



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 19, Number 1

January 2010

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Sunglasses for a Solar Observatory

by Patrick Barry

In December 2006, an enormous solar flare erupted on the Sun's surface. The blast hurled a billion-ton cloud of gas (a coronal mass ejection, or CME) toward Earth and sparked days of intense geomagnetic activity with Northern Lights appearing across much of the United States.

While sky watchers enjoyed the show from Earth's surface, something ironic was happening in Earth orbit.

At the onset of the storm, the solar flare unleashed an intense pulse of X-rays. The flash blinded the Solar X-Ray Imager (SXI) on NOAA's GOES-13 satellite, damaging several rows of pixels. SXI was designed to monitor solar flares, but it must also be able to protect itself in extreme cases.

That's why NASA engineers gave the newest Geostationary Operational Environmental Satellite a new set of sophisticated "sunglasses." The new GOES-14 launched June 27 and reached geosynchronous orbit July 8.

Its "sunglasses" are a new flight-software package that will

enable the SXI sensor to observe even intense solar flares safely. Radiation from these largest flares can endanger military and civilian communications satellites, threaten astronauts in orbit, and even knock out cities' power grids. SXI serves as an early warning system for these flares and helps scientists better understand what causes them.

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Out of This World Father-in-Law

President's Corner

About 13 years ago, I got my first telescope, a 10" Meade LX200. I would take it up north to Alpena when we visited my mother-in-law and father-in-law at their farm, which is 15 miles west of Alpena. I usually set the telescope up on the tennis court behind their house and enjoyed the dark skies and sometimes cold weather.

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X-9 class solar flare December 6, 2006, as seen by GOES-13's Solar X-ray Imager.

It was one of the strongest flares in the past 30 years.



Sunglasses for a Solar Observatory (continued from Page 1)

Its “sunglasses” are a new flight-software package that will enable the SXI sensor to observe even intense solar flares safely. Radiation from these largest flares can endanger military and civilian communications satellites, threaten astronauts in orbit, and even knock out cities’ power grids. SXI serves as an early warning system for these flares and helps scientists better understand what causes them.

“We wanted to protect the sensor from overexposure, but we didn’t want to shield it so much that it couldn’t gather data when a flare is occurring,” says Cynthia Tanner, SXI instrument systems manager for the GOES-NOP series at NASA’s Goddard Space Flight Center in Greenbelt, Maryland. (GOES-14 was called GOES-O before achieving orbit).

Shielding the sensor from X-rays also reduces the amount of data it can gather about the flare. It’s like stargazing with dark sunglasses on. So NASA engineers must strike a balance between protecting the sensor and gathering useful data.

When a dangerous flare occurs, the new SXI sensor can protect itself with five levels of gradually “darker” sunglasses. Each level is a combination of filters and exposure times carefully calibrated to control the sensor’s exposure to harmful high-energy X-rays. As the blast of X-rays from a major solar flare swells, GOES-14 can step up the protection for SXI through these five levels. The damaged sensor on GOES-13 had only two levels of protection—low and high. Rather than gradually increasing the amount of protection, the older sensor would remain at the low level of protection, switching to the high level only when the X-ray dose was very high.

“You can collect more science while you’re going up through the levels of protection,” Tanner says. “We’ve really fine-tuned it.”

Forecasters anticipate a new solar maximum in 2012-2013, with plenty of sunspots and even more solar flares. “GOES-14 is ready,” says Tanner.

For a great kid-level explanation of solar “indigestion” and space weather, check out spaceplace.nasa.gov/en/kids/goes/spaceweather.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contact with NASA.

STAR STUFF

January 2010 - Vol. 19 No 1

STAR STUFF is published eleven times each year by:

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

PRESIDENT: Doug Bauer
VICE PRESIDENT: Chuck Jones
SECRETARY: Lori Poremsky / Kevin Medon
TREASURER: Steve Flessa
NEWSLETTER EDITOR: Greg Knekleian

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.boonhill.net/faac).

