FERA
Ford Employees Recreation Association

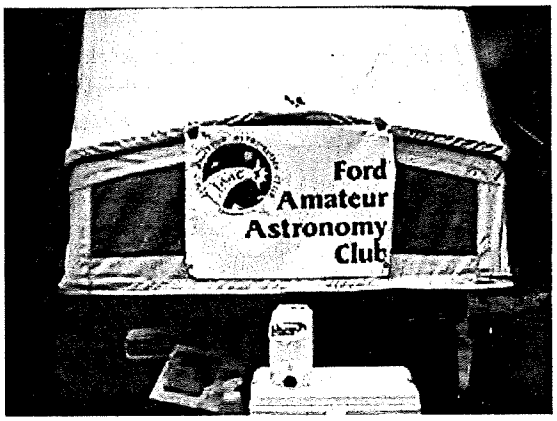
FORD AMATEUR ASTRONOMY CLUB
FAAC
Established 1992

Star Stuff

ASTRONOMICAL LEAGUE

Volume 7 Number 8 September 1998

Feature of the Month



Smashing Time at SMURFS!

By Clayton Kessler

If this is the midsummer new moon then it must be time for SMURFS. What is SMURFS you ask? The acronym SMURFS stands for Southeastern Michigan Unorganized Regional Festival of Stargazers. This is a star party sponsored by the Genesee Astronomical Society and held in the northern lower peninsula - near Hillman. If you look at the IDA map of the US you can see that the SMURFS site is one of the darkest places in the lower peninsula of Michigan. The site is an old farm owned by the family of GAS member Kurt Kemp and this site provides plenty of room to camp, set up telescopes and do fun stuff during the day like shoot model rockets! Facilities are a little rough at the site with Port-a-potties and an "Alaskan" shower that lives up to it's name but showers are avail-

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FIRE IN THE SKY

by Paul Mrozek

Oh my God, they're coming right at us! Everywhere you look in the sky, mosquitoes, umm I mean meteors! If you are out late during these fall nights, you are more likely to see a meteor than at any other time of the year.

Some amateur astronomers may see a few faint meteors and think what's the big. Why would anyone want to go out to a dark sky site, stay up very late, and not bring a telescope? Well, after I saw my first fireball (while driving in my car down the highway) I was so astonished I wanted to see more. After doing some research, I found out there are a lot of interesting things about even the small/normal meteors. Once I knew this, I no longer had that "seen it once, they all look the same" attitude. Furthermore, unlike most other celestial objects there is no guarantee that something will be there

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Star Stuff
Monthly Publication of the:
Ford Amateur Astronomy Club.

Star Stuff Newsletter
P.O. Box 7527
Dearborn, Michigan 48121-7527

1998 Club Officers

President	**Greg Burnett**
Vice President	**George Korody**
Treasurer	**Ray Fowler**
Secretary	**Dave Beard**

General Meetings
The Ford Amateur Astronomy Club (FAAC) holds regular general meetings open to the public on the fourth Thursday of the month at 5:00 PM. Meetings are held in conference room 1491 of the Ford Credit Building

Observing Site
The Ford Amateur Astronomy Club has an established observing site, by permit, at the Spring Mill Pond area of Island Lake Recreation Area in Brighton, Michigan located near the intersections of I-96 and US-23. Members are responsible for opening and closing the gate after the parks 10:00 PM closing time. (Summer season only)

Observing Hot Line - (313) 390 5456
On Friday and Saturday nights, or nights before holidays, you can call the hot line number up to 2 hours before sunset to find out if we will be observing that night.

WWW Page
FAAC maintains a web page on the internet at URL:
http://kode.net/~dougbock/faac/
Ford Intranet at:
http://be0084.be.ford.com/fhl/faac

Membership and Dues
Membership to the Ford Amateur Astronomy Club is open to both Ford employees and the general public. The dues structure is as follows:

Annual Individual/Family	$ 20.00
Lifetime Membership	$100.00

Membership benefits include a subscription to the Star Stuff newsletter, discounts on subscriptions to Astronomy and/or Sky and Telescope magazines, after hours use of the observing site at Island Lake, and discounts at selected area astronomical equipment retailers.

Newsletter Editor:
Jack Kennedy 248-399-9403
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home 248-399-9403

Editors Corner

By Jack Kennedy

This has been a very rewarding summer for those of us that have been able to travel to both distant and near star parties. Included in this issue is reports on the summer solstice party at Doug Bocks. This party has been going on longer than most of us have been involved in the hobby. Even with the weather only giving us one out of two clear nights it was a great gathering of amateur astronomers.

