STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

February 2000
Volume 9 Number 2

Please send articles to westpark@mediaone.net by Febuary 28th for March Newsletter

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DEPARTMENTS...

Observing the New Century at Island Lake
By Clayton Kessler

New Years Eve – 1999. So there I was, alone under a darkening sky, equipment set up, polar alignment made, waiting for civilization as we know it to come to an end! I really didn't expect any y2k problems – but what if those annoying doomsayers were correct? I was going to be ready to take advantage of the predicted massive power failures and get some really dark skies.

The real reason that I was out was to test some new equipment and attempt to spot any problems before heading to Tucson. I was fortunate, everything seemed to work well and I think the Taurus Tracker has helped me to defeat the dreaded "flexure monster". Things seemed to be going so well that I decided to put a roll of film in the camera and try a few exposures.

After a while a young man named Tim showed up with a new dob that he wanted to try out. Time stayed for a couple of hours and then went home about 8 or so. The only other people that showed up was the "biker gang". They came roaring through at about 11:00 PM, 20 or 25 of them. Lights were flashing around for a while and they wished me a cheery "Happy New Year" as they pedaled past me. Yeah, pedaled! Those 15 speed mountain bikes are sure quiet at night.

M42, M43, NGC 1973 and NGC 1981 by Clay Kessler Taken December 31, 1999 at Island Lake Recreation Area. Composite of two 15 minute exposures and one 30 minute exposure on Fuji Superia 800 X-Tra. Combined in Picture Window. Color balanced and processed in Adobe Photoshop V 4.0.

Most of you are familiar with Island Lake but let me try to describe the conditions. It was clear, but very humid. The sky was steady but not very transparent. I would rate the transparency at a "4" at most. All in all it was a very poor night for seeing. I could only see hints of the milky way structure, M31 was an averted vision object, and only bright stars were visible. Looking at the stars visible in ursa minor I estimate magnitude 4 stars were visible at best. I did not expect much from the photos due to the sky condition even though the dob that was out showed some very nice views. I was mainly looking for round stars indicating good tracking. When I processed the negatives I was surprised at how much detail was picked up. The shots of M42 were very usable and I digitally stacked them and came up with a nice astrophoto. Likewise the shots of M45 and the asterism in the head of Orion were also suprisingly good.

Maybe I have become spoiled with the really good sky up in Boon and out west. I just "assumed" that the sky would be so poor it would not be worth trying astrophotography at Island Lake. This was a big mistake on my part, and my mistake is what prompted this article. The lesson learned is "don't make assumptions". I "assumed" that Island Lake would be unsuitable for astrophotography. I went out there because it was a convenient place to "test" new equipment. I now know that even under fairly poor conditions I can get reasonable results with my camera at Island Lake. Now that I realize this I am sure I will go there more often, especially in the winter time. Having a hard surface parking lot to set up on is a great advantage in the snow season. I want to encourage you to go there more often as well. This would be a good place to get started with astrophotography – even with the light pollution, and we usually have a few interesting characters hanging around to chat with. I'll see you there!

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 meetings 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, and discounts at selected area equipment retailers.

Note: If you want to join the group observing at Island Lake I suggest that you call the FAAC "Hotline" at (313) 390-5456 on Thursday or Friday. The message should indicate the planned activities for the weekend. We observe in the "Spring Mill Pond" parking lot.

Book Review of "NightWatch"
By Jack Kennedy

NightWatch
A Practical Guide to Viewing the Universe
By Terence Dickinson
ISBN 1-55209-302-6

NightWatch was the first book I purchased when I became actively interested in astronomy. Over the past few years I purchased about a half dozen copies of NightWatch both for myself and as gifts for others interested in astronomy. The first thing that I noticed about this book was the fact that it was spiral bound. This makes it real easy to have open at the telescope. I was very happy to see it revised and improved about a year ago. The pictures and artwork are exceptional throughout the book.