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 Richmond Airport, Unadilla, given prior permission, and Lake Erie MetroPark. 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 more than welcome! Send your story and/or images to the editor at pvideo@aol.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 that weekend can be included in that issue.

* FAAC Members are welcome to join our FordAstronomy Club Yahoo! Group. Messages photos, files, online discussions, and more! URL: groups.yahoo.com/group/FordAstronomyClub.

REMINDER: FAAC membership renewals are due by **January 31, 2010.**

Annual - New Member: \$30
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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.

Presidents Corner *(continued from Page 1)*

My father-in-law, Louis Baker (Dad), is always interested in learning and would come out to look through the telescope and learn about the objects he was seeing. It was really nice to have someone interested enough in astronomy to take the time to come outside and observe with me.

After a couple of years of doing this, Dad commented that it sure would be nice if we didn't have to stand out in the elements to do the observing and suggested building an observatory. I tried to dissuade him, saying that I really didn't get up there that often and even then, it seemed to be cloudy on many of the visits, or we are too busy when we come up to spend much time in an observatory. I also pointed out that an observatory could not be heated and would only really provide a refuge from the wind.

Dad is not one to be easily dissuaded. He is a remarkable man. He built all of the buildings on the farm, the house, the machinery building, the six stall horse barn with haymow, the granary, and the riding arena. When I say he built them, I mean he cut trees and had them milled into lumber, and did all of the construction himself. He decided he was going to build an observatory.

The next time we visited, he had begun the construction of a two story, 16 foot diameter observatory with a revolving dome. He developed his own plan, cut trees and had the logs milled into lumber, put in footings, ran electricity to the site, made forms in the haymow to build laminated curved beams, collected roller skate wheels to use as bearing, and had the first story completed. The first story also had windows, as he planned to use it to start his plants for the vegetable garden. I was shocked at how quickly he had done all of this! He told me that when he was working on the floor in the second story, the ladder blew over and he couldn't get down.

continued on page 4

Presidents Corner *(continued from Page 3)*



My mother-in-law came out looking for him around supper time and saw him on top of the structure sitting leaning against the protruding pier and asked if she should put the ladder back up for him. He replied, "Either that or toss up my pajamas!"

He completed the whole structure in one summer, completely on his own. He had me help install the bearings, not that he really needed any help, more so that I would feel like I had helped. The bearings were ingenious. He made them from 32 sets of roller skate wheels and hard maple blocks that he built to hold them. The dome rests on 16 of these bearing and is kept in alignment by 16 more that abut the base of the dome on the inside. He made a sliding louver out of fiberglass sheets and built the custom track in which it slides. He covered the whole dome with aluminum sheeting screwed to the beams and pop riveted to each other with a rubber seal between the sheets of aluminum. He also installed a wind vent on the top to keep it from getting too hot inside.

We went together to buy and install a 12 inch Meade LX 200 on the pier which is buried in the center of the observatory and protrudes through the floor into the second story. Dad is truly an incredible person. He is a testimony to what a person can do when he sets his mind to it. Since his retirement 25 years ago, he has learned to play the guitar, learned to play golf, written two books on his life, takes communion to shut ins, is a hospice volunteer, participated in building 20+ habitat houses in Alpena, goes to nursing homes during Lent to teach the residents how to make Ukrainian Easter eggs and helps them make the eggs, and still finds time to farm 80 acres.

We have enjoyed using the observatory together and have had a number of neighbors, children, friends, and relatives spend time there learning about the sky.

I have included some photos of the finished observatory taken by John Schroer on a recent visit, a testimony to the nicest father-in-law you could ever find.

Thanks,

Doug Bauer

dougbauer@comcast.net

December Meeting Minutes

Kevin Medon/Lori Poremsky

Attendance: 40+

The meeting was called to order by President Doug Bauer at 5:30 p.m.

