



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 16, Number 3

March 2007

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Early Bird Gets the Worm or, "Black Hole Breakfast"

by Dr. Tony Phillips

We all know that birds eat worms. Every day, millions of birds eat millions of worms. It's going on all around you! But how often have you awakened in the morning, stalked out in the dewy grass, and actually seen a bird having breakfast? Even though we know it happens all the time, a bird gulping a worm is a rare sight.

Just like a black hole gulping a star...

Every day in the Universe, millions of stars fall into millions of black holes. And that's bad news for the stars. Black holes exert terrible tides, and stars that come too close are literally ripped apart as they fall into the gullet of the monster. A long burp of X-rays and ultraviolet radiation signals the meal for all to see.

Yet astronomers rarely catch a black hole in the act. "It's like the problem of the bird and the worm," says astronomer Christopher Martin of Caltech.

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Lake Hudson Dark Sky Preserve

by Tim Bauer
Park Manager, Hayes State Park

Not so many years ago, I would lie on my back in our backyard and stare at the stars, gazing up at the Milky Way. I always thought the attraction was indeed the connection with the Mars candy bar. We lived on a main street, in those years, in a small southwestern Michigan town.

Well, time passed and so did that way of life. Over time I forgot about those quiet moments looking into the heavens. Little did I know that our need to illuminate the night for our protection, and ability to see, would all but eliminate the celestial experience. Light became a new form of pollution.

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STAR STUFF

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FORD AMATEUR ASTRONOMY CLUB
P.O. Box 7527
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VICE PRESIDENT:	Doug Bauer
SECRETARY:	Ken Anderson
TREASURER:	Gordon Hansen
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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, Administrative 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 of the dark skies at Richmond Airport, Unadilla, given prior permission. 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 Member:	\$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 subscription 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 dake00k@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 that weekend can be included in that issue.

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

Things that Go “Ka Boom”

President’s Corner

Don Klaser, President, FAAC

For over 40 years I've always enjoyed the astronomy and space-related articles in National Geographic Magazine. One of my fondest memories is that of sitting in my parents' backyard with a flashlight and a star map of the summer sky. The light pollution didn't seem as bad back then so even though I didn't use a red-filtered light, the sky looked so full of stars!

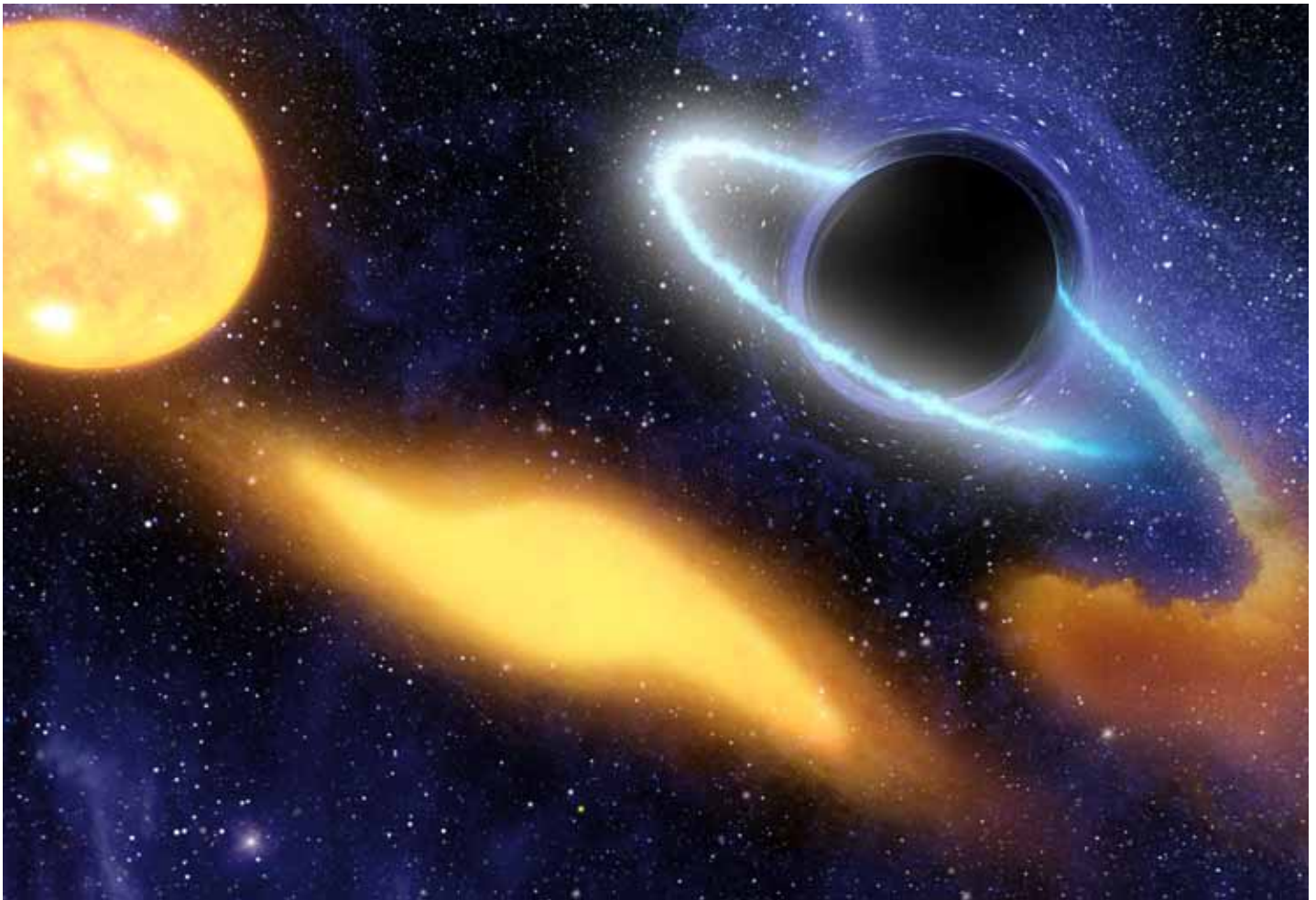
About three years ago, they published a very informative article on the Sun, and just a few months ago an article on Saturn with outstanding photos from the Cassini Mission.