The book has a great tour through the universe called "The Universe in Eleven Steps" which is chapter two. I have read and reread this chapter and always enjoy Terence's easy writing style. The next chapter deals with how the sky moves and why, again in easy to understand terms. The next chapter is all about sky charts and how to use them. He then goes into a discussion on stargazing equipment in chapter five. Each observing aid is examined from binoculars to large telescopes. The next chapter does into an introduction of the types of object to see in the depth of the night sky. We then get to the best part of the book. The next section has a sky chart of each constellation and the highlights. I have spent many hours at the eyepiece with a copy of this book going through the objects.

After the sky charts is a nice chapter on the solar system and each planet. Then our tour leads us to eclipses, another chapter on comets, meteors and the auroras. The final chapter deals with getting started in Astrophotography. Terence explains how to get started in either film photography or CCD imaging.

All in all I have found this book to be worth every penny. I continuously pick it up to enjoy some light reading, some exceptional photos and artwork or in one case I used the book open to one of the sky charts as a mouse pad.

FAAC Dinner Party 2000
By Susan Fowler

Ford Amateur Astronomy Club is having their annual party on Saturday, March 25, 2000 at 6:30 p.m. Dinner will be at 7:30 p.m. There will be a cash bar. The party will be held in the Banquet Room of Kiernan's Steak House located at 21931 Michigan Avenue, Dearborn, MI. Please make your reservations by calling Susan Fowler at 313.274.7151 by Saturday, March 11, 2000. Your menu choices and prices are as follows:

Raspberry Glazed Chargrilled Chicken – Award winning dish.....$16.00

Baked Lake Superior Whitefish topped with almonds and herb scented butter $17.00

Tournedos of Beef – Twin petite filets topped with artichoke hearts and Béarnaise sauce, served over buttered croutons $20.00

Prime Rib of Beef "Au Jus".....$23.00

Entrees include soup du jour or tossed salad and choice of rice, potato or pasta. Please have your choice of entrée ready when you call in your reservation. Hope to see everyone there.

OBSERVATIONS
by Greg Burnett

Our ancient ancestors' lives were guided by the stars. The annual cycle of the constellations foretold the coming of seasonal rains, and dictated the movements of nomads. Later, risings and settings told when to plant and when to harvest. But primitive people had no inkling of the true nature of the stars. Petroglyphs and other gleanings from the distant past indicate that they thought the stars might be the home fires of distant tribes. Encampments of

neighboring clans could be seen from the hilltops at night. Why not others, even further away?...strange races in distant realms, beyond the possibility of contact.

As time went on and our culture advanced, wonderful new mythologies arose to explain the comings and goings in the heavens. According to some very early writings, the stars were stitch-holes in the cosmos where the fires of the gods shown through. In medieval times, the fixed and wandering stars were born on crystal spheres, whose turnings were propelled by angels.

Enlightened by the towering intellects of Copernicus, Galileo, and Newton, renaissance philosophers began to puzzle out the true nature of our Universe. Planets might be other worlds, stars other suns. These changes in thinking were hard-won. More than one scholar went to the stake for professing such heretical ideas.

But little by little, truth will out. The planets, indeed, were other worlds, but always too hot or cold for life such as ours. The stars were shown to be much like our Sun in many cases, but because they are so very distant, evidence for attending planets was lacking until recently. Today, with new instruments of exquisite precision, we can detect the tell-tale wobble of stars with large planets. Such discoveries now number in the dozens. Soon, scientists believe it will be possible to glimpse the spectroscopic signature of free oxygen, if it is present in the atmospheres of planets circling distant stars, very strong evidence for metabolizing life. As last we are on the verge of vindicating the ancients: Some stars may indeed be the home fires of other distant tribes.

Heard On The Net

from the sci.astro.amateur newsgroup
by Bob Lambeck

In contrast with the usual questions regarding how to clean snail trails off SCT corrector plates and removing bird droppings and tree sap from Dob mirrors, someone asked what the real astronomers do with their really big mirrors. Mike Simmons provided the following answer:

It's a chore! The 100-inch Hooker Telescope at Mt. Wilson Observatory was recently re-aluminized and the scope was down for four days, if I recall correctly. The aluminization tank is on the ground floor of the 100-inch dome. The mirror cell (the back end of the telescope) is removed and held in a special wheeled carrier and the mirror (9000 pounds of glass) is removed from the cell by a crane that moves on curved rails on the dome. The mirror is gripped by a device around the edge (yes, it's scary!). It's lowered through openings in each floor to the ground floor and placed in a pan where the old Al is stripped, then lifted again while the bottom half of the evaporation tank is rolled under it on railroad-type tracks. It's then wheeled into the aluminization room where the upper half of the tank is suspended, lined with Al coils, and the tank is closed after a final, very careful cleaning. Then the process is reversed to re-install the newly-coated mirror. The 60-inch mirror and all other mirrors on the mountain have to be brought to the 100-inch dome for aluminization. Other observatories sometimes send smaller mirrors for re-aluminizing when an aluminization "run" is going on. The 200-inch at Palomar also has a tank in the 200-inch basement and I think the procedure is similar, although I've never seen it done there. I don't know about other observatories. The aluminizing tank can be seen on the Virtual Tour of the 100-inch at the MWO web site at http://www.mtwilson.edu/Tour/100inch/. There are tours of the rest of the facilities and other interesting things at the MWO site, too, including other unpleasant jobs like shoveling snow off of the domes.

Re-aluminization happens every two years or so though maintenance schedules do slip sometimes. There's no cleaning in between re-Al. The covers are kept over all primary mirrors when the scope's not in use, and if the dew is too heavy the dome isn't opened because of condensation problems. These big metal structures can condense enormous amounts of moisture -- I've seen water dripping off of the domes in clear but hazy skies because of high humidity. The domes are never opened when there's a forest fire nearby because the ash is very caustic.

Interesting side-note: The 100-inch was completed in 1917 and thus was silvered originally since aluminization wasn't invented until the '30s. There's an enormous yoke in a room directly under the center of the observing floor that is on a threaded screw (maybe two-feet across). The yoke is turned and rises up to the telescope through a round opening (if you visit, look for the huge circle on the floor under the 100-inch -- that's the removable cover). Once the mirror (and the rest of the back of the scope) was in the yoke, it was screwed back into the floor below and a dam placed around the mirror. Solutions were used to dissolve the old silver and the new silver was deposited chemically using 35 gallons of solution held by the almost-101" f/5 parabola. The new silver was burnished (I don't recall the material) and returned to the scope. The silver only lasted a few months before tarnishing badly. There's a picture of the mirror being returned to the scope in that era on the MWO web site at http://www.mtwilson.edu/History/cal88/cal0588.html, though you can't see the yoke.

Minutes from the 1/27/2000 Meeting of the Ford Amateur Astronomy Club

By Dave Beard

The meeting was called to order at 5:03pm by president Dan Kmiecik, and the members dug right in to the pizza and pop, thanks to Bob Fitzgerald and Dale Ochalek. The roundtable ensued, and members introduced themselves, and discussed their latest observing activity and recent purchases.

Susan Fowler and Bob McFarland discussed the upcoming FAAC Winter Dinner, which is currently slated for the 25th of March. Two locations were proposed, Leon's of Wixom, where the event was held last year, and Kiernan's of Dearborn. A show of hands indicated overwhelming support for the Kiernan's location. Announcements will be posted soon with more details.

Dan and Treasurer Ray Fowler reminded the members that as of the end of the month, dues for the 2000 calendar year will go up to $25, and the lifetime membership will remain at $100.
Dan also asked the membership if any would be interested in joining the Astronomy 101 presentation given by the club. Dan will be coordinating the presentations, and if you are interested in

becoming a member of the team, please contact Dan Kmiecik at faac1992@hotmail.com.

The Treasurer's Report: $ 2580.53 in checking, $1122.86 in savings, and of these moneys, $862.83 is for the scholarship fund.

The G.L.A.A.C. report: The date for the Kensington spring GLAAC star party is being studied.

Doug Bock gave the highlights of the activities of the Remote Access Telescope Group, and notified members that the February 5th observing session is cancelled due to business plans.

The Elections

The election committee chairperson Doug Bock announced the candidates for the 2000 slate of club officers:

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

The candidates were approved by the membership and voting was unanimous for the candidates presented.

Bob Fitzgerald reminded the members that the deadline for applications for the FAAC scholarship fund is February 28th.

NEXT GENERAL MEETING

The next meeting of the Ford Amateur Astronomy Club will be held on Thursday, February 24th, at 5:00PM in conference room 1491 in the Ford Credit building in Dearborn.

The program for the meeting has not yet been determined, but as always, pizza and pop will be provided.

The Ford Credit building is the low building immediately northeast of (but not attached to) Ford World Headquarters. The building is secured with a card entry system. The easiest way to enter for meetings is to park in the lot east of the building and enter thru the lower east or lower northeast doors. At 5:00p no one seems to have much trouble entering, because many people are leaving about that time. At the lower east door there is a manned security desk. Identify yourself, and say you are attending a Ford club meeting, and the guard will admit you. The meeting room is on the lower floor, on the east side of the building, about mid-way along the north-south corridor. Usually, signs will be posted to direct you to the room. ☆

2000 Ford Amateur Astronomy Club Calendar
FAAC, P.O. Box 7527, Dearborn, MI 48121-7527

(upcoming events are underlined)

Jan 8	Lake Hudson Dark Sky Stargaze
Jan 15	Lake Erie Metropark Ice Daze Festival and Star Party – Marshlands Museum
Jan 20	Lake Erie Metropark Lunar Eclipse Star Party (Weather Permitting)
Jan 27	FAAC General Membership Meeting and Election of Officers
Feb 5	Lake Hudson Dark Sky Stargaze
Feb 24	FAAC General Membership Meeting
Mar 4	Lake Hudson Dark Sky Stargaze
Mar 23	FAAC General Membership Meeting
Mar 25	Fourth Annual FAAC Dinner Party
Mar 31 thru Apr 3	NCO Boon Hill Spring Star Party – Boon, West of Cadillac – BYO Everything
Apr 1	Lake Hudson Dark Sky Stargaze
Apr 8	Astronomy Day
Apr 27	FAAC General Membership Meeting
Apr 29	NCO Planning Meeting @ 4:00 PM Followed by Star Party
May 5 thru 8	NCO Boon Hill Star Party – Boon, West of Cadillac – BYO Everything
May 6	Lake Hudson Dark Sky Stargaze
May 25	FAAC General Membership Meeting
Jun 3	Lake Hudson Dark Sky Stargaze
Jun 2 thru 5	NCO Boon Hill Star Party – Boon, West of Cadillac – BYO Everything
Jun 22	FAAC General Membership Meeting
Jun 23-24	17th Annual NCO Summer Solstice Star Party
Jun 30 thru Jul 5	NCO Boon Hill Star Party – Boon, West of Cadillac – BYO Everything
Jul 1	Lake Hudson Dark Sky Stargaze
Jul 27	FAAC General Membership Meeting
Jul 29	Lake Hudson Dark Sky Stargaze
Aug 24	FAAC General Membership Meeting
Aug 26	Lake Hudson Dark Sky Stargaze
Sep 23 thru Oct 1	NCO Boon Hill Fall Star Party – Boon, West of Cadillac – BYO Everything
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 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

FAAC Intranet: **http://www.be.ford.com/astro/faac.html** or the FAAC Internet: **http://kode.net/~dougbock/faac/** - **NCO: http://kode.net/~dougbock/**

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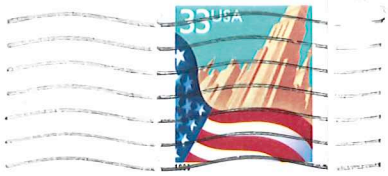

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