During pizza and pop, several members mentioned their recent observing experiences.

The meeting was held in a conference room, due to a benefit dinner being in the regular HFCC location. We ran out of seats in this room and a few new members were present as well.

Doug Bauer mentioned the mentoring program. Anyone interested in mentoring, or having a mentor, should reach Doug via phone or e-mail.

Doug Bauer is also seeking volunteers to bring pop to the general meeting as well as a StarStuff editor. Mohamed Mroue volunteered to bring the pop. John Schroer suggested that he could assist with StarStuff. If any one else is interested, please contact Doug Bauer directly.

Gordon Hansen noted that the Griffith Observatory in Los Angeles is giving a mini presentation on the largest astro image. It is open every night for observing.

The main presentation was introduced by Don Klaser. The group in attendance was able to view an episode of "Astronomy for Everyone", the cable TV being produced by few members of the Henry Ford Amateur Astronomy Club. The episode chosen was "Binoculars" and focused on types of binoculars and what can be viewed in the night sky by each. If anyone is interested in becoming a part of the show, please contact Don Klaser or Kevin Medon.

The tech talk this evening was centered around Astro Christmas Toys and presented by John Kirchhoff. John passed around many items which went from hand to hand around the tables for inspection. Many eyepieces, new 100 FOV Explorer Scientific eyepieces were passed

around and enjoyed by all, as much as we could without throwing them in a telescope. Some books were passed around as well. John even passed around a small 6 inch Celestron OTA which was one of the more interesting items to pass around at a meeting.

Club Business

Treasurer's Report - Steve Flessa has ordered 50 copies of the 2010 Astronomy Magazine Calendar. The calendars will be available for purchase at Astronomy at the Beach for \$10. \$7 is the break-even on the calendars. He also noted that FACC dues are payable by the end of January. Please send your renewals to the FAAC P.O. Box, or Steve will also be collecting at the January general meeting. Steve also mentioned Sky & Telescope subscriptions and the availability of handbooks.

Secretary's Report - Kevin Medon noted that we have one new member this month. Motion & second to accept the October minutes; approved.

Equipment Managers Report - All equipment is accounted for. As a reminder, equipment is now reserved through the database on the Yahoo Group. Individuals will be responsible for contacting the person who currently has the equipment to arrange for pick-up.

Open Discussion

Jim Frisbie presented the nominating committee slate for election of officers. Elections will be held at the January general meeting.

An Astro Event was held at Camera Mart on December 4-5. The focus was Astro Photography for Beginners.

Continued on page 6

December Meeting Minutes

(continued from Page 5)

Gordon Hansen noted that SIG meetings are taking place the 2nd Thursday of every month in the Berry Auditorium of Henry Ford Community College, located in the Administrative Services and Conference Center.

Doug Bauer mentioned that nominations for the annual Sirius award have been submitted and are being reviewed by the Board.

John Schroer noted Ice Days would be taking place January 16-17 at Lake Erie Metropark.

The meeting adjourned at 7:30 p.m.

Meeting Agenda – January 28th

HFCC –Berry Auditorium - Admin. Services & Conference Center

For map see: http://www.hfcc.edu/contact/campus_maps.pdf

5:30 PM

Opening/Introduction/Member Observing

Main presentation:

Election of Board Members

Doug Bock

FAAC

Tech Talk:

Ask the Astronomer

Doug Bock

FAAC

Club Business/Secretary/Treasurer/Equipment Reports

- 2010 Astro Expo/Swap Meet – Sat, March 6th
- Ann Arbor Hands On Museum – Friday, March 19
- 2010 Annual FAAC Banquet, Sat, March 27
Karl's Cabin - 6005 Gotfredson Road Plymouth, Michigan - \$30/Person
- Cub Scouts pack at Memorial Elementary School
in Garden City, 30001 Marquette, Garden City - Monday, April 26
- Astro-Imaging SIG
- Dark Sky Committee

