NOVAC

THE NEWSLETTER OF THE NORTHERN VIRGINIA ASTRONOMY CLUB

Issue Number 41 **Volume 12** **May/June, 1992**

President: Myron Wasiuta	703-494-0413
Vice President & Editor: George Uhl	703-369-4575
Secretary: Bob L'Hommedieu	703-978-0946
Treasurer: Brenda Jones	703-527-7963
NOVAC Information Hotline	703-256-8359
NOVAC Computer Bulletin Board	703-256-4777

UPCOMING EVENTS

Club Observing Dates		Monthly Meetings
May	29, 30	May 20
June	5, 6, 26, 27	June 17
July	3, 4	

Astronomy Day - Saturday, May 9, 1992

President's Column

ASTRONOMY DAY 1992

As you may know, Astronomy Day 1992 is rapidly approaching. This year it will be on Saturday, May 9th. NOVAC has a full day of activities planned. First, we will have a display set up at the Air and Space Museum. Club members are encouraged to set up their telescopes in a designated area and participate in any observing that may be planned if the weather permits. Interested members should contact Brent Archinal about the details. On another front, we will be doing some solar observing at Arlington Planetarium from 1pm-4pm. We will have a .5 angstrom Hydrogen Alpha filter attached to a C8 which should provide truly spectacular views of the solar prominences and normally invisible disc detail! In addition, white light views of solar activity will be available. Starting at 8pm, we will begin observing the moon and Jupiter. Again, any interested members are encouraged to bring their own scopes, and should contact either Myron Wasiuta or Brenda Jones. Finally, beginning at 8pm, we will be observing from a somewhat darker sky out at the Arlington Outdoor Lab. Anyone interested in going or needing directions should contact Brenda Jones. We can always use help in setting up equipment or answering questions for the general public, so if you can be at any of these NOVAC sponsored events, it would really help!

What's Inside

Myron Wasiuta
President - NOVAC
494-0413

Upcoming NOVAC Meeting Programs

by George Uhl

After hosting two excellent guest speakers the last two meetings, The Northern Virginia Astronomy Club is getting back to grass-roots and having two distinguished members speak at the May and June meetings.

In March, Navy Capt. Frank Wooldridge gave an informative lecture on meteorology and its effects on "seeing". He briefly discussed Stonehenge and its use as an astronomical tool. See the article summarizing this fascinating lecture in this newsletter.

The speaker in April was Dan Weedman, Professor of Astronomy at Penn State and visiting scientist at NASA Headquarters. Dr. Weedman discussed the orbiting observatories, Hubble Space Telescope (HST) and the Gamma Ray Observatory (GRO). The main theme of his talk centered on Gamma-Ray Bursters. These objects are the biggest mystery in the field of Astrophysics. Evenly distributed throughout the sky, Gamma-Ray Bursters are not associated with any visible object in the sky, which adds to the puzzling nature of these bizarre objects. An article revisiting the highlights of

this lecture is forthcoming in a future edition of this newsletter.

On Wednesday, May 20, the featured speaker will be our own Bill Burton. Bill will be talking about the geology of Venus as revealed by the images received from the Mageallan Orbiter. Bill has obtained slides from NASA which illustrate the many geologic phenomenon of our sister planet. Be sure not to miss this interesting lecture!

Our speaker for the June program, on the 17th, will be Geoff Chester. Geoff will be discussing imagery from orbiters closer to home. Satellite images from the GOES oribter, weather satellites, and other spacecraft will be the focus of Geoff's fascinating talk. So don't miss any of our upcoming meetings!

The monthly meetings of the Northern Virginia Astronomy Club are held on the third Wednesday of every month at 7:30 P.M., at the Arlington County Planetarium, 1426 N. Quincy Street, Arlington, VA 22207. Admission is free and open to the public. Call the NOVAC hotline (703 256-8359) for upcoming events, special announcements, or to leave a message in order to obtain further information.

Apologies In Advance

by Al and Lynn Schumann

The Green Hornet is gone. It had to happen sooner or later. After all, that grand old Ford pickup truck of ours was in its 16th year, and it was getting a little more crotchety each time we went bye-bye. The automatic transmission had been slipping for several years - 2nd gear had given out long ago - but with a gentle foot on the throttle, a light load and fairly level terrain, it never failed us. During the years she was ours, we went through a couple of batteries, a few starter motors, a set of rear brakes and a muffler or two. Offsetting that, were countless trips to Crockett Park, Sky Meadows and the Skyline Drive. Hey, don't forget the sheets of plywood, loads of landscape logs, bricks, furniture and occasional loads of manure for the garden. You pickup people out there know what we're talking about.