This month's issue is no exception. An article by Ron Cowen details the cataclysmic death of stars when they finally go supernova. He clearly outlines the processes for both sun-like and massive stars, and explaining that gamma-ray busts precede the supernova explosion. He also covers how astronomers are using super computers to try and analyze just how a star goes through its death throes to become a fireball with the brilliance of an entire galaxy. It's a quick, interesting read, and if you have a few minutes to spare, check out the images on the Web at www7.nationalgeographic.com/ngm/0703/.

Coincidentally, the main presentation at this month's general membership meeting is about one of the end results of all this cosmic destruction - neutron stars. The talk is being given by a guest speaker - Guy Maxim, of the Warren Astronomical Society. His program looks like a very interesting and informative look at this fascinating topic. I hope you can make it.

Another “can't miss” event is the club's annual banquet, on Saturday the 24th. There'll be an updated digital slide show running during cocktails and dinner, an exciting speaker, an award's presentation, door prizes and a rousing new edition of Astro-Jeopardy! I hope to see you there as well.

And lastly, don't forget about Astronomy Day coming up on Saturday, April 21st. There'll be sign-up info at the meeting Thursday, and you can also join up by sending an e-mail to the club's Yahoo group, or fordastronomy@comcast.net.



In this artist's concept, a giant black hole is caught devouring a star that ventured too close.

Early Bird ... *(continued from page 1)*

"You have to be in the right place, right time, looking in the right direction, paying attention."

A great place to look is deep in the cores of galaxies. Most galaxies have massive black holes sitting in their centers, with dense swarms of stars all around. An occasional meal is inevitable.

A group of astronomers led by Suvi Gezari of Caltech recently surveyed more than 10,000 galactic cores—and they caught one! In a distant, unnamed elliptical galaxy, a star fell into a central black hole and "burped" a blast of ultraviolet radiation.

"We detected the blast using the Galaxy Evolution Explorer (GALEX), an ultraviolet space telescope," explains Gezari. Her team reported the observation in the December 2006 issue of *The Astrophysical Journal Letters*. "Other telescopes have seen black holes devouring stars before," she adds, "but this is the first time we have been able to watch the process from beginning to end."

The meal began about two years ago. After the initial blast, radiation diminished as the star was consumed. GALEX has monitored the process. Additional data from the Chandra X-ray Observatory, the Canada-France-Hawaii Telescope and the Keck Telescope in Hawaii helped Gezari's team chronicle the event in multiple wavelengths.

Studying the process in its entirety "helps us understand how black holes feed and grow in their host galaxies," notes Martin.

One down, millions to go.

"Now that we know we can observe these events with ultraviolet light," says Gezari, "we've got a new tool for finding more."

For more on this and other findings of GALEX, see www.galex.caltech.edu. For kids, visit **The Space Place** at spaceplace.nasa.gov.

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

Lake Hudson ... *(continued from page 1)*

Something that seems so benign had taken from us, the means by which ancient mariners traveled the world. Those twinkling lights high above, which once conjured legends and beliefs, were now all but obscured in our modern world. Light that humans developed to better our world was now removing a part of it. I don't think this is what Thomas Edison meant to do.

Then came a bright moment when two men set out to preserve the dark skies in their area. Jim Whitehouse, an employee of Albion College, and Wes Boyd, a reporter for the Hudson Gazette, saw Lake Hudson Recreation Area as an opportunity to have something done that has never happened before -- setting aside a piece of public land as a dark sky preserve. Under their guidance and gentle nudging, Michigan enacted 1993 PA 57, which officially made Lake Hudson the first night sky preserve on public land in the country.

We do have sufficient lighting in the park, but it is installed and utilized so it puts no light pollution into the night sky.

It should be noted the original law did have a sunset clause. This hurdle was most positively leaped in January 2002, when Sen. Bev Hammerstrom introduced legislation to make this law permanent.

So, here we are four years later, and though night sky watching is not the park's most noticeable recreational use, it certainly is one of the most positive, quiet and unobtrusive uses. The quiet moments enjoyed by several astronomer's clubs and individuals is truly a unique experience in our state park system.

But it has changed a little. Most of these folks don't lie on their backs and gaze in silence. Now they whisper to each other using a special lingo about what they are seeing. They speak in numbers and letters, and I have never heard anyone shout, "There is the Big Dipper!" Even the ancestors of Sputnik don't seem to overly excite them, but you can be sure their hearts beat a little faster and their smiles, if you could see them in the dark, would be noticeable.

(Note: The Lake Hudson Dark Sky Preserve is one of only two in the United States.

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February 22 Meeting Minutes

Bob FitzGerald

Meeting officially started at 5:30 pm with pizza and pop available, in the Hackett conference room of the HFCC Health Careers Building. Don Klaser, President, chaired the meeting and led the introductions, and asked for observations. Present were 24 members and two guests, Gil Gabo (introduced by Jim Frisbie), and Eric Rasmussen of the University of Michigan-Dearborn.

Members introduced themselves and shared observing experiences, notably some imaging by Tony Licata and a report on the Winter Star Party by Dennis Salliotte.

Ed Halash entertained and educated the group with a presentation on Venus transits. He had observed the 2004 transit, and while captivated with its beauty wanted to gain an understanding of the whys and wherefores of the rarity of the transits and the patterns of their duration and periodicity. The need to understand, he asserted, is very much a part of the hobby of astronomy. Ed identified seven parameters which can be plugged into calculations (he developed his own which were then solved with a hand-held calculator) which will produce the "when" of the paired transits. These results were then plotted on solar system charts so that the process could be verified by viewing.

We are fortunate to be living in an age when the pairing of transits is the norm: several millennia in the past, and again in the future, this was not (and will not be) the case, and astronomers will have to seek other wonders to amaze them. A few other departures from the duality of the transits are attributed to calendar reform, notably the Julian and Gregorian.

In club business, the Secretary's report was accepted as published in Star Stuff, and the Treasurer's report, as read by Gordon Hansen, was accepted as presented.

Don Klaser announced that the FAAC is supporting Astronomy Day, Saturday, 21 April, with three activities: New Detroit Science Center (contact John Schroer, or see the FAAC Yahoo site, FordAstronomyClub, for parking information, etc.); solar observing, Kensington Nature Center; and Beginner's Night observing at Island Lake.

...continued on page 5

Meeting Minutes... *(continued from page 4)*

Tony Licata reminded members that the Astro-Imaging SIG meets on the second Thursday at 5:30 pm -- next in the Hackett Conference Room March 8; and that a week-long summer event is planned (now scheduled for September 5-11, on the hill at River Valley RV Camp, the site of the Gladwin Star Gaze). Tony extended the invitation for the event to non-imagers who will, of course, be happy to follow all lighting restrictions. Also, check the FAAC Yahoo site for updates.

The 4th Annual Swap Meet was recapped by Jim Frisbie. Both the actual meet and the classroom events were deemed to have been successful, as was the mini-planetarium. Several members had suggestions for improving the event. President Klaser said that all suggestions, on any matter, are more than welcome (member participation being one of the weaker aspects of the club) but that the proper method for submitting them is in written (or, at least, outline) form, preferably at the Board Meeting (at which all members are welcome) where ideas can be discussed in a more informal environment without extraneous matters getting in the way.

The date of the Club Banquet has been changed to 24 March. Seating is limited, so get your reservations into the Treasurer. See the flyer in this newsletter, or check the FAAC Yahoo site.

Mr. Klaser gave a report on the Forest Elementary outreach program. While the weather was uncooperative, the event again proved successful, and we will repeat next year.

Bob MacFarland reported on the planned lunar eclipse viewing on Saturday, March 3. The Club will be gathering at Cove Point within the Lake Erie Metro Park. Also check the FAAC Yahoo site.

Jim Frisbie is organizing a field trip to Abrams Planetarium, date TBD. A show of hands indicated overwhelming potential participation.

Mr. Rasmussen invited those wishing to view the lunar eclipse March 3, but may be unable to attend either the DSC or Cove Point gatherings, to join the U-M group on top of their parking structure, which has a clear view of the eastern horizon. Bring your own equipment, or use theirs. Also, the Michigan Olympiad is seeking mentors for contestants for the forthcoming Olympiad. Mr. Rasmussen can be reached at (313) 792-6875.

Meeting Agenda - March 22

5:30 pm

Opening/Introduction/Member Observing

New Members and Guests – Diane Worth

Tech Talk: Collimating Binoculars – Jim Frisbie

Presentation: Neutron Stars – Guy Maxim, Warren Astronomical Society

Club Business/Secretary/Treasurer reports

Club Projects/Committees/Member support

- Astronomy Day, April 21 – Don Klaser
- Astro-Imaging SIG – Tony Licata
- Club Banquet – Doug Bauer
- Club Road Trip – Jim Frisbie
- Forest Elementary Recap – Don Klaser
- Lunar Eclipse - Lake Erie and DSC, Recap – Bob MacFarland and Don Klaser
- Open discussion

Treasurer's Report

Gordon Hansen

Bank Accounts

Checking	\$	687.51
Savings	\$	5648.43

TOTAL Bank Accounts	\$	6335.94
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Cash Accounts

Cash Account	\$	99.75
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TOTAL Cash Accounts	\$	99.75
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Asset Accounts

GLAAC	\$	1497.21
Projector	\$	768.13
Scholarship	\$	263.05

TOTAL Asset Accounts	\$	2528.39
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OVERALL TOTAL	\$	8964.08
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FAAC Events 2007

Bob MacFarland

- March** 3 – Lunar Eclipse, Cove Point, Lake Erie MetroPark
24 – FAAC Annual Dinner
- April** 21 – Astronomy Day - Detroit Science Center & Kensington MetroPark, with Beginners' Night, Island Lake Recreation
- May** 19 – Beginners' Night, Island Lake Recreation Area
- June** 23 – Beginners' Night, Island Lake Recreation Area
- July** 21 – Beginners' Night, Island Lake Recreation Area
- August** 18 – Beginners' Night, Island Lake Recreation Area
- September** 5-11 – Astro-Imaging Workshop, Gladwin
14-15 – Great Lakes Star Gaze, Gladwin
21-22 – Astronomy on the Beach – GLAAC, Kensington Park
- October** 20 – Beginner's Night - Island Lake
- TBD 2007** – Sand Hill / FAAC Picnic
– Detroit Symphony Orchestra night

Astro Imaging SIG

Tony Licata

The next meeting of the Astro Imaging SIG is Thursday, March 8th, 2007, 5:30 pm, Roseneau Rooms A-B, at HFCC in Dearborn, in the Administrative Services and Conference Bldg. (same as the FAAC General Meeting). If you drive up to the Faculty parking lot gate, it should open allowing you to park close to the building.

We will continue discussion of planetary imaging. An additional presentation is T.B.D.

Also, mark your calendars! The Dark Sky Workshop is scheduled for Sep 5th-11th, at River Valley RV Camp in Gladwin, MI. A flyer and sign-up sheet will be posted at the Yahoo group site. Hard copies will also be made available at the general meeting.

Items for Sale

Coulter 10" Dobsonian telescope. \$400.
Contact Bob Stonik, 313-361-4954.