Our feature article this month is SMURFS or Southern Michigan Unorganized Regional Festival of Stargazers. This is our premier star party in the state of Michigan. The dark skies of northern Michigan near Hillman are always a treat. We had two partly clear nights and one clear night.

Another real treat in this issue is "Fire from the Sky" by Paul Mrozek. This is great reading and you will want to keep it around as a reference. Especially interesting is the potential for a major meteor storm this fall or in 1999 from the Leonids which occur November 16-17 this year. Paul brings up a good point to take some time when out under the night sky to just look up with the naked eye and enjoy.

Thanks to all those that contributed. To the rest, now is the time to share your hobby with others.....

House Bill 4254

The light pollution bill is still in the Senate committee for Technology and Energy. Representatives from the area clubs are planning a trip to Lansing with Norbert Vance to testify before the committee. This has not been confirmed yet. If you would like more information on this bill or the trip to Lansing contact Jack Kennedy at 248-399-9403 or e-mail to jkennedy1@voyager.net

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when you look, so there is a build up of anticipation. What follows are some facts about meteors (from The American Meteor Society -- www.serve.com/meteors) that will hopefully encourage people to take some time out and just look up at this fire in the sky.

Meteoroids are the smallest members of the solar system, ranging in size from large fragments of asteroids or comets to extremely small micrometeoroids. Whenever a meteoroid enters the Earth's atmosphere, it will create a brief flash of light called a meteor (and will be called a meteorite if the remnants reach the ground). Most meteors occur in the thermosphere, which is about 50 to 75 miles in altitude. However, some very fast meteors may become visible above this height and slow, bright meteors may be seen lower. The majority of visible meteors are caused by particles ranging in size from a small pebble down to a grain of sand, and generally weigh less than 1-2 grams. The brilliant flash of light from a meteor is caused by its high kinetic energy, with most entering the atmosphere at speeds ranging from 25,000 to 160,000 mph! On the evening side, meteoroids must catch up to the Earth (which is traveling around the Sun at about 67,000 mph) to cause a meteor and tend to be slow. On the morning side, meteoroids can collide head-on with the atmosphere and tend to be fast.

When a meteoroid collides with air molecules it ionizes a column of atmospheric atoms, usually less than 1 meter in diameter but tens of miles long, creating a flash of light. If the glow from a meteor trail lasts for longer than 1/2 second, then it is called a meteor train. Trains are usually seen from fast, bright meteors in high altitudes, and are primarily generated by the green emissions of neutral nitrogen. Most meteors produce a wide blend of emissions giving an overall white color, but specifically colored meteors are often observed. Meteoroid composition is an important element -- sodium produces bright yellow, nickel shows as green, and magnesium as blue-white. Meteoroid velocity is also a big factor -- slow meteors are often seen as red or orange, while fast meteors are frequently blue. Such meteor colors are usually rather weak in appearance, but vivid colors are often reported with fireballs.

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NCO Summer Solstice Star Party -

by Clay Kessler

The end of June is a great time for a Star Party in this area. That is when Doug Bock hosts his annual Summer Solstice Star Party at the Northern Cross Observatory in Fenton Michigan. This year's event was held on June 26th to the 28th. Man - did we have fun!!

People started arriving on Friday afternoon and setting up camp and observing sites. The weather cooperated on Friday with a hot afternoon and a clear night with a slight haze - not bad for this time of year. The seeing remained good until fog rolled in at about 3:30 AM. Saturday's daytime weather was good but a few rain showers rolled through and there were patchy clouds all day. The evening was a teaser with holes drifting past until around 12:00. At midnight the clouds went away except for a high haze layer that only let the brightest stars show through. Well, 50% for a Michigan Star Party was not bad and we did get to sit around and "shoot the bull" on Saturday.