Treasurer's Report

by Steve Flessa

Bank Accounts	
Checking	\$609.34
Savings	\$6.44
TOTAL Bank Accounts	\$615.78
Cash Account	
Cash	\$100.00
TOTAL Cash Account	\$100.00
Investment Accounts	
CD 1	\$1,080.31
CD 2	\$1,046.91
TOTAL Investment Accounts	\$2,127.22
Asset Accounts	
Equipment	\$1,451.42
Scholarship	\$620.30
TOTAL	\$2,071.72
OVERALL TOTAL	\$4,914.72
Memos	
GLAAC	\$2,596.64
Total	\$7,511.36

Expo and Swap Meet March 6

John Schroer

Mark your calendars, and plan ahead! Thesixth annual FAAC Astronomy Expo and SwapMeet is scheduled for Saturday, March 6, 2010, 9am-4pm, at the familiar Holy Cross Church Gymnasium, 30650 Six Mile, Livonia.Details are not final for the programs, but a full day is planned, according to event chair John Schroer (email: ka8grh@yahoo.com).Event seeks early table sales and possible sponsors. See the latest flyer on the FAAC site: <http://www.boonhill.net/faac/>

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.

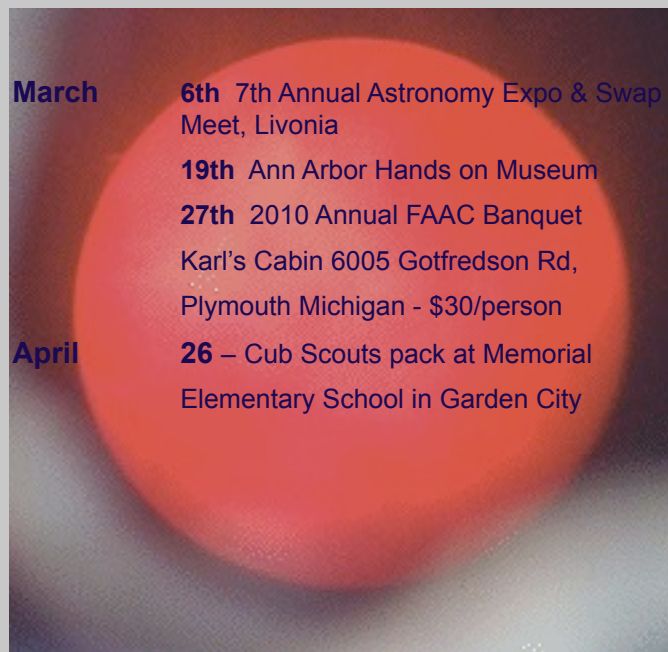
We always have a good time, with lively discussion, and sharing of valuable information.

Next meeting is February 11. Note the new meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

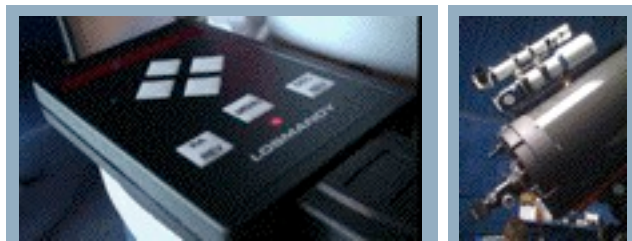
FAAC Events 2010

Kevin Medon and Lori Poremsky



March	6th 7th Annual Astronomy Expo & Swap Meet, Livonia
	19th Ann Arbor Hands on Museum
	27th 2010 Annual FAAC Banquet
	Karl's Cabin 6005 Gotfredson Rd, Plymouth Michigan - \$30/person
April	26 – Cub Scouts pack at Memorial Elementary School in Garden City

(iPhone still of prominence through solar scope- background above)



Video stills (above & below) taken fall 2009: during FAAC setup sessions at HJR Observatory



Items For Sale

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.