The hornet did not go out "On the Hook", incidentally. It was with full dignity all the way as we drove the truck to Arlington and donated it to the Goodwill folks. Perhaps it will find a home with someone having a flair for tranny repair. Given some TLC, there should be a lot more miles for someone.

What precipitated this horrendous act? It was a low mileage, lease vehicle, and it's in splendid condition. Tell you one thing, it has more bells and whistles on it than any vehicle we've ever owned in our lives. But, mostly what it seems to have is lights! My God!! Every time we open a door we are reminded of the creation. There are nice, big, bright, white lights all over the bloody thing; dome lights fore and aft, lights on each of the door footwells, airliner type overhead lights and a light so you can find the ignition lock. And they stay on forever! It's one thing to have a light come on while you open the door to grab a sandwich and go out again when you slam the door. But, Nooooo, these lights stay on for an eternity, at least that's the way it seems to the guilty party. Can't recall whether it's a time or temperature sensor that turns them off, but it is, by any valid measure, an interminable delay.

We checked the owners manual to see if there was a dedicated fuse for these so called courtesy lights. No go. Seems like they are all on different circuits, so the whole van would become virtually immobilized if all the appropriate fuses were pulled. So, there you have it. In time, we'll dope out a reasonable compromise. In the interim, "oops, sorry everybody, these lights will go out in about 20 minutes or so." On second thought, We know there is at least one other Aerostar owner in the club, and since all vans are gray in the dark, we might just preempt the out rage by yelling, "Hey Ridgley, turn those damn lights out!"

Summary of NOVAC March Meeting Program

by Kin Searcy

Capt. Frank Wooldridge, a Navy meteorologist stationed at the Space and Naval Warfare Systems Command in Washington, amateur astronomer and former member of the Riverside astronomy Club made a presentation on meteorological aspects of observing. He discussed a the meteorological phenomenae that impact astronomical seeing conditions.. He also discussed the astronomical features of Stonehenge and noted that the sky conditions over England at that time must have been significantly better than now for the builders to have gained the requisite knowledge to design the observatory features and to check the survey during the long construction. Meteorologists do not understand the reasons for long-term changes in historical climate.

Capt. Wooldridge summarized his lecture in the following outline:

Basic physical reasons for the generation of weather producing phenomena on the earth including the effects of:

- Rotating sphere,
- Tilted polar axis,

- Constant warming from the sun.

Atmospheric extinction of stellar sources as a function of the angle above the horizon --- 0.5 magnitude at the zenith to 3 magnitudes at 10o above the horizon.

Sources of convective turbulence in a clear atmosphere.
- Horizontal wind shear &
- Curvature around highs & lows.

Seeing - Large scale atmospheric disturbances caused by gravity waves. Creates distortion in larger telescopes due to the aperture subtending at least a full wavelength.

Scintillation - Short wave disturbances, twinkling or image broadening, in the atmosphere caused by a variety of sources including:
- Interaction of solar wind with upper atmosphere causing distortion of incoming wave front.
- Other locally occurring disturbances.

One point that he made is that vertical wind motion causes seeing problems. If you imagine horizontal wind motion as the same as currents in a river, differences in current speeds will set up a vertical vector (remember the right hand rule from vector mechanics). The vertical wind vector causes the bad seeing.

May/June Sky Sweep

by Kevin Jones

This issue's telescopic tour starts high overhead, in the constellation Hercules. After locating the distinctive "Keystone" asterism in this constellation, try to pick out the bright globular cluster M13 without optical aid. This cluster, also called the Hercules Cluster, glows between fifth and sixth magnitudes, and can be seen with the naked eye when skies are dark. M13 can be readily resolved by most telescopes, since the brightest of its component stars are eleventh magnitude. If you are observing M13 with a fairly large telescope, the small spiral galaxy NGC 6207 can be swept up in the field. The galaxy is roughly half a degree northeast of M13, and is directly north of one of the seventh magnitude stars which flank M13.

In the southern part of Hercules, a tiny but bright planetary nebula can be observed. NGC 6210 can be found about one-third of the way along a line from Beta to Delta Herculis. This 10th magnitude planetary can be resolved into a vaguely blue disk at high power, and the 13th magnitude central star can be seen shining at its center.

Another big, bright globular cluster is situated in northern Hercules, about six degrees north of the Keystone. This seventh magnitude cluster, M92, is very impressive through the eyepiece, despite being overshadowed by the even more brilliant M13. M92 is approximately one-third the visual size of M13, and is slightly harder to resolve.

Adjoining Hercules to the east is the constellation Lyra, the Lyre. Lyra contains several deep-sky objects of interest. The first of these, as well as the easiest to locate, is Epsilon Lyrae, also called the "Double Double." This star system appears to be a single star to most people's naked eyes, but when viewed through binoculars it becomes resolved into two distinct stars. When this stellar pair is seen through a telescope at high power, each of the two stars are again resolved into pairs, giving this multiple-star system four visible omponents.

Centered around the star Delta Lyrae (the northeast corner of Lyra's parallelogram) is the large, scattered open cluster Stephenson 1. This aggregate of stars is best appreciated through binoculars or a finderscope, as it is only sparsely populated with stars. In the field of this cluster is a nice example of stellar color contrast: a bluish star situated near a golden one. The colors are similar to those of the famous double star Albireo.

The Ring Nebula, M57, is located essentially in the middle of the south side of Lyra's parallelogram. This nebula is rather large, as planetary nebulae go. It can easily be resolved into a grayish smoke ring through most telescopes. Don't expect to see a central star here, however. Although the ring itself is ninth magnitude, the central star is fifteenth magnitude, out of the range of average-sized amateur

The final object on this celestial tour is in southeast Lyra, near the Cygnus border. The globular cluster M56 shines here at eighth magnitude. The brightest eleventh magnitude stars on the fringes of this cluster can easily be resolved through the telescope, although the central mass may remain simply a blur of light.

That's it for this issue's tour of the heavens. Don't stop now, though--there's plenty more up there to see! And with the warm nights of summer on the way, you won't have any excuse to keep you from getting out under the stars.

March 1992 Meeting Minutes

The meeting was called to order at 7:30 pm on March 18,1992 with

Myron Wasiuta presiding. There were 31 members and guests present.

Old Business

There was no old business.

New Business

1. We will try to hold the program length to one hour in order to shorten the meetings somewhat.

2. The Trustees are looking into the possibility of selling commercial advertising in the newsletter to help cover the printing costs of the newsletter.

3. Astronomy Day, 1992 celebrations were discussed and the members decided to sponsor three activities. During the day there will be solar viewing at the Arlington Planetarium and a group from the club will display their telescopes at the Smithsonian Air and Space Museum. That night we will have some scopes at the Arlington Outdoor Lab. All members are urged to participate.

4. A new club service called the NOVAC Network was begun at the meeting. The Network consists of a list of topics of interest along with the phone numbers of club members knowledgeable in those subjects. The purpose of the Network is to serve as a source of information for new and old members alike and to help members with similar interests get in touch with each other. All members are urged to participate.

5. Club members reported observations of the Nova in Cygnus and a spot in the Southern Temperate Belt on Jupiter.

The program for the evening was given by Frank Woolridge who is a meteorologist with the U.S. Navy. Mr.Woolridge titled his wide ranging and informative talk " Seeing and Scintillation ".

Respectfully submitted,
Bob L'Hommedieu, Secretary

April 1992 Meeting Minutes

The meeting was called to order on April 15,1992 at 7:30 pm. There were 24 members and guests were present with Myron Wasiuta presiding.

Old Business

1. Brent Archinal has filed the necessary tax forms with the I.R.S. for tax exempt status. Many thanks to Brent and the others who have worked so hard on this project.

2. Plans for Astronomy Day have been finalized. The club will sponsor three events. There will be solar viewing from 1-4 pm. and night time viewing from 8-10 pm. at the Arlington Planetarium. Brenda Jones will be coordinating these events. There will also be night time viewing at the Arlington Outdoor Lab. Myron Wasiuta will be coordinating that event. Thirdly, the club will have members at the Smithsonian Air & Space Museum to talk to the public. Bob L'Hommedieu and Brent Archinal will coordinate the museum event. All members are urged to participate in these activities.

New Business

1. An up to date membership list will be available to all members soon.

2. On June 6, 1992 there will be a trip to the Hood Observatory in Fredrick Maryland to see and use the 9" Clark refractor. All interested members should contact Myron Wasiuta.

3. Myron has agreed to be Observing Chairman. He will be responsible for giving out information on the Crockett Park observing site.

4. There will be an occultation of Pluto on May 21, 1992. More information is available in Sky & Telescope.

The business meeting was closed and then Andre Bormanis showed us some nice photographs he took of the recent annular solar eclipse in California.

The program for the evening was given by Dr. Dan Weedman who is an astronomer at NASA. Dr. Weedman gave a fascinating talk about the recent important discoveries made by the Hubble Space Telescope and the Gamma Ray Observatory. Dr. Weedman is interested in quasars and answered many questions about these strange and awesome objects.

Respectfully submitted,
Bob L'Hommedieu, Secretary

NOVAC NOTICES

NEW NOVAC MEMBER

Congratulations to Bill Burton and Laurel Wanrow on their new NOVAC member. Emmeline Wanrow Burton was born at 00:52 UT, Tuesday, April 28, 1992. For you earth-oriented folks, that's 8:52 p.m. EDT, Monday April 27, 1992. Emmeline weighed in at 8.1 Solar masses and stretched 20 parsecs from head to toe. Let's keep them new members coming in!

OBSERVING SITE RULES

NOVAC members may use Crockett park for observing on nights other than those scheduled for club observing; BUT, YOU MUST HAVE PRIOR APPROVAL FROM RODGER PENCE, THE PARK MANAGER. Call early in the day on which you wish to observe; the telephone number is 703-788-4867. If you reach the answering machine leave a message stating that you are a NOVAC member and you wish to observe that night. Also, leave a telephone number where you can be reached. If you do not receive a return call you may not use the park. THERE ARE NO EXCEPTIONS! Use of the park is limited to NOVAC members only, and your Observing Pass must be displayed on the dashboard of your car.

The gate is locked at sunset and the combination is shown on your Observing Pass. Do not reveal it to anyone. The combination will be changed from time to time and you will receive a new pass along with your newsletter. After setting the combination, the shackle must be pushed in slightly before it will release. You must lock the gate behind you after entering and please remember to lock it after you leave. No loud radios, no alcoholic beverages; no loose pets; do not leave trash or debris behind. We are guests of the park and our observing privileges may be revoked at any time because of the carelessness of one person. @

Directions to Crockett Park

From the Washington D.C./Northern Virginia area, go west on I-66 to the Manassas exit, 234 SOUTH. Continue on 234 until reaching Route 28--turn right. (If you are familiar with the area, there is a little short cut to Route 28 just past the "Po Folks" restaurant in Manassas. It goes past the IBM plant and saves about a mile.)

Once on Route 28, keep going straight through Prince William County. You will drive through Nokesville, passing the 7-11 on the left (a good landmark to remember, especially after freezing your gizzard for half the night--you may need something to warm you up on the way home. Even more importantly, they sell gas there when other gas stations are closed for the night).

After crossing the Fauquier County line there are about six miles to go. You will drive through the sleepy little hamlets of Catlett and Calverton. After you cross over the railroad tracks in Calverton, you only have a few miles to go, thus you should start paying attention to where you are driving.

Make a right turn on 643. CAUTION: the first 643 sign to come into view goes only left--DON'T TURN THERE! Continue for about a mile, and there is another Route 643 going right (to Warrenton). There is a small country store (Mayhugh's) on the corner of the intersection. Turn right on 643 and proceed about a mile. Look for a small sign for C.M. Crockett Park on your right. Go about 100 yards and turn left. There will be a sign indicating "Dead End .5 miles". The park gate is at the end of the road. We suggest you get there before dark the first couple times. If it is dark, turn off your headlights when you stop at the gate.

There are a number of locks on the gates; one of them is ours. It is a combination lock which was thoughtfully provided by Al Boldt. The combination can be obtained from a club officer. Undo the lock, swing open the gate, drive through, stop, swing the gate closed, replace the lock and ease forward once again. We suggest you turn off your instrument panel lights at the gate to help you see better in the dark. Also, if you are unfamiliar with the area, we suggest you get out of your vehicle and walk down to the parking lot (during EST) or the field (during EDT) to see where other observers are located. Then drive into an open spot, unload and have at it.

If you decide to go there when its not an official club observing night, you must call Roger Pence at the Park [(703)788-4867] ahead of time to let them know you're coming. There are no exceptions!

ADVERTISEMENTS

For Sale, contact Jim Schaeffer during working hours only at 281-6363: CAPS, baseball type, mesh back, adjustable, NOVAC logo, $5.95 (you pick up), $7.75 (UPS ship); JACKETS, nylon/satin, NOVAC logo on front & back, elastic at sleeves, neck, and bottom, very good quality, sizes S, M, L, XL, $34.95.

For Sale, Unbelievable Views. Coulter Odyssey II, 17.5 inch reflecting telescope. Dobsonian mount allows easy set up and use. Very good f4.5 mirror. 26mm eyepiece with Lumicon premium H-beta filter good for the Horsehead Nebula. No wait, available now. $950. Carl Adams (703)391-8838

For Sale, 17.5-inch Coulter Dobsonian with 10X80 finder, 3 eyepeices, 2X Barlow, Lumicon UHC Filter, 4 Color filters and carrying case for accessories. $1150.00 or Reasonable Offer. Call Dave Pessagno, Westminster Astronomical Society. Phone# 410-526-5128.

NOVAC Network

The NOVAC Network is a listing of topics of interest to amateur astronomers and the names and phone numbers of NOVAC members who are knowledgeable on these subjects. The goal of the Network is to provide an information referral source for our members and to help members with similar interests get in touch with each other. Please call Bob L'Hommedieu for further information or to have your name included on the listing.

Naked Eye Observing			
Myron Wasiuta	494-0413	George Uhl	369-4575
Binocular Observing			
Thomas Johnston	736-8736	Thomas Parry	758-8224
Bob L'Hommedieu	978-0946		
Lunar Observing			
Myron Wasiuta	494-0413		
Solar Observing			
Brenda Jones	527-7963		
Planetary Observing			
Michael Lucas	78-6634	Myron Wasiuta	494-0413
Bob Bunge	301-390-7298		
Deep Sky Observing			
Al Schumann	971-3257	Dave Reese	406-7631
Sikander Daryanani	818-0513	Lance Gardner	385-9366
Bob Bunge	301-390-7298	George Uhl	369-4575
Jerry Wolczanski	349-1582		
Astrophotography			
Dave Reese	406-7631	Blaine Korcel	256-4430
Bob Bunge	301-390-7298		
Computing			
Blaine Korcel	256-4430	Jeff Stetekluh	979-8249
Kevin Jones	527-7963	George Uhl	369-4575
Telescope Making			
Jerry Wolczanski	349-1582	Bob L'Hommedieu	978-0946
Bob Bunge	301- 390-7298	Michael Lucas	878-6634
Sundials			
Lloyd Verhage	799-4926		

The NOVAC Newsletter is published six times a year. Subscriptions are available through membership in NOVAC. Dues are $18.00 per year. For club membership information contact:
Brenda Jones, Treasurer,
883 North Kentucky Street,
Arlington, Virginia, 22205,
telephone: 703-527-7963.

NOVAC Questionnaire

Please circle the response that best describes how you feel about each question. Bring in the completed questionnaire to the next monthly meeting, or send it to, George Uhl, 9039 New Britain Circle, Manassas, VA, 22110.

1. MEETINGS

A. The day that I would prefer for the meetings is:
Mon Tue Wed Thurs Fri Sat Sun

B. The meeting time that would be most convienient is:
6pm 6:30pm 7pm 7:30pm 8pm 8:30pm

C. Our current meeting place is:
excellent good barely adequate inadequate

D. I think the length of the meetings are:
too short too long just right

E. I think the speakers we have at the meetings are:
boring adequate good excellent

F. The topics I would enjoy hearing most about are:

_____
_____
_____
_____

G. Other activities I would like to see at meetings are:

_____
_____
_____
_____

2. OBSERVING SITE

A. Do you own a telescope ?
yes no

B. Have you ever been to the Crocket Park observing site other than the Telescope Meet ?
yes no

C. Please circle the number of times you use the observing site at Crocket Park each year.
0 1-3 3-6 6-9 9-12 12-15 15-18 over 18

D. Please circle the number of times you observe with your telescope at home each year.
0 1-3 3-6 6-9 9-12 12-15 15-18 over 18

E. Circle the number of miles from your house to the observing site at Crcoket Park.
1-15 16-25 26-35 36-45 46-55 56-65 66-75 over 75

F. Do you generally like the observing site ?
yes no

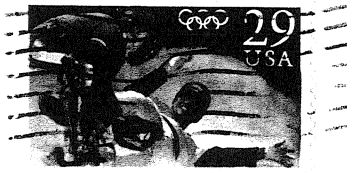
G. If a better observing site was found would you be willing to drive farther to a new site ?
yes no

H. Would you be willing to pay a modest fee or dues increase to fund a new observing site ?
yes no

I. List the things that are most important to you about an observing site:

3. COMMENTS/SUGGESTIONS

Please feel free to comment, suggest, complain, etc. on anything that will help improve the way the club operates:



The Northern Virginia Astronomy Club
c/o George Uhl
9039 New Britain Circle
Manassas, VA. 22110

12/92 - $0.00

Robert E. Ridgley
1316 S. Buchanan Street
Arlington, Virginia 22204-3410