As usual, it is the people who make this type of event and we had some neat people show up. About 35 people attended the Friday night session. Several groups of people showed up after seeing the announcement is Sky & Telescope or Astronomy Magazine. One fellow, Reinhold, came with his family from up in the thumb somewhere. Reinhold does not yet have a scope, and never has, but he is building a 10" and wanted to look at a variety of scopes for ideas. This shows a fantastic amount of determination. I am sure that I would be too intimidated to just "build" a scope from scratch if I didn't know a great many people around here who can help me! A very resourceful couple Reinhold's wife, Susie, rewired Doug's circuit breaker box in the roll off roof and solved the AC power problem in the second dome!! Several groups of curious onlookers showed up around dark and Doug was, as always,

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A fireball is generally any meteor brighter than magnitude -4 (about the same as planet Venus), and a bolide is a fireball that explodes in a bright terminal flash. Fireballs greater than about magnitude -6 are occasionally seen in the daytime, and often have a smoke trail when they are low in altitude. If a fireball greater than about magnitude -8 reaches the stratosphere (about 30 miles in altitude) and explodes as a bolide, then there is a chance that sonic booms may be heard 1.5 to 4 minutes later. A fireball must be greater than magnitude -8 in order to potentially reach the Earth's surface. Two important requirements for producing a meteorite are that the parent meteoroid must enter the atmosphere relatively slow and it must be composed of sturdy material, like from an asteroid. Meteoroids of asteroid origin make up only 5% of the overall population, which is primarily cometary.

It is estimated that several thousand fireballs occur in the Earth's atmosphere each day. However, a majority of these occur over the oceans or uninhabited regions and many more are masked by daylight. Moreover, there is roughly only about 1/3 as many fireballs present for each successively brighter magnitude. So, an experienced observer can expect to see a magnitude -4 fireball once about every 20 hours and one of magnitude -6 about every 200 hours of observing. The number of fainter meteors that can be seen is much higher, but also quite variable. Over the course of a night, about 2 to 3 more of random, or "sporadic", meteors will be noticed in the hours before sunrise than after sunset. Additionally, about 2 to 3 more sporadic meteors can be seen in the early Fall than in the early Spring (due to the tilt of the Earth's axis). So, the general per hour rates that can be seen in good conditions are as follows:

	Evening	Morning
March	2-4	4-8
Sept.	4-8	8-16

The number of meteors that can be seen may increase during one of the annual meteor showers. These events occur when the Earth's orbit intersects a stream of particles left by the passage of a comet (or an asteroid, as for the Geminid shower). All of the meteors will appear to come from a single point in the sky, called the radiant, in the constellation for which the shower is named. Some meteor showers, like the Quadrantids, have maximums lasting only a few hours, and others, like the Taurids, can be near peak activity over a few nights. Many publications will list a Zenith Hourly Rate for meteor showers, which is standardized to optimum conditions. These shower rates are corrected for fully dark skies, and the radiant is artificially located directly overhead. The actual rates of meteors that can be expected for the 10 major showers are as follows:

(1) city sky or rural sky with full Moon
(2) suburb sky or rural with quarter Moon
(3) rural sky and no Moon
(4) calculated Zenith Hourly Rate

Date	Shower name	(1)	(2)	(3)	(4)
Jan 03-04	Quadrantids	5	10	25	120
Apr 21-22	April Lyrids	4	7	15	15
May 04-05	Eta Aquarids	4	6	10	40
Jul 28-29	Delta Aquarids	4	7	15	20
Aug 12-13	Perseids	10	20	40	120
Oct 21-22	Orionids	5	10	25	25
Nov 03-13	Taurids	4	6	10	10
Nov 16-17	Leonids	5	10	15	15
Dec 13-14	Geminids	18	35	85	85
Dec 21-22	Ursids	3	5	10	20

Occasionally the Earth's orbit will pass through a very concentrated meteor stream producing a meteor storm. The Leonid stream is the most well know example, and tends to produce a storm about every 33 years. The last appearance, on November 17, 1966, provided the highest known meteor rate ever recorded. An approximate 40 meteors per second (about 144,000 per hour!) was seen for about 1 hour from the western portion of North America. The next appearance of this storm should be in 1998 or 1999. Don't miss the opportunity to see this potentially unique and amazing event. Even if you are just out on a normal night, try to take some time out and look up for this fire in the sky.

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Meeting Minutes for 8-27-98
by Dave Beard

The meeting was called to order by President Greg Burnett at 5:00pm on 8/27/98. There were a total of 37 attendees, no new members identified themselves. As has become the custom, members jumped right into the pizza and pop, which were provided by George Korody and Ray Fowler, refreshment co-chairs.

When the dust settled, President Greg mentioned the great Aurora Borealis seen around midnight last night, and also mentioned that due to even more recent activity, that there was a prediction of another event sometime the following weekend. Greg passed around an article about telescopes in Cerro Paranal, Chile, an article on the many "official" star naming services, and the Texas' Astronomical Society and Oakland Astronomy Club newsletters for August.

