FORD AMATEUR ASTRONOMY CLUB
FAAC
Established 1992

Star Stuff

FERA
Ford Employees Recreation Association

ASTRONOMICAL LEAGUE

Volume 7 Number 6 July 1998

Feature of the Month

Bock's Boon Bash!

By Clay Kessler

The Memorial Day Weekend was the time frame for the Northern Cross Observatory Wilderness Star Party in Boon Michigan. Host, and noted local astronomer, Doug Bock worked hard to assure a successful weekend. Many astronomers from the Warren Astronomical Society and the Ford Amateur Astronomy Club were in attendance as well as several northern Michigan observers! To say that "a great time was had by all" would be a terrible understatement. The weather was beautiful and the observing conditions were excellent. Doug's Boon Hill observing site provided plenty of room for camping and telescope setup.

It was a wonderful family weekend with many

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GET A 60 INCH TELESCOPE FOR $100.00!

By Doug Scobel -
University Lowbrow Astronomers

Well, not exactly. But, if you like to go after faint nebulae, you CAN get your telescope to perform like a 60 inch with a little, $100.00 (or less) accessory called a Nebular filter. With it you'll be able to see things through your telescope that you never thought were possible.

What They Do
Without going into a lot of detail, the way these filters work is to block out most wavelengths of light except for those which are commonly emitted by gaseous nebulae. The net effect is to let the light of the nebula pass through unattenuated, while the background is darkened. So, although the object is not made any brighter, it is the resulting increase in

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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
e-mail jkennedy1@voyager.net
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Editors Corner

By Jack Kennedy

In this issue we have an account of a great star party at Doug Bock's dark viewing site near Cadillac. The skies were dark and the company was great. And the best part was that the Michigan weather cooperated three out of four nights.

Also in this issue is a new column called "Just the FAACs" by our Vice President George Korody, which is news about our club members. This will give us an opportunity to keep all members up to date on the latest activities of the club.

Filters are the subject of an article by Doug Scobel of the University Lowbrow Astronomers. This is a great article to clear up the mystery surrounding different filters.

Finally, I would like to ask that all of you mention the articles you liked to the members submitting them. This is the feedback we need to keep the articles coming in. If you have anything to share you can submit it in written form or electronically to myself at the email address at the right, or give a written copy to any of the clubs officers. Till next month,

Clear Skies.....

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

NOTHING BUT THE FAACs

By
George Korody

This is a new monthly column that will bring you various Club facts not found in other newsletter columns, as well as some other "gee whiz" information that you just couldn't live without having known. This column could also be considered a catchall of floor sweepings from the newsletter editor's publication room.

No claims are made as to the accuracy of the information contained herein, nor to any real persons, places, or things. You might consider this a "reader beware" warning. Please read carefully for you never know when your name may show up here in print.

Suggestions are welcomed, and anyone with information for possible inclusion in future columns is requested to contact the writer at (248) 349-1930, or send E-mail to gkorody@mediaone.net.

Welcome to recent new members William R. Allenbaugh, Richard & Christine Becker, B. Kyle, Don Nakic, Don Polidori, Don Smith, and William Wyckoff. We hope that you have many pleasurable experiences while participating in FAAC activities.

Harry and Ada Kindt and Zeke are getting settled in their new home in dark sky country in northwestern Ohio. Harry had been the Club's Secretary. Harry and Ada are now on line at their new location. They would be happy to receive greetings and information updates at their new E-mail address at hkindt@bright.net.

Recently some of the four-footed residents from the farmstead across the road came to welcome the new neighbors, while leaving fragrant reminders of their visit. Well, it still beats the odor of exhaust fumes from the Southfield and Jeffries Freeways.

Zeke also likes his new home and has already made friends with some of the local farm animals, while making enemies with some of the local varmints. Possum stew – yum, yum!

Giant pretzel sticks have now been designated the official snack food at FAAC observing outings after a precedent started by Bob MacFarland and heartily endorsed by other observers. While any brand is acceptable, Rold Gold seems to be the brand most highly favored. Don't be caught without them. FAAC Security will be making periodic checks. By the way, FAAC Security can be bribed with the prized munchies. (Note: Since FAAC Security has the latest state-of-the-art night vision equipment don't try to sneak a stick or two without sharing.)

Dave Beard recently took delivery of an 18" f/4.4 mirror and diagonal set from Galaxy Optics of Buena Vista, Colorado. Thorough tests showed them to be "research grade". Dave will install the optics in an Astro Systems Dobsonian type TeleKit. FAAC observing outings will now be more fun with Dave being able to confirm what our "faint fuzzies" should really look like. The 18" f/4.4 will also be a great comet-hunting scope. The name Comet Beard has a nice sound to it.

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children running around having fun during the day and lots of serious astronomy going on at night. Blaine McCollough brought up the WAS 22" Dob and this was used by Marty Kuntz and Pat "Comet Ace" Stonehouse to provide a look at the new comet and other "faint fuzzies" to all who cared to peek. Doug Bock had his 20" Dob and provided his "tour of the universe" to anyone who wandered by. I kept hearing people saying "Six! I count six galaxies in this field of view!" from Doug's direction. Jack

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Boon (Continued from page 3)
Kennedy took some astrophotos this weekend using his LX200. Judging from the raw prints he got some excellent shots! Larry Vassallo brought up his new 5th wheel for camping and had an LX200 and a 10" Dob, he was also taking astrophotos. Glen Wilkins had his new camper set up on the field near the road along with his large Dob. Tim Gillen, from Traverse City, joined us and brought his large Dob. Rich Brenz from Cadillac was out with his 10" LX200 for two nights **and** he kept us supplied with tools for on-site repairs! Thanks Rich! I won't forget the time I spent looking through Dave Ciali's 14" Dob observing the veil nebula with an O-III filter. This allowed us to very clearly see the smoke like wisps of the nebula structure and almost gave a 3-D effect - **VERY NICE!!** I also saw Pluto for the first time thanks to Dave.

Also on site was the entire extended Bock clan, Vic and Pat Singh and their extended clan, Rich and Christine Becker, new members of the FAAC and several new observers from the Cadillac area out to scope out the scopes.

KA-CHING!! Mother nature paid off against the odds, for us here in Michigan, giving us 3 clear nights out of 4. Made you kind of want to run up to a casino while our luck was holding so well! Friday night was kind of scary with the sky clouding up in the afternoon. The clouds teased us until around 11:00 and then we noticed that the stars were getting brighter. By 11:30 the sky was clear. Saturday was great all day and all night. Sunday was a different story. The clouds rolled in at mid-morning and a soft rain started to fall. This kept up, on and off, all day and through the night. Monday morning dawned still raining. This was crunch time - do you pack and go home or have faith? The clouds lingered through the morning and into the afternoon. Finally the sun broke through some holes. Two hours later the sky was clear and stayed that way all night! The "Faithful Five" that stuck it out had a wonderful night of observing.

Looking at the equipment that showed up it seems that large Dobsonian telescopes were the scope of choice for the veteran serious observers. There were 4 SCT's (two 8" and two 10") and one equatorial Newtonian on the field with the rest big Dobs. We needed Greg Burnett, with his big refractor, and Bob Fitzgerald, with his binocular setup to round things out!

The skies were very nice getting dark at around 10:30 and staying that way until around 4:30 AM. The humidity kept the skies a little "bright" but afforded some great nebula views. I am no judge of stellar magnitude but some discussions on Saturday night put the sky at somewhere around 6th magnitude. It was plenty dark enough to see a lot of structure in the milky way. The Lagoon, the Eagle, the Swan, the double cluster and M31 were all naked eye objects, that's dark enough for me.

As usual for a star party, things got quiet in the wee morning hours. This is the time when quiet murmurs can be heard across the field and the occasional group gasp as a particularly bright meteor flashes by. This quiet intensity is what unknots the psyche and relaxes the soul. Is this a great hobby or what!!!!

Don't forget the Northern Cross Observatory Summer Solstice Star Party at the observatory site in Fenton Michigan. This will take place on June 26th to the 28th. Check Doug's Northern Cross Observatory web site for maps and additional information at http//bsd1.kode.net/~dougbock/index.html. **See you there!!**

Meeting Minutes for 5-28-98
by George Korody

The meeting was called to order shortly after 5 PM by President Greg Burnett. There were 26 members and guests in attendance. After a brief introduction, Greg invited everyone to partake in the customary pizza and pop.

At this point our usual round table introductions and discussions were held. Here members introduce themselves and give a brief discussion of their recent astronomy related experiences, equipment purchases and other noteworthy happenings. After that, Greg passed out some newsletters from other clubs and several other items of interest.

Treasurer Ray Fowler was asked to report on the Club's financial status, which he did. The election of a new Club Secretary to replace Harry Kindt, who had moved to Ohio, was shelved until a later meeting, due to the absence of one of the nominees. A brief mention was made of the FAAC Scholarship Fund, but updated status will be presented at a later time after the fund committee has completed its review and developed recommended actions.

Greg reminded members to have their Club Membership pass with them at all times when viewing at Island Lake State Recreation Area and other sites, since Park Rangers occasionally check for unauthorized persons staying after closing hours. Any member without a valid membership card was advised to obtain one from Membership Chairperson Al Bates.

Greg reminded members that our Sixth Annual Island Lake Star Party will be taking place this year on Saturday, September 26. Anyone who already offered to serve on the committee, as well as any other interested members, were invited to meet in the conference room after the membership meeting, to work on plans for the star party.

Bob MacFarland advised that mailing of the Club's monthly Star Stuff newsletter to Ford employes using the intra-company mailing service was presenting significant problems due to so many members moving within the company, etc.. Bob made a motion that in the future newsletter mailings to all Club members be made through the US Postal Service, even though there would be some additional cost to the Club. Clay Kessler seconded the motion. A vote was taken and the motion was passed by a majority of those members present.

Bob also mentioned that due to membership renewals being spread out over a number of months and the sign-up of new members throughout the year a sizeable workload was being placed on the Treasurer when members apply for reduced astronomy magazine subscriptions through the Club. Bob suggested that magazine subscription submissions to the magazine publishers be made only at specified times, probably in March and September. The idea was accepted.

A solar eclipse video provided by Paul Mrozek was then shown. After the video the meeting was adjourned and interested members met to make plans for the Sixth Annual Island Lake Star Party.

Submitted by:
George Korody

Filters (Continued from page 1)

contrast of the nebula against the background that makes the nebula become much more visible. For me, the enhancement was so dramatic that when I tried mine for the first time, it felt like suddenly I had quadrupled the aperture of my telescope!

There are actually two classes of filters currently available. So-called Light Pollution Rejection (LPR) filters are designed to reject wavelengths from certain artificial lights and natural skyglow, and allow the rest to pass through. LPR filters are sometimes called broadband filters, because they pass a wide range of wavelengths. Nebular filters, on the other hand, are actually specialized LPR filters, passing only the narrow portion of the visual spectrum that brackets the desired emission lines, and rejecting the rest. For this reason nebular filters are sometimes called narrowband filters.

One thing to keep in mind is that these filters work better with certain classes of objects than others. They work the best with most emission and planetary nebulae, and not very well with galaxies and star clusters. The reason is that emission and planetary nebulae emit light at certain wavelengths, namely hydrogen beta at 486.1 nm, and doubly ionized oxygen (O III) at 495.9 and 500.7 nm. In this case, it is easy to design a filter that passes these wavelengths and rejects the rest. However, stars, galaxies, and reflection nebulae emit light pretty much across the entire spectrum, so there are no wavelengths that can be "singled out", and the contrast gain is modest at best.

How to Use Them

Usually you simply screw the filter into the rear of the eyepiece you are using. It can get to be a pain unscrewing and rescrewing the filter, though, if you switch eyepieces often. If you own a Schmidt-Cassegrain telescope, you can get filters sized to screw into the rear cell of your telescope, in front of the star diagonal. This will let you change eyepieces without replacing the filter. If you have an eyepiece with enough eye relief, you can even hold the filter between the eyepiece and your eye. However, with narrow bandpass filters, you have to be careful to keep the filter exactly normal to the optical axis. If you don't, the angle will cause the bandpass to "shift" off the desired wavelengths, dimming the nebula. In any case, I have found it to be important to keep stray light from hitting the filter from the "eyeball" side. Nebular filters actually act as mirrors, reflecting the rejected wavelengths rather than absorbing them. So, if any stray light (even skyglow) enters the eye lens of your eyepiece, it will reflect off the filter and back into your eye, reducing contrast. Use a shroud, or at least cup your hands around the eyepiece to keep all stray light out. Try it and you'll see a big difference.

What Kind to Get

If you can afford to buy only one filter, which one would I recommend? I own Lumicon's Deep Sky, UHC, and O III filters. The Deep Sky is a broadband LPR filter, while the UHC is narrowband and the O III is REALLY narrowband (the UHC passes both the Hydrogen Beta and the O III lines; as its name implies, the O III passes only the O III lines). At relatively dark sites, like Peach Mountain, the one I find myself using the most is the O III. It consistently provides the best "60 inch" results. A close second is the UHC. I have also heard that Orion's Ultrablock filter is very good, but I have never tried it in a side by side comparison with the O III or UHC. The filter I seldom use is the Deep Sky. It generally provides the least noticeable contrast gain, but sometimes helps with galaxies. Perhaps in a more light polluted environment it would work better due to the artificial skyglow. If I could only keep one, though, it would be the O III. Another thing to consider is the kind of viewing you expect t do. If you intend to spend most of your time observing small, faint planetary nebulae at high magnifications, then you may wish to consider the Lumicon UHC or Orion's Ultrablock, instead of the O III. In my experience, the O III's extremely narrow bandpass lets so little light through that at high power (say, 200x or higher), the view is sometimes too dim and it's hard to see any detail. Whenever I go to high power I'll use the UHC and actually see more.

Observational Comparisons

Here is a sampling of objects that in my experience benefit greatly from the use of Nebular filters. Note that what I've listed here are only the big, bright, showpieces. There are many more smaller, fainter (mostly planetary) nebulae that benefit greatly from nebular filters as well. Also, note that my descriptions here are from the moderately light polluted skies of Peach Mountain, using my 13" Dob. Other sites and/or telescopes may let you see more or less, but the difference between observing with and without a filter should be similar.

Veil Nebula

This supernova remnant in Cygnus is notoriously difficult to observe. I had seen it before, but it had always been very faint, and with little detail. But with the O III filter it really comes alive! The brighter portions, which are barely visible without the filter are now bright and easily seen, even without using averted vision. Fainter portions throughout the huge complex come into view. All the filamentary structure seen in photographs is now apparent - it's now obvious why it is called the Veil. I've considered making a sketch of it, but there's so much detail that I doubt that I could begin to capture it all. Just to see this nebula alone might be worth the price of the filter.

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1998 Astronomy Events

23 Jul	FAAC General Membership Meeting
TBD	Lake Hudson Dark Sky Party - Lenewau Club Schedule (G. Korody 810-349-1930)
18 - 25 Jul	Nebraska Star Party
23 - 26 Jul	SMURFS (Southern Michigan Unorganized Regional Festival of Star gazers)
20-23 Aug	StarFest near Toronto, Canada
27 Aug	FAAC General Membership Meeting
24 Sep	FAAC General Membership Meeting
26 Sep	5th Annual Island Lake Star Party
TBD	NCO Fall Fenton Star Party (D. Bock 313-390-8101)
TBD	NCO Wilderness Campout/Star Party (D. Bock 313-390-8101)
22 Oct	FAAC General Membership Meeting
3 Dec	FAAC General Membership Meeting

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Dumbbell Nebula

The bright planetary nebula M27, is impressive enough without a filter. But, with the O III, it's even more impressive. Its entire oval outline is apparent, with the "dumbbell" shape superimposed on top of it. There are also fine details in the brighter portions.

Lagoon Nebula

Also known as M8, in Saggitarius, this cluster in nebulosity should be an excellent object if observed from a really dark site. But from Peach, it's low in the South, which is usually pretty murky. The nebulosity is pretty much washed out except for the brighter portions. But with the UHC or O III, the nebulosity expands to twice the diameter that is visible without it. Details that were hidden now pop out at you. The dark "lagoon" now is framed by glowing gas. It's a fantastic view.

Omega or Swan Nebula

M17, also in Saggitarius, is typically a pretty good sight, as portions of it have a fairly high surface brightness. With the UHC or O III, though, nebulosity and detail that were previously hidden are now visible. Like M8, with the filter the nebula appears to be nearly twice as large as without it. The "swan" shape (it always looks like a "2" to me) is now very bright, and there is structure everywhere.

Trifid Nebula

You say you have trouble seeing the dark lanes that give M20 its popular name? With the UHC or O III they're a cinch - very inky black against the surrounding nebula. The reflection portion of the nebula nearly disappears, though, with the narrowband filters. To me it is enhanced slightly by using the Deep Sky filter.

Eagle Nebula

M16, in Serpens, is an open cluster embedded in nebulosity. Without a filter, I've only on the darkest of nights noticed any nebulosity at all. With the O III, however, the nebulosity pops into view, and the eagle shape is easily apparent.

Helix Nebula

NGC 7293, a very large, low surface brightness planetary nebula, is also situated low in the South in Aquarius. If you can find it without the filter, it just looks like a slight brightening in the background glow. With the O III, it now shows its true self, clearly nearly circular with a "hollow" appearance. Some portions of the ring appear to be brighter than others.

Rosette Nebula

This diffuse nebula surrounding the bright open cluster NGC 2244 in Monoceros has always been nearly invisible to me, only a couple bright portions being apparent. Low magnification and the O III really makes it pop out. With it the nebulosity surrounds the cluster like a wreath, with lots of structure and detail.

Great Nebula in Orion

You wouldn't think that the bright nebula M42/M43 should need any help. But the O III helps bring out the faint outer portions of the nebula. At low magnification, the entire fan shape is apparent, and details previously hidden can be seen. It also enhances M43 noticeably, which without a filter is rather unimpressive compared to its neighbor.

Owl Nebula

M97, a relatively low surface brightness planetary nebula in Ursa Major, has never impressed me much until I used

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Ford Amateur Astronomy Club
Star Stuff Newsletter
P.O. Box 7527
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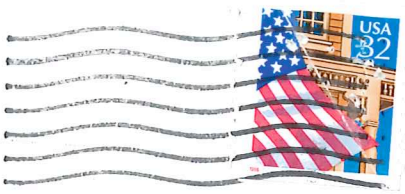

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26 SR: 05:19 SS: 19:58 MR: 08:27 MS: 21:48	27 SR: 05:20 SS: 19:57 MR: 09:26 MS: 22:17	28 SR: 05:21 SS: 19:56 MR: 10:25 MS: 22:44	29 SR: 05:22 SS: 19:55 MR: 11:22 MS: 23:12	30 SR: 05:23 SS: 19:54 MR: 12:19 MS: 23:41	31 SR: 05:24 SS: 19:53 MR: 13:16 MS: None FQ: 07:05	

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the O III on it. The O III makes it look much brighter, with a much sharper edge. The "eyes", though, still elude me. I can tell that there are brightness variations, but had I never seen a photograph of them I doubt that I would ever describe them as looking like eyes. Perhaps they are more apparent from a truly dark site.

So, what are you waiting for? They're not that expensive, about $80.00 to $100.00 brand new, even less if you can find one used. Plus, like a barlow lens, you can use it with any of your oculars. So, for about the price of a good eyepiece, you too can look through that 60 incher you've always dreamed about! Or at least you'll feel like you are.

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