Celestron Orange Tube 8" (mid-1970s) Very good condition, no scratches, w/camera mount, tripod. RA bearings, slo-mo Dec fine. Corrector plate needs cleaning; needs visual back, diagonal.

Contact Dr. Nicolle Zellner, Albion College
nzellner@albion.edu

Schmidt-Newtonian 10" – F5.35, 1360 mm focal length with 2" focuser. Includes 60 mm guide scope, Full aperture solar filter by Thousand Oaks (Mylar). Also includes cooling fan, extra set of "O" rings. Corrector plate made by Optron systems (division of Nazca Corp. of Callifornia).

Also available is the Crestliner mount (on wheels). Scope made by Nelson Lewis of Detroit Astronomical Society in 1962. Purchased 1981. Selling telescope for \$325. Mount for \$200.

Contact: Harold Thomason 313-584-7465

AstroSystems 12.5" F5.26 TeleKit Dobsonian, 2" thk 1/15 peak to valley wave front Pegasus primary, new Sky Commander XP4 DSC , AstroSystems Phase IV focuser, 9 x 70 finder, internal filter slide, secondary heater, base mirror fan with 2 boundary layer fans, light shroud, full nylon cover, truss bag, wheelbarrow handles, other extras.

\$4400 new, asking \$2150.

Contact Bob, stargzr@wowway.com

Orion Telescopes 8-inch XT8
Very Good Condition
Comes with 6X30 finder, 2 eps 25 & 9mm Dobsonian mounted, great all around Scope!
\$300.00

Contact Michael, 734-777-3605 or email:
mharri1000@netzero.com



FAAC Dinner Banquet 2007

*Saturday, March 24, 2007
6:00 pm until ?*

Astro Slide Show – Prizes – Astro-Jeopardy

LOCATION: Station 885, located at 885 Starkweather, Plymouth, Michigan 48170, 734-459-0885.

Dinner Selections:



10oz Prime Rib of Beef au Jus

OR

Broiled Whitefish with Michigan Sun Dried Cherry Cream Sauce

OR

Chicken Marsala with Mushrooms sautéed in Marsala Wine



Dinner entrees include fresh vegetable medley, Chef's roasted herb potatoes, and a mixed green salad

Dessert: Raspberry Sorbet



Coffee, tea, iced tea, and soft drinks will be available throughout the evening.
A Cash Bar is available. Ask your server for beer, wine, and mixed drinks.

ADMISSION: \$29.95 per person.

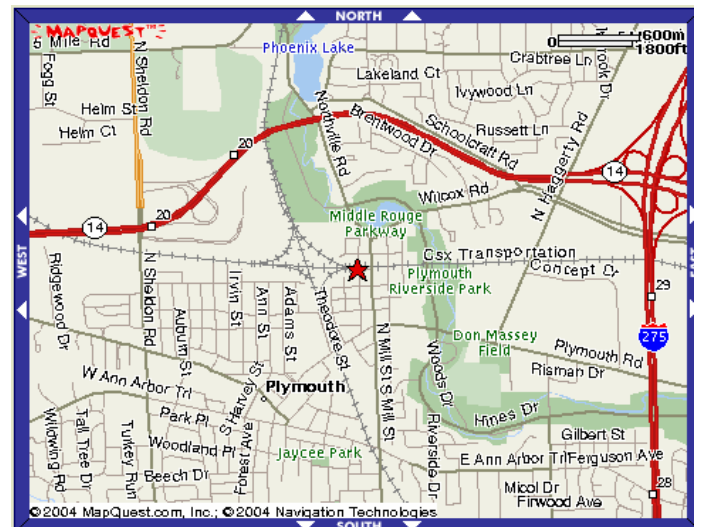
Cocktails 6:00 pm (cash bar), Dinner 7 pm.

Make Checks Payable: Please pay Gordon Hansen at the General Meeting, or send payment to Ford Amateur Astronomy Club, P.O. Box 7527, Dearborn, MI 48121-7527.

"Thank you for another great year. We hope to see you there. Please let us know if you are coming!"

- - **FAAC Board.**

Location: The restaurant, **Station 885** is located 3 blocks north of Plymouth Road, just east of downtown Plymouth. * **See STAR on map***



For More Information: Contact Doug Bauer via email: DougBauer@comcast.net or call (248) 828-7385

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**Skypod Alt-Az "GoTo" mount, with
Starbook S controller.**

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