Then the enlightening round the table discussion of all the members recent observing experiences went around the room.

The Treasurers report was given by Ray Fowler (we're not bankrupt yet). Then George Korody led a discussion of the current access situation at the Island Lake observing site. If there are any questions, please contact either the hotline listed in this newsletter, or a club officer.

The election for office of club secretary was held, with me as the only candidate, and David Beard (me) was elected with no big objections.

Bob McFarland gave an update on the upcoming Sixth Annual Island Lake Star Party, and mentioned that a few volunteers were still needed to fill out some positions. Bob also talked about next years Kensington Metropark event with the other members of the G.L.A.A.C.

Greg Burnett mentioned that there is now available through the club discount Renascence Festival tickets and Entertainment Gold books. The sales of these items help the club and our parent organization, the Ford Employees Recreation Association. Please help out with this effort. The real benefits are that we can continue to have Ford sponsored clubs on Ford property.

George Korody, Vice President, had a couple of walk-ins. He mentioned that all members planning to use the Spring Mill Pond site at Island Lake State Park should carry their Ford Club Membership cards. George also mentioned that there is an article about a possible meteor storm coming in October, in the October issue of Sky and Telescope.

Also, George mentioned the NCO Fall star party at Fenton will be September 19th, 1998, and also the NCO Wilderness Fall star party in Boon will be October 16-19, 1998. Please visit Doug Bock's site at http://kode.net/~dougbock/ for more information.

Dave Beard gave a presentation on a new astronomer's chair he is working on, and also had a couple of observing equipment tips (like use good glue instead of bad glue on your observing chair....).

New business: Members of the Eastern Michigan University Astronomy club mentioned that they had a couple of events coming soon, the Open House at the Sherzer Observatory on September 24th at 8:00pm, and on October 16-18, a Fish Lake weekend field trip. Please visit their site at http://www.physics.emich.edu/astrclub for more information.

The meeting was called at 6:45pm, as there was a meeting of the Island Lake Star Party committee following.

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generous with time on his big 20". Many people received his "Tour of the Universe" on Friday.

Several WAS members showed up and a lot of folks from the FAAC were there including our "lost" secretary Harry Kindt. Harry made the trip from his dark sky site in NW Ohio so he could visit with his old friends!. George Korody was very quiet over on the north of the observing field. He brought his CCD setup and took some fantastic images of M51 and the Eagle Nebula. Dave Beard had his "spaghetti pot" Dob. That was a fun scope but I understand it has since been modified. Dave Ciali had his great 14" Dob out and spent the evening in serious observing. Rick Kovari had both of his scopes out and kept his eye on the weather in his official post as NCO weatherman. We were happy to see WAS member Randy Rubis on what I understand to be his first star

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The Ford Amateur Astronomy Club
Presents:

THE SIXTH ANNUAL

Saturday, September 26, 1998

6 PM – ???

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

Our Sponsors:

RIDER'S HOBBY SHOPS
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THE NATURE COMPANY

Solstice (Continued from page 5)

party. He had a fully handicap accessible 10"LX200 and a whole slew of ATM built accessories. One of the neatest, in my opinion, was his power box. It used a deep cycle battery that was recharged during the day via solar panels. The whole thing was fully instrumented and mounted on wheels - really neat. I hope to see you at SMURFS Randy!

Saturday morning dawned around 10:00 - at least I think that was the time! ☺ The survivors enjoyed a pancake breakfast and immediately started to check the weather. Things were pretty quiet during the day but occasionally groups of astronomers would wander by and check out the site. Several were looking for a "swap meet" but they came too early. Things started to get crowded after 6:00 in the evening. Most of the Friday crowd was back and more groups were coming over but the clouds did not let up. Marty Kuntz showed up around then - Ah, instant swap meet!

Unfortunately the skies disappointed those who set up on Saturday. There were a few hazy holes early in the evening, then clouds and finally clearing but so much haze the seeing was very bad. This did, however, provide lots of time for the "slinging of the bull" - ahem!! Ahhhh I mean "technical discussions" yeah, that's the ticket! My discussion group went to about 1:00 AM and then petered out - oh well, an early night!

The Summer Solstice Star Party was a winner! We had one good night of observing with a good many astronomers present. What was especially gratifying were the people that showed up that were interested in astronomy. I know they got a lot out of their star party experience. I have heard a rumor that the Autumn Equinox Star Party will be held in the end of September. I can't wait!!

