



★ **STAR STUFF** ★

The Newsletter of the Ford Amateur Astronomy Club

**August & September 2000
Volume 9 Number 7**



Editor: John M. Kmiecik

Congratulations to Mr. Gregory Burnett and Ms. Victoria Cooper on their engagement!

In this Issue...

Contents

Joining the New E-Mail List

STAR STUFF Editorial

Engagement Announcement

New Digital Camera Chip

Introduction to Amateur Astronomy Class

Flyer for Beginner's Night

Flyer for Island Lake Star Party

Departments

NEW! the clubspOt

FAAC Meeting Minutes – August 24th

2000 FAAC Events Calendar

Email Made Easy

By Dan Kmiecik

Keeping the FAAC email list current is a task that needs constant attention. Transferring the email list from one officer to another is difficult if the two people involved do not use the same email software (and they rarely do). Therefore I am requesting that all members with an email address who wish to continue to receive club emails subscribe to the "FAAC email list service". This will allow club officers to send email to everyone on the FAAC list much more efficiently, keep the list up to date and eliminate the need to transfer the list from one officer to another. To subscribe to the "FAAC email list service" follow these directions: Send an email to majordomo@www.boonhill.net. In the body of the email type: `subscribe faac`. Once subscribed you can send your notes to faac@www.boonhill.net. Everyone on the FAAC email list will receive your note.

These directions are also posted on the FAAC web site at <http://www.boonhill.net/faac>. From

there you can select the "FAAC email list service" link and subscribe to the list.

STAR STUFF Editorial

By John M. Kmiecik, Editor

As some of you may know, I have had many computer woes recently. I lost info on one hard drive, and another one is not looking recoverable. As a result, I have lost all my master electronic copies of STAR STUFF. January through June newsletters are no longer available. A few hard copies are left over from July, and some people did not receive the July newsletter. Please contact me if you would like a copy of it.

I lost my masters, which means I also lost the generic STAR STUFF newsletter. So this month, I have redesigned STAR STUFF! The newsletter now has a new logo and has been switched to a two-column format from the three columns used previously. This allows for more material to be in the newsletter and also provides for an easy read. I hope that everyone enjoys the changes. More may be in store but I assure you they will be for the better!

Also, I recently started High School. This means more homework, more work and more involvement in school. I must drop some things from my everyday life that I enjoy. Unfortunately, one of the things is STAR STUFF. I am in search of a new editor, and wish to find one as soon as possible. Please contact me for more information.

STAR STUFF is a monthly publication of the Ford Amateur Astronomy Club, an affiliate club of the Ford Employee Recreation Association.

Ford Amateur Astronomy Club
P.O. Box 7527
Dearborn MI 48121-7527

Your submissions to **STAR STUFF** are welcome. Please write to the address above or contact the editor:

John Kmiecik
westpark@mediaone.net

Officers:

President	Dan Kmiecik
Vice President	Don Thompson
Secretary	Mike Kruskie
Treasurer	Mike Bruno

General Meetings:

The Ford Amateur Astronomy Club holds regular general meeting on the fourth Thursday of each month (except the combined November/December meeting held the first Thursday of December) at 5:00 PM in conference room 1491 in the Ford Credit building in Dearborn, Michigan.

Observing:

The Ford Amateur Astronomy Club observes at Spring Mill Pond within the Island Lake State Recreation Area near Brighton, Michigan. The club maintains a permit for after-hours access. Weather permitting~ the club observes on Friday nights, Saturday nights, and nights before holidays.

Hotline:

Observing schedules and additional Club information is available by calling the Observing Hotline at (313) 390-5456.

Club Membership:

Membership in the Ford Amateur Astronomy Club is open to Ford employees and non-employees. Write or call for an application.

Annual --New: \$ 25-Renewal: \$ 20
Lifetime -- \$ 100

Membership includes:

A subscription to the **STAR STUFF** newsletter

Discounts on **ASTRONOMY** and **SKY & TELESCOPE** magazines

After-hours access to the observing site

discounts at selected area equipment retailers.

Engagement Announcement
By Greg Burnett

Ms. Victoria Cooper of Royal Oak, a member of the Warren Astronomical Society, and Mr. Gregory Burnett of Dearborn, a member and co-founder of the Ford Amateur Astronomy Club, are pleased to announce their engagement to be married on May 2, 2001. Ms. Cooper is presently employed as a legal secretary for Kemp, Klein, Umphrey & Endelman in Troy. Mr. Burnett is a computer systems manager with Ford Motor Company in Dearborn. The couple met when Vicki attended an astronomy class that Greg teaches in the Dearborn Adult & Community Education Program. They share a deep interest in astronomy, and are regularly in attendance at local amateur astronomy events. It is rumored that the bride and Groom are registered at Astro Physics and TeleVue.

New Digital Camera Chip

Edited by Dan Kmiecik from an article

By **JOHN MARKOFF** of the New York Times
Submitted by Greg Burnett

Suddenly the future of digital photography seems to be becoming much clearer.

Only two weeks ago, Eastman Kodak announced a chip able to capture digital images with a resolution of 4,096 by 4,096 picture elements — or pixels — by some measures, is about twice the resolution per square inch. That, of 35-millimeter film. Today, a company founded by one of Silicon Valley's pioneer chip designers, will announce an image-sensing chip capable of the same resolution as the Kodak chip, but made using a technique that could be much less expensive. Executives of the company, Foveon, said they had given a prototype camera based on their chip to a photographer in Los Angeles, Greg Gorman, who had used it to make a portrait of a cowboy. In that image, no pixels, or dots, were visible to the eye, even with the photograph blown up to a size of 8 feet by 4 feet.

"We're headed to flat-out replace the film camera," said Carver Mead, the founder of Foveon, which is based in Santa Clara, Calif. Mr. Mead, a pioneer of the chip industry, became a Silicon Valley legend in the 1970's by helping develop techniques that for the first time enabled chip engineers to create circuits containing tens of thousands of transistors.

C.C.D.'s now dominate the digital- imaging industry, but compared with CMOS devices, they require production and assembly of several chips and related components to combine the

sensing and computing tasks that can be performed by a single CMOS chip.

Both companies' achievements have startled industry experts because the new devices move far beyond the current industry standards for CMOS and for C.C.D. cameras, which until now have been able to achieve resolutions of 6 million pixels a square inch. The Foveon and Kodak sensors can pack 16.8 million pixels into a square inch.

Yet despite their promise, CMOS-based sensors have until now had just a tiny impact on the overall market for digital imaging because they have been unable to achieve the resolution and clarity of C.C.D. sensors. The global market in 1999 for C.C.D. sensors was \$959 million, compared with only \$14.2 million for CMOS sensors, according to Frost & Sullivan.

But even before Foveon's latest achievement, CMOS was gaining ground. Not only have companies including Kodak and Polaroid begun to offer inexpensive, low-resolution CMOS-based cameras, but telecommunications giants like Nokia of Finland and NTT DoCoMo of Japan are planning to include inexpensive CMOS sensors in millions of their next-generation cellular phones. Foveon's contribution has been to improve the quality of CMOS images by continuing to put more computer processing power behind the task of capturing the digital image. The new 16.8 million-pixel device has seven active transistors for each pixel. The benefits include less interference, better focusing and more precise exposure times. "When the pixels get smarter," Mr. Mead said, "that translates into better image quality." Foveon's principal investor and the company's technology partner is National Semiconductor, a big Silicon Valley chip maker. National Semiconductor's manufacturing plant in Santa Clara is capable of etching chip circuitry only 0.18 micron wide — a microscopic fineness that few other chip makers can equal. By contrast, most current low-cost CMOS sensors are made with circuitry of 0.35 or 0.5 microns, which allows for millions fewer transistors per chip.

Despite the advances now being made, Mr. Mead acknowledged that digital-image sensors are still a long way from matching the skills of the human eye. An eye is movable, which enables it to scan various parts of an image and then allow the brain to compose a single, larger image. The eye is also remarkably diverse: elements that have high resolution are clustered at the center of the field of vision, while sensing

elements that function well at low light levels are around the periphery of the eye, giving human vision a great flexibility of range in varying light conditions that no artificial imaging system can yet match.

Mr. Mead said that because of fundamental size limits in the wavelengths of light, it is unlikely that future digital sensors will gain much additional resolution. Instead, shrinking semiconductor circuit sizes will make it possible for companies like Foveon to add more and more intelligence to their digital-imaging systems, perhaps simulating more of the image-enhancement functions of the human brain.

Introduction to Amateur Astronomy Class By Greg Burnett

The Dearborn Adult & Community Education Program is again offering "Introduction to Amateur Astronomy" for the Fall 2000 Semester.

The class is a beginner's introduction, and discusses telescopes, binoculars, solar system and deep-sky observing, and how to locate objects in the sky.

The class starts Tuesday, September 19, and meets for five consecutive Tuesday nights from 8:00-10:00PM at Edsel Ford High School at Rotunda and Pelham (two blocks west of the Southfield Freeway on Rotunda). The instructor is Greg Burnett of the Ford Amateur Astronomy Club, who has taught the class twice before.

The cost for non-residents of Dearborn is \$47. Call the Community Education office at 313-730-0476 for more information or to register.

FAAC Meeting Minutes – August 24th By Mike Kruskie, Club Secretary

- President Dan Kmiecik called the Meeting to order at 5:00PM. As is customary, everyone enjoyed pizza and pop during the roundtable introductions. Several members reported that Smurfs turned out wonderful this year but attendance was low due to a poor weather forecast. There were several reports of a spectacular Perseids show this year also coupled with a spectacular aurora.
- There were several announcements,
- The August Star Stuff was not published due to a lack of articles. Please! Send articles to the Editor.
- The Editor also announced that because of school this fall, he is looking for a replacement to finish the remainder of his term which is December 2000.

- Beginners Night II is planned for September 23rd. It will be held at the Island Lake observing site from 7PM to Midnight. Flyers are available from John Ford or they may be obtained from the FAAC WEB site.
- Congratulations to John Ford. He received his Double Star Certificate from the Astronomical League.
- Treasurer Mike Bruno reported the following account balances, Checking \$877.05 Savings \$2530.86 The Scholarship Fund balance is \$897.83 and is included in the account balances above.
- A sign-up sheet went around for volunteers to assist with registration, parking, sky tours, etc.
- George Korody will look into getting the canoe shuttles again this year. George will also check into getting the food caterer.
- We will have to put together the skytour certificates.
- Clay Kessler volunteered to put together the Flyer again this year. Doug Bock will post it on the Web site.
- We need to put together an agenda and determine if we can get speakers for the event. If anyone has any ideas for speakers please contact a club officer.
- Mike Kruskie will contact Orion again this year to see if they would like to provide catalogs and gifts.
- Someone(I didn't catch who) will ask Al Bates to see if he can gain support from his contacts from last year.
- Mike Bruno will contact Paul Mrozak to see if he can obtain light bracelets and he will also contact Patty to see if see can coordinate tee shirts again .
- John Kmiecik will contact Barry Craig to see if he can provide PA equipment and also possibly do his comet making presentation.
- The tent and tables are already on reserve.
- We are considering placing literature on tables this year and letting people take what they want.
- Don Nailec will provide a projector screen for the presentations.
- Don Glaser and Bob McFarland will look into providing basic speaker equipment.
- Advertisement for the star party will be by word of mouth, Sky and Telescope magazine, flyers, and e-mail of last years registrants.
- Tom Boisak tabled the idea to see if the Dearborn Community Television would like to do a program on the star party. It was agreed to a good idea, so Tom will contact them.

the clubspOt

By Daniel J. Kmiecik

Beginning this month Star Stuff will have a new regular feature, the clubspOt. Acknowledging that not all FAAC members have access to a computer I have decided to run this feature to make everyone aware of the Astronomical League Observing Clubs. The first edition of this new feature introduces the purpose of the Clubs and the requirements to the Messier Observing Club. I hope this feature will inspire all of you to earn as many different Observing Club certificates as possible. Future editions will introduce other Observing Clubs and their requirements. As members complete specific Club requirements we will print their name and the Club certificate they have earned.

The observing clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. These include the Messier Club, Binocular Messier Club and the Herschel 400 Club, the Deep Sky Binocular Club, the Southern Skies Binocular Club, the Meteor Club, the Double Star Club, and the newly formed Lunar Club.

Each Club offers a certificate based upon achieving certain observing goals. These are usually in the form of a specific number of objects of a specific group with a given type of instrument. Occasionally there are multiple levels of accomplishment within the club. There is no time limit for completing the required observing, but good record keeping is required.

When you have reached the requisite number of objects, your observing logs are examined by the appropriate authority and you will receive a certificate and pin to proclaim to all that you have reached your goal. Many local astronomical societies even post lists of those who have obtained their certificates.

The FAAC is affiliated with the Astronomical League. When you have completed the requirements for any Observing Club, turn your notebook into Dan Kmiecik. Dan will be sure the appropriate FAAC expert examines your notes and send the necessary form to the Astronomical League.

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The Astronomical League offers special recognition in the form of a Messier Club Certificate for those that have observed most or all of the Messier objects. To qualify you must either be a Member-at-Large or be a member of an astronomical society which is affiliated with the League. To obtain an award you must observe the following rules:

Rule 1:

Observe 70 Messier objects and keep a record of your observations. Your notes must show:

- a. Date of observation
- b. Time of observation
- c. Seeing conditions
- d. Aperture size of telescope
- e. Power used
- f. A short note describing your observation of the object.

Rule 2: Have your notebook or record examined by an officer of your Society or a suitably qualified second party if you are not a member of a society and have this party forward a letter to the effect that you have made the necessary number of observations.

Rule 3: When you have observed the balance of the Messier Objects, have your notebook or records examined again and a letter forwarded to the Astronomical League indicating that you have completed the observations of the Messier Catalog. You will receive an "Honorary" membership certificate signed by the current President of the League.

2000 Ford Amateur Astronomy Club Calendar FAAC

Sep 23 thru Oct 1	NCO Boon Hill Fall Star Party - Boon, West of Cadillac - BYO Everything
Sep 23	FAAC Beginner's Night II - Island Lake, Spring Mill Pond
Sep 28	FAAC General Membership Meeting
Sep 30	Lake Hudson Dark Sky Stargaze
Oct 7	Eighth Annual Island Lake Star Party
Oct 26	FAAC General Membership Meeting
Oct 27 thru Oct 30	NCO Boon Hill Star Party - Boon, West of Cadillac - BYO Everything
Oct 28	Lake Hudson Dark Sky Stargaze
Nov 25	Lake Hudson Dark Sky Stargaze
Dec 7	FAAC Joint November/December General Membership Meeting
Dec 23	Lake Hudson Dark Sky Stargaze

Check for updates on the FAAC hotline: 313-390-5456

Ford Intranet: <http://www.be.ford.com/astro/faac.html> or the External Internet:
<http://www.boonhill.net/faac>

Ford Amateur Astronomy Club

Beginners' Night at Island Lake

September 23rd, from 7:00PM to Midnight
(Arriving at 7PM will allow you to get help during daylight)

Do you have a new telescope that you would like to learn to use? Do you
want to see samples of

what the night *sky* has to offer? (weather permitting)

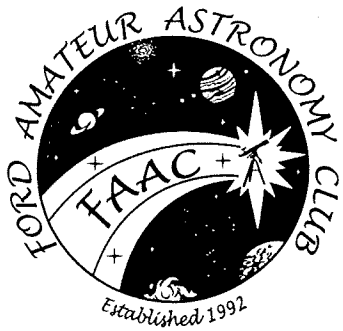
You should consider coming out to Island Lake Recreation Area on Beginner's Night. These nights are dedicated to providing equipment and observing assistance to new astronomers

The event will take place on the date indicated regardless of sky conditions, cloudy or dear.
If it is raining, the event will be cancelled.

The exact location of the observing site is the "Spring Mill Pond" parking lot and picnic area, at the Island Lake State Recreation Area, on Kensington Road, south of 1-96 between South Lyon and Brighton.

For more info or details on this event, contact John at
Pattern12O@hotmail.com or Dan at faac1992@hotmail.com

The Ford Amateur Astronomy Club observes at the Island Lake site on Friday and Saturday evenings year round, provided skies are clear. You are welcome to visit the observing site on any weekend, but you must be with a club member if you plan to observe after 10PM. Call 1-313-390-5456 to find out if anyone is going out on any particular night.



The Ford Amateur Astronomy Club
Presents:

THE EIGHTH ANNUAL



**Saturday,
October 7,
2000**

6 PM – ???

This event will be held rain
or shine, cloudy or clear!!



Our Sponsors:

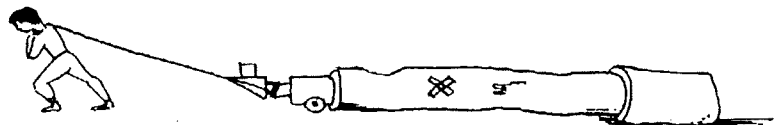
RIDER'S
HOBBY SHOPS
THE BETTER HOBBY PEOPLE!



The Discovery Channel Store

Event Listing:

- ♦ **Telescopes of all kinds** – these are available to look at and look through . Have questions? Just ask!
- ♦ **Presentations and Demonstrations by local Technical Experts.** These are designed to answer your questions about equipment and observing techniques and help you to get the most from your telescope.
- ♦ **Astronomical Equipment** – educational material, books and star charts will be on display and made available by our sponsors.
- ♦ **PRIZES!!!** - There will be door prize drawings for telescopes and other items.
- ♦ **Observing Tour for Children** – Kids who register will be given an observing list. Marked telescopes will be on the field for the challenge. A certificate of achievement, and a gift from the Ford Amateur Astronomy Club, will be awarded to all who complete the observing list!



Your Telescope is Welcome!!

If you have questions about your equipment this is the perfect opportunity to get the helpful advice you need. Limited AC power and plenty of space is available. Please arrive before dark to allow for set-up time.

No telescope? No Problem! There will be lots to look through – just bring your curiosity!

Admission is Free* and Children are Welcome!

* You need a State Park Vehicle Permit if you don't have one – a daily permit is \$4.00



Ford Amateur Astronomy Club
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