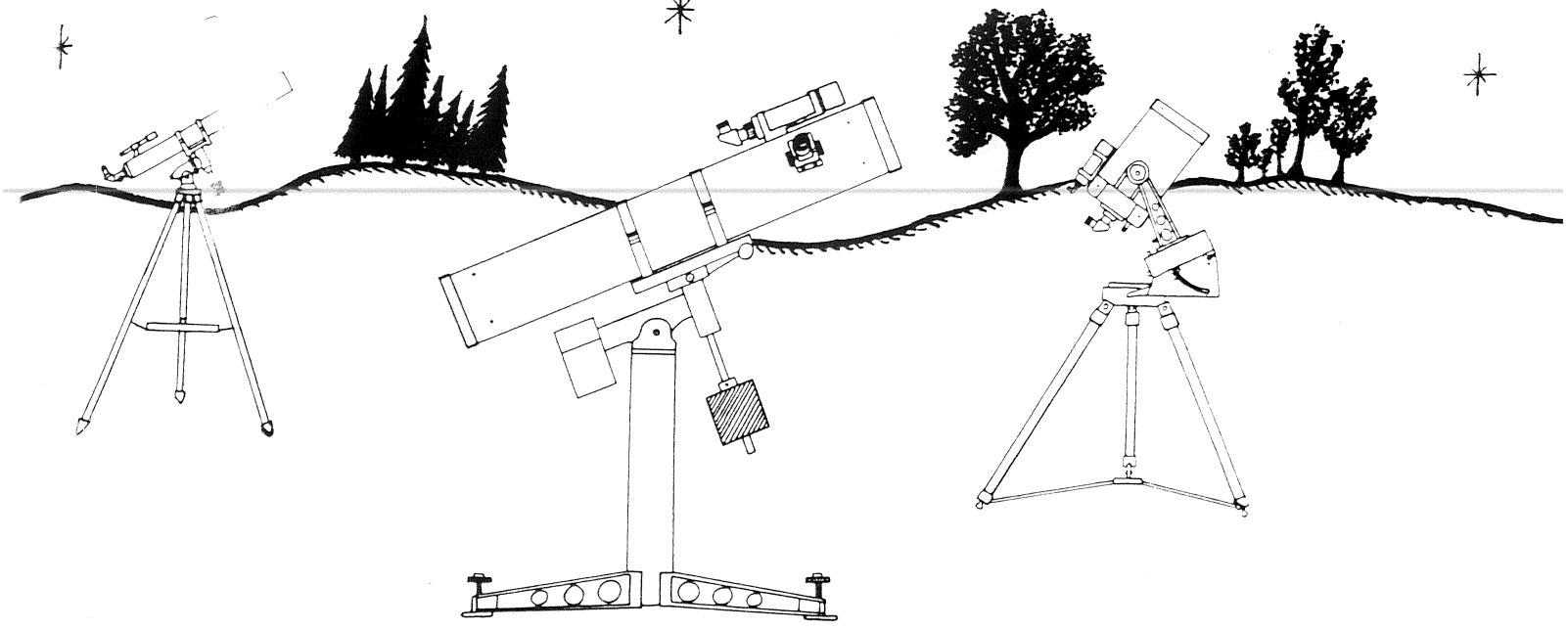
THE

BURKE LAKE TELESCOPE MEET

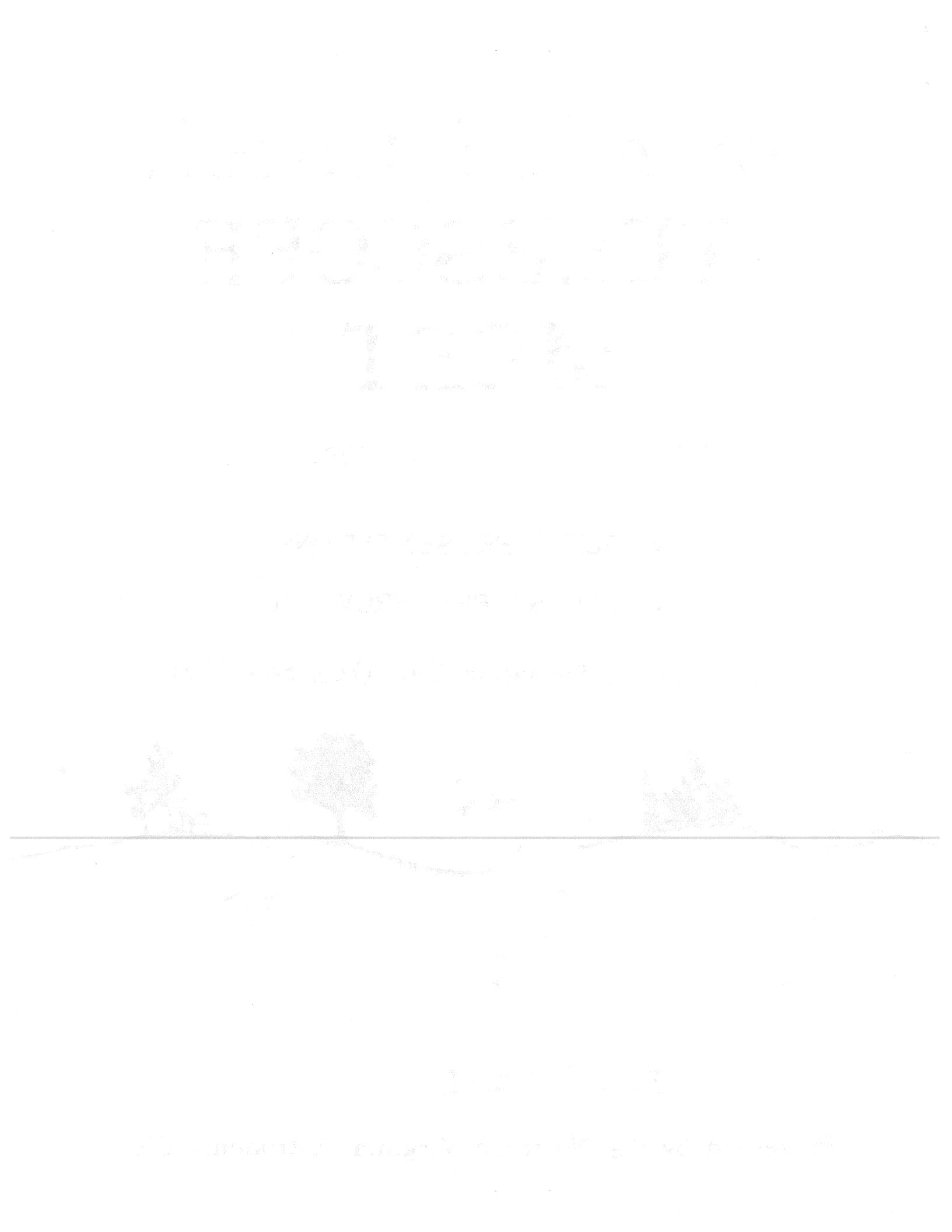
FRIDAY, JULY 17 AND SATURDAY, JULY 18

- SLIDE PRESENTATIONS
- TELESCOPES PROVIDED

For More Information Call (703) 644-4331



Presented by the Northern Virginia Astronomy Club



BURKE LAKE TELESCOPE MEET

If you own a telescope, have a pair of binoculars, or have an interest in astronomy, the Burke Lake Telescope Meet (BLTM) is for you. On July 17 and 18 starting at 8:ØØpm the Northern Virginia Astronomy Club (NOVAC) is having their fifth annual telescope meet. BLTM is the first of its kind in the southeastern part of the United States.

If you're a telescope owner, please feel free to come and show other people what a scope can do. Feel free to show off what you know about the night sky above us. We will provide 12Ø VAC to power your clock drive if you have one; however, since our electric outlets are limited we would appreciate your contacting us so we can get an idea of how many scopes we can expect. It would help to bring some strong people with you since our observing site is about 1ØØ feet from the road and a scope can get heavier the longer you have to carry it. Don't forget your observing aids or binoculars if you have them. We want to see how other amateur astronomers go about doing things. If you wish to take pictures, feel free to do so. Again, we would like to see your tricks and methods.

If you don't have the luxury of owning a scope of your own, but you do have a pair of binoculars, opera glasses, a captain's eyeglass, or whatever; you can use them for astronomy with great results because they are far better than the unaided eye. With them you can see things like the Andromeda Galaxy, the Pleiades Star Cluster, the Great Nebula in Orion, or you can patrol the Milky Way and discover things you probably didn't know existed.

If you don't have anything to use, come anyway because there will be many scopes there for the public to look through.

If you're a family person, bring your kids. If you wonder about the stars, bring yourself. If you are interested in joining our club, please come and see what the Northern Virginia Astronomy Club can do for you. We have a small library for members. If you lack a telescope, we have one that can be checked out by any member, no matter what his age.

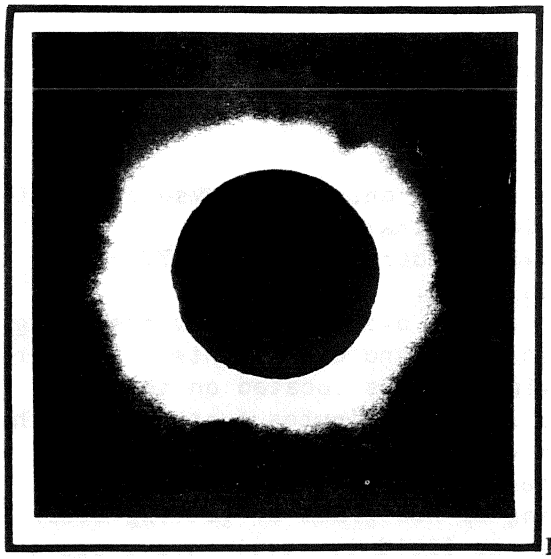
Activities will generally begin around dusk. If you are going to bring a scope, come earlier so you can set up in the daylight. There will be a slide show on Friday and Saturday in the Amphitheater at Burke Lake Park during the evening twilight.

FOR MORE INFORMATION CALL John at 644-4331
or Burke Lake Park at
323-66ØØ
or 323-66Ø1

See you there!!!!!

Sincerely,

John S. Huggins,
BLTM coordinator



THE NOVAC CORONA

to observe and to
help others observe

NEW OBSERVING
SITE LOCATED
1Ø MILES NORTH WEST
OF MANASSAS

THE OFFICIAL PUBLICATION OF THE NORTHERN VIRGINIA ASTRONOMY CLUB

Issue No. 14 Volume 7 May/June/July 1987

President, Blaine Korcel 7Ø3-256-443Ø
Secretary/Treasurer, John Huggins 7Ø3-644-4331

CALENDAR

For more information about activities call 7Ø3-644-4331

July 17..... Opening day of the Burke Lake Telescope Meet 8:ØØpm
July 18..... Second day of the Burke Lake Telescope Meet 8:ØØpm
July 24..... Observation at Greenville 8:3Ø
July 25.....Stellafane; Springfield, Vermont
August 1..... Public observing session at Lake Fairfax Amphitheater
August 19..... Public observing session at Elinore C. Lawrence park
in the Walney Visitor Center
August 21.....Public observing session at Burke Lake Park
August 22..... Observation at Greenville TBA
September 25..... Observation at Greenville TBA
October 24..... Observation at Greenville TBA
November 2Ø..... Observation at Greenville TBA
December 19..... Observation at Greenville TBA

NEW OBSERVATION SITE LOCATED SEE DETAILS INSIDE

Editorial

Blaine Korcel

Well, no excuses this time. I am very late and can only blame myself and final exams and work and the weather... Anyway, here it is finally!

All calls to me should be made at the 256-443Ø number. The 256-4777 number is now answered by a computer. More details on this later.

Many new things are going on especially our change over to the new observing site. Al Boldt has secured a site away from high beams and city lights. However, we gained a new obstacle. COWS! Our new observing site is located on the Greenville Farms Campground. It is only another 1Ø to 15 minutes further from the battlefield but offers better seeing and horizon visibility. There is one draw back. If his field is muddy, we have to move the observation back to the battlefield. The owner does not want cars tearing up his grass or getting stuck in the mud. Trucks are not neccessary otherwise as the field is easily traversed in any small car. To get there, take Rt. 66 West to the Manassas Rt. 234 North exit. Proceed as you would to get to the Battlefield. In fact, we pass the Battlefield on the way! Continue on 234 for another 8 miles or so towards route 15. Just before you get to route 15 and the 7-11 on the corner (5Ø yards!) you will want to make a sharp right turn onto route 6Ø1. Follow Route 6Ø1 to the Greenville Farms Campground sign, about 1.5 miles and turn left. Continue until you get to the stop sign then veer left. Continue until you come to a sharp left turn in front of the barn. There will be a wooden gate here. PLEASE CLOSE THIS GATE AFTER YOU GO THROUGH. This is the one that keeps the cows in. Follow the dirt road until you reach an open field and you are on top of a small hill.

Please come the first time just prior to sunset. As was with the Battlefield, you may have difficulty finding it when it is dark.

This observing site is strictly for club members and their accompanied guests. No others are allowed. To prevent problems, we will be mailing membership cards to all members. These should be presented upon request. Any member wishing to observe from the new site on an individual basis must first call Mr. or Mrs. Latham at 7Ø3-754-7944 (office) or 7Ø3-754-8877 (home) for permission. For further details, see the enclosed maps.

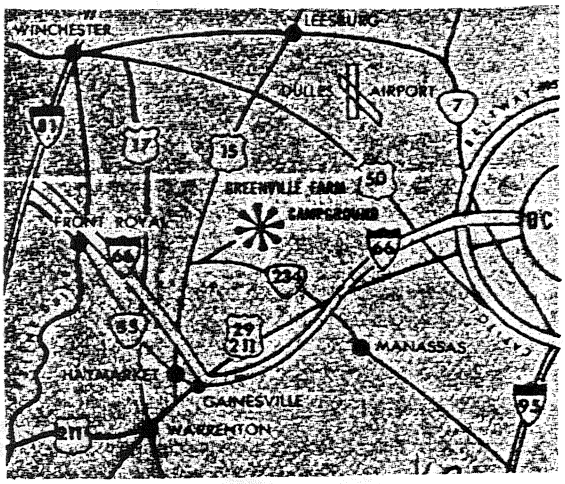
The Burke Lake telescope meet is coming up and plans are already made. We are still up for suggestions though. Response has been good this year as our meet was advertised in both astronomy periodicals. It was also announced in this summer's Park Takes and will be announced in the Weekender the week before. We should have an extraordinary turn out. Let's hope the weather holds this year.

On another note, the club has TWO, yes two Computer Bulletin Boards set up. Anyone can access these boards by calling up via a 12ØØ baud or less modem and following the simple questions they ask. Please call using at least 3ØØ but not more than 12ØØ baud, no parity, 8 data bits, and one stop bit. Here are the boards and their corresponding numbers:

