of faint objects. Digital involves time exposures or the use of sensors and CCD chips between the image and a redisplay of the image. Even on a live monitor, we are looking at a digital image when we are viewing the output of a video camera hooked up to the telescope. I can see Pluto on the HJRO monitor with the Stellacam hooked up to the C14. It looks just like other stars on the monitor. I can see mag 15 or 16 stars easily with the Stellacam, even on smaller telescopes under Lincoln Park's light polluted skies.

Digital is a different experience. The digital experience allows more processing and more artistic fun "in the processing of the image". Digital images can be published and printed in books or on the web. The analog way is in person, looking through the eyepiece. We can't deliver real analog star gazing experiences through cable tv or printed material.

It's been more than a year since I visited Perkins observatory in Delaware Ohio. They have perhaps 50 or more telescopes on display many in their library. Many of these were donated from the Columbus Astronomy club members. When I visited Perkins we didn't get a chance to take any those telescopes outside and actually look through them. We were able to observe through a 14" Obsession which was nice

#### **OLD SCHOOL TELESCOPE APPROACHES**

When I joined the student club back in 1974, we only had a large black tube 12 inch F7.2 Newtonian reflector inside HJRO. We didn't have a wide field club telescope.

We could not see M45 in one field of view with the large 12 inch scope. I hoped to solve this viewing gap by adding a rich field telescope to the club's inventory. I ran and was elected as the LPAC president in the 77 school year. My goal for the club was to build telescopes. I saw that doing projects was more exciting, than just sitting around and talking about observing or only reading about it. We had solar projection capability to view the sun with a few private telescopes, to view sunspots. That would be only available if a student brought their telescope to school. That was our only daytime live option. If we built a telescope, we would be learning and doing. We would have a project to focus on during daytime and bad weather In 1977, the club built two telescopes. We built a 10 inch F5, an 8 inch F5 and I built a four inch F4 at home. These were all rich field We could get twice the eyepiece telescopes. time with the 2nd club scope that we stored at HJRO. We had twice the visitors with a telescope outside. People who saw the telescope realized we were open. member could operate the 8 inch scope outside while others were inside. Membership increased to 36 members, a club record.

The eight inch rich field was fiberglassed. I suggested the color "powder blue" to match my fathers Powder Blue 1975 Newport Custom. Our sponsor said, we'll call it "sky blue". So the eight inch Newtonian ended up with a nickname, "the blue tube."

The "blue tube" weighed a lot. The "simple pipe mount" had 2 inch pipe and a solid wooden base.

By 1978, I left the student club and basically stopped doing astronomy, I was into tennis by that time. I still took out my home telescope a few times a year, but soon I was off to other hobbies. My astronomy knowledge was locked in 1977, like a time capsule. Sealed up almost as tight as the observatory itself.

In 2009 FAAC started doing the restoration work and I found out about FAAC and HJRO. much was known about the middle years of the Junior High club. Because I was in that club, I could tell Tim Dey some things about the good old days. I met Tim and others in the club and decided to join and do what I could to insure the observatory would not be abandoned by sponsors and fall into disuse again. The best way of course was to insure a large club of sponsors was involved, FAAC being that club. This of course wasn't my idea, but I strove to help insure that the school would realize the strength of FAAC as a club supporting the observatory. FAAC is more important than the equipment, because without sponsors and users, the equipment will just be mothballed again.

**Trivia tidbit:** Did you know that one of the student members of our 1977 Lincoln Park Astronomy club is a current school board member in Lincoln Park.

I can get caught up with old school thinking. I still enjoy a variety of telescopes at HJRO. I like rich field telescopes. I even bought an "old school telescope" with a nickname, "Big Bertha". from Harold Thomason. I heard of the nickname from Harold's wife as I was driving off with the telescope in the back of my pickup truck. "Thanks for taking Big Bertha off our hands" she said as I started driving off.

#### PRACTICALITY OF BIG BERTHA?

Often I leave that large telescope setup at HJRO, because I'm tired or leave to late to break it down. Or "my truck is at home" and I "have other stuff under the truck lid". I have a number of creative excuses to leave that telescope up in HJRO. 90% of the time HJRO is opened up, I'm there or I'm the person opening up the observatory. So I can often get there first and wheel Big Bertha out of the observatory. When we have a few FAAC astronomers and not many visitors, I may leave the telescope inside the observatory. There's a downside to this. The mounts pedestal legs can become a tripping hazard in the dark.

I've tripped over the legs two or three times over the past 2 years, while walking toward the computer late at night. I also heard that George kicked the pedestal leg six times in one night and found out that old astronomers can swear. This inspired a poem George constructed about the telescope. As you can see he mentions the pros(?) and cons of the telescope in his poem.

BTW: I have a new neighbor that ran and won political office. One of her campaign flyers said some people "wrote poems about her". An odd campaign strategy . . . .

(Maybe it's time I run Big Bertha on a political ticket. We might get a few astronomers to vote for her.)

Big Bertha's optics are wonderful, and better when they are in optical alignment. I had an accident wheeling it into the observatory. The scope fell over and glanced off my leg and ankle. Right now it's not completely aligned and there is a image issue at higher power. I'm glad the corrector plate didn't break when the heavy scope fell over.

When it fell, the tube glanced off the side of the door and picked up a bit of a blue paint scrape on the tube. (Some battle scars.)

Big Bertha was built in 1962 by a member of the Detroit Astronomical Society, Nelson Lewis. When he retired, his coworkers asked Mr. Lewis what he wanted as a retirement gift. He replied, a corrector plate for the telescope I'm building. So a custom corrector costing apx. \$340 went into the Schmidt Newtonian built in 1962. In 1982, Harold Thomason became the second owner. Checking on the cost of a replacement corrector (in case the corrector broke) Optex replied a custom corrector could be fabricated for \$1800. With inflation, it might cost nearly \$3000 to get a corrector replaced today. Hopefully the corrector will never break.

#### THE BLACK TUBE 12 inch

In 1962 the 12 inch Newtonian telescope was completed by Huff students. Big Bertha is as old as the original observatory black tube telescope that was installed in the dome in 1964. Big Bertha for me is a nice history item, that is still usable. It's functional history.

There are disadvantages in owning an old telescope like Big Bertha. It's large, and takes up a lot of space. It weighs 200 lbs fully assembled. It has a great wide field eyepiece, perhaps a surplus military Erfle design. The eyepiece gives wide field views and nice low power views of M45. Bertha's size and the new lower door jam makes it a challenge to move inside and out of the observatory on it's wheeled pedestal.

A C8 is much easier to setup than Big Bertha and SCT's take up less space than Newtonians. Most people don't have wide field SCTs for visual.

Sometimes I wonder what should I do with this telescope. Should I donate or loan it as a display piece to Perkins observatory or perhaps EMU? Would it actually be used, or just displayed?

I don't use it much away from HJRO, because when it's clear out, I'm often at HJRO. It's not a replacement for the C14, but augments those views with rich field views. It's not the perfect complementary telescope for the HJRO site.

A more ideal scope would be an 8 inch F4 telescope. Or perhaps an eight inch F4.9 like the Orion telescope that Brian Kutcher picked up at last years swap meet. Brian's Orion eight inch offers nice wide field views and good planetary views. A wide field scope complements the C14. We have a F7 capability for the C14, but that's not the same as F5 or faster for wide objects like the double cluster or M45.

Many of my smaller scopes are not used as much as they could be. This is because I often open up HJRO and keep busy at the observatory often with FAAC members. Smaller complimentary telescopes are often available and brought by other members. I don't need to supply every scope for the site. And 60% of the time we don't setup other telescopes outside, the two inside the dome are often enough. At times I leave a small telescope inside the observatory. Lately it's been a four inch F4.2 rich field consumer Bushnell telescope. It's inexpensive, it's a wide field. And young observers get a kick out of looking through a small telescope when I show it to them.

I think an ideal observing session for visitors would be to have three telescopes outside, a visitor might start by viewing through smaller instruments and work their way up the observing ladder culminating with the C14 inside. We can do this a bit inside the observatory as well, with the Meade refractor and the C14. The Meade however is a little high off the floor for young observers.

When I visit an observatory, I hope they let me look through the biggest telescope they have there. That is my personal wish, perhaps the inner child astronomer hoping to observe through a monster sized telescope. My goal as a host is to allow every visitor a chance to look through the biggest telescope we have inside, which is the C14.

For me, HJRO is a primarily a visual observatory for visitors. They don't show up and ask about cameras on a telescope. They want to see the telescope and then often want to look through it. We keep expanding our options as we slowly add more equipment.

Thanks to clubs like FAAC, we have a lot to show and tell.



Nice wide field telescope, F4.2 Bushnell four inch. It's not for planetary observing. I picked it up in a new boxed condition at a local pawn shop for \$75.

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# Ode to Big Bertha by George Korody

(To be sung or read with an Arnold Schwarzenegger accent.)

My name's Big Bertha and that is clear; for I'm real big and always here. I stand against the big blue wall; looking smart and standing tall.

They stub their toe, they scrape their shin; but still they take me out and in.
And unkind words they say so much; that it almost seems to make me blush.

I hit the door and then I fall; and hit my face against the wall. But little damage do I partake; cause I'm Big Bertha and I'm no fake. When I'm outside, I feel forsook; seems few do come to take a look. Could be because my great big eye; is pointing down not towards the sky.

Then there are some who wish my demise; to have more space to search the skies. But into a dumpster I will not go; because my owner be my Bro.

I'm growing older day by day; And many scars I do display. But even though my looks deplore; I still have my spot next to the door.

And if some day should I disappear; you will always know that I am near. Because the stars will no longer shine; through all those clouds and muck and grime!