SOLD
Schmidt-Newt F5.35, 1360 mm length with 2" focuser, 60 mm guide scope, Thousand Oaks Full aperture solar filter, extra set of 10" rings, Dobsonian mount, Crestliner mount available. Selling telescope for \$325. Mount for \$200. Contact Harold Thomason 313-584-7465.



Hector J Robinson Observatory

by Greg Knekleian

Earlier in the fall the mount was aligned and Leo McMaster had no problems finding stars, using the remote. (He felt like an astronomy "master", things were running smoothly.) Lately the mount has lost track of the correct settings.

About six FAAC members spent 4 cold hours at the site, January 11th, 2010. We worked on replacing some counterweights (which were on loan to the observatory by George Korody).

We viewed a few objects while testing the mount, Mars, M42 and M44. Skies seemed transparent at first, but Mars was breaking up big time from air turbulence at only 100 power.

We have some problems in star alignment of the Losmandy Titan mount. We are searching for solutions (possibly the meridian flip settings are set wrong). *More info to follow next month.*



2010 FAAC Dinner Banquet

Saturday, March 27, 2010
6 PM till 10 PM

Dinner Talk – Norbert Vance
Going Virtual: A Real Sky Astronomer's Story

Plus

Astro Picture Presentation – Door Prizes – Astro Jeopardy

Location: Karl's Cabin
Price: \$30 / person (checks payable to FAAC)

Dinner Selections:

- ❖ - **New York Strip Steak** – Char-grilled 10 oz. cut cooked medium
- ❖ - **Chicken Marsala** – Tender chicken breast topped with marsala wine mushroom sauce
- ❖ - **Herb Whitefish** – Fresh whitefish topped with herb olive oil and baked

Includes vegetable, potato garden salad with choice of two dressings, bread & butter

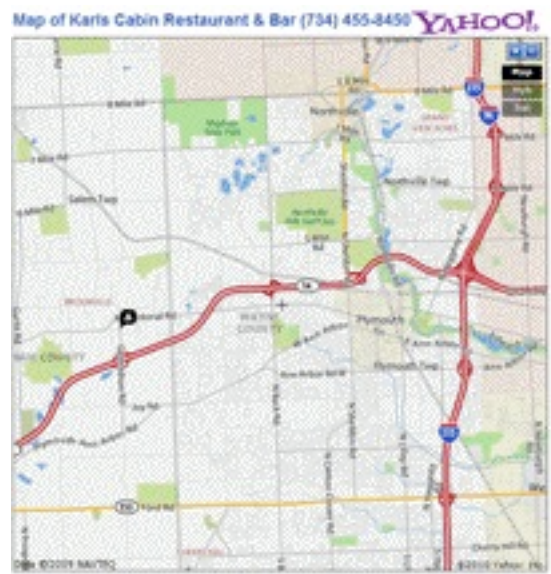
Coffee, hot tea, and soft drinks included

\$\$Cash Bar\$\$

Cocktails at 6 PM – Dinner at 7 PM

Reservations:
Gordon Hansen at
ghansen@comcast.net
or post a note on the Yahoo Group

Karl's Cabin is located at:
6005 Gotfredson Road
Plymouth, MI 48170
Phone 734-455-8450





7th Annual Astronomy Expo & Swap

Saturday, Mar 6, 2010 9:00 am - 4:00 pm
Holy Cross Church Gymnasium, 30650 Six Mile, Livonia

The Day's Activities

FAAC Speakers

- 10:00 am: Astronomy 101 – G. Hansen
- 11:00 am: Climbing the Learning Curve – Astrophotography with a DSLR – C. Kessler
- 12:00 pm: Backyard Observing – J. Frisbie
- 1:00 pm: TBD
- 2:00 pm: TBD

Featured Astronomy Subjects

- 10:30 am: High Resolution Lunar and Planetary Imaging – J. Kirchhoff
- 11:30 am: Secrets of the Sun – F. Ancona
- 1:00 pm: TBD - T. Trusock
- 2:00 pm: TBD
- 3:00 pm: TBD

Planetarium Lectures @ 10am, 11am, 1pm, 2pm – T. Cervenak

Information: Tom Blaszk via email: key_string_guy@yahoo.com or
Don Klaser via email: dklaser@sciencedetroit.org
Doug Bauer via email: DougBauer@comcast.net

Catering by KIM
(Pizza, Hot dogs, Wraps, and other Morsels)

Admission: \$5.00 at the door or presale.

Table Fee: Individuals \$15 in advance or if available at the door \$20

Advanced Registration ends February 15, 2010

Doors Open at 8 AM for set up and Public Open at 9 AM.

**Make Checks Payable to: FAAC. Send payment to: Ford Amateur Astronomy Club,
P.O. Box 7527, Dearborn, MI 48121-7527.**

**Vendors, Manufacturers, Commercial contact Tom Blaszk at
key_string_guy@yahoo.com or contact Doug Bauer at DougBauer@comcast.net**



7th Annual

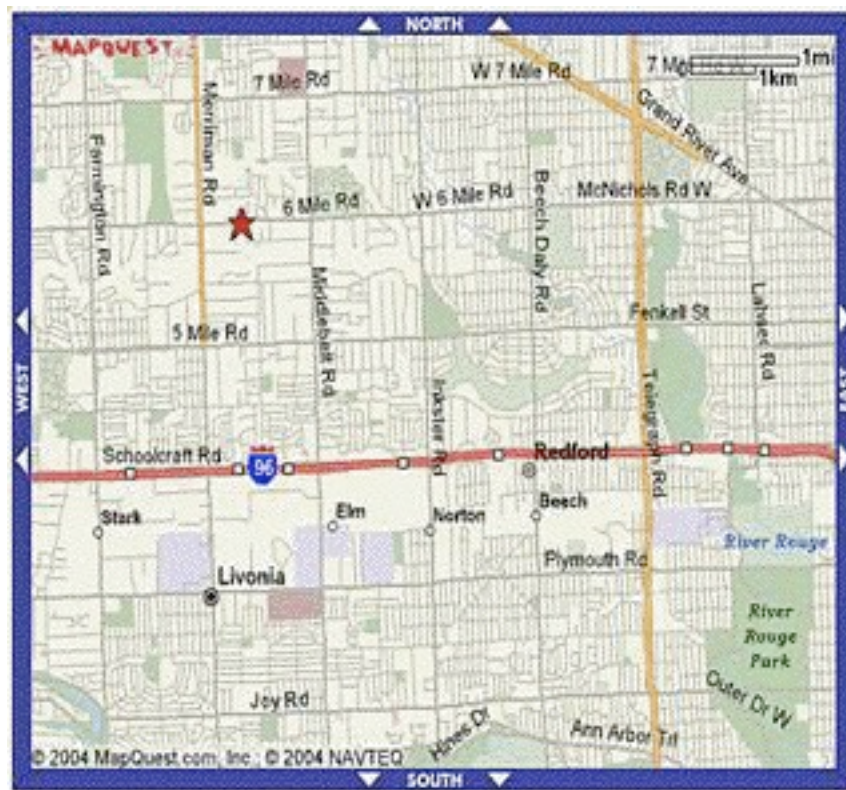


Astronomy Expo & Swap

Saturday, Mar 6, 2010 9:00 am - 4:00 pm

Holy Cross Church Gymnasium, 30650 Six Mile, Livonia

(Map)



(Expo 7 Jan Update w Spkr 1-7-10 FAAC Event 1/7/2010)

Stills from my Laptop

Some photos from 2009 Astronomy At the Beach Event. (Taken with a Sony HD Cam.)



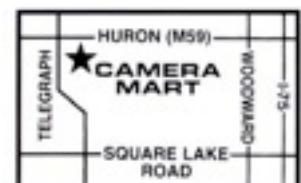
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