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able at the campground in Hillman a few miles away. For the faint of heart there are plenty of motels in Hillman and Atlanta nearby.

The star party officially goes from Thursday until Sunday. I say "officially" because some people arrive early - like the weekend before! It is a very popular star party for this area with many attendees who go every year. This year I heard that there were 110 registered on Saturday. With the kids running around it looked to be around 150 or so actually there. Lots of cool telescopes! The WAS had their 22" dob and, of course, Doug Bock had his 20" dob. There were lots of dobs in the 12" to 18" range, many equatorial newtonians, lots of SCT's and a lot of those funny long things with glass up in the front end - I think they are called rebreakers or refractors or something ☺.

I arrived on Friday afternoon, a day later than I planned - but I made it! I was just in time to start the sauce for the dinner that Jack Kennedy and I hosted. We served Shrimp and Artichoke Linguini for 25 people or so. It seemed well received and all the sauce was gone! It was a lot of fun and a good way to start the weekend for me. I also got a tour of the NCO mobile observatory - noted local astronomer, Doug Bock, suprised us all by showing up with a new travel trailer! That looks like a perfect "home" for the Texas Star Party! I eagerly inquired as to the previous nights observing conditions. Jack and Harry told me that Wednesday and Thursday nights were partially cloudy with some good viewing opportunities. I set up my scope and awaited darkness.

Hmmmmm.... Mother Nature was not cooperating! The cloud deck stayed pretty thick with only a few stars showing through the occasional hole. I decided to "nap" until the sky cleared - I needed the sleep anyhow. After a good nights sleep I was ready to go on Saturday.

Saturday dawned with some clouds but also a fair amount of sun showing. Then the "waiting for dark" chore started. Fortunately there was plenty to do to keep busy. First stop - the campground in town for a shower and to service the tanks in Jack's motor home. Then a good breakfast - always start with a good breakfast! The sun continued to shine albeit with a few puffy clouds to keep us guessing. Model rockets were the afternoon activity with a LOT of launches. All the kids - young and old - had a great time.

The Smurfs site held a lot of folks that I met last year and I made the rounds chatting. As the day rolled on many people arrived for the evening's observing - we even had a visit from Greg Burnett and company who just stopped to say HI! on the way home from vacation. I think the fellow that worked the hardest to get there was FAAC member Bob Vitullo. He checked himself out of the hospital, where he was suffering from kidney stones. He flew his group in his private airplane to the Atlanta airport. Then he picked up a rented van and made his way out to the SMURFS site. This is true dedication! Bob observed all night and even though he was in pain he seemed to have a good time. I hope you are well now Bob!

Saturday remained clear all night and the dedicated observers stuck it out. There was a fair amount of dew, but those with hair dryers or a dew remover were safe. I did come up with a new astronomical product - windshield wipers for Schmidt-Cassegrains - as seen on TV - coming soon to a store near you.....

I managed to get about four decent astrophotos on Saturday night. The summer nights are short enough so that a few 30 to 60 minute exposures and it is getting light. It was a wonderful night and I was sad to see it end. Kurt and the GAS did an outstanding job and I had a great time with everyone. I wish SMURFS came more than once a year!

Let's see - next month StarFest, in September Astrofest and then Island Lake! Is this **GREAT** or what!

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Upcoming Events

NCO Fenton Star Party	Sept 19-20
EMU Open House	Sept 24
NCO Boon	Oct. 16-17
Fish Lake	Oct 16-17

Ford Amateur Astronomy Club
Star Stuff Newsletter
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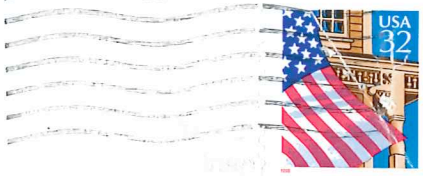

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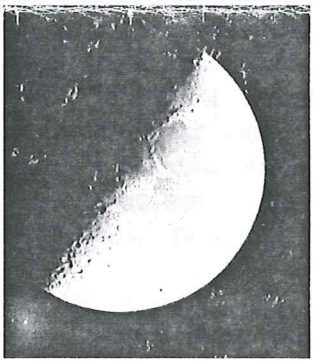

ASTRO PHOTOS WANTED

We are considering a special issue of Star Stuff with astro photos of club members. If you have photos and would like to submit let me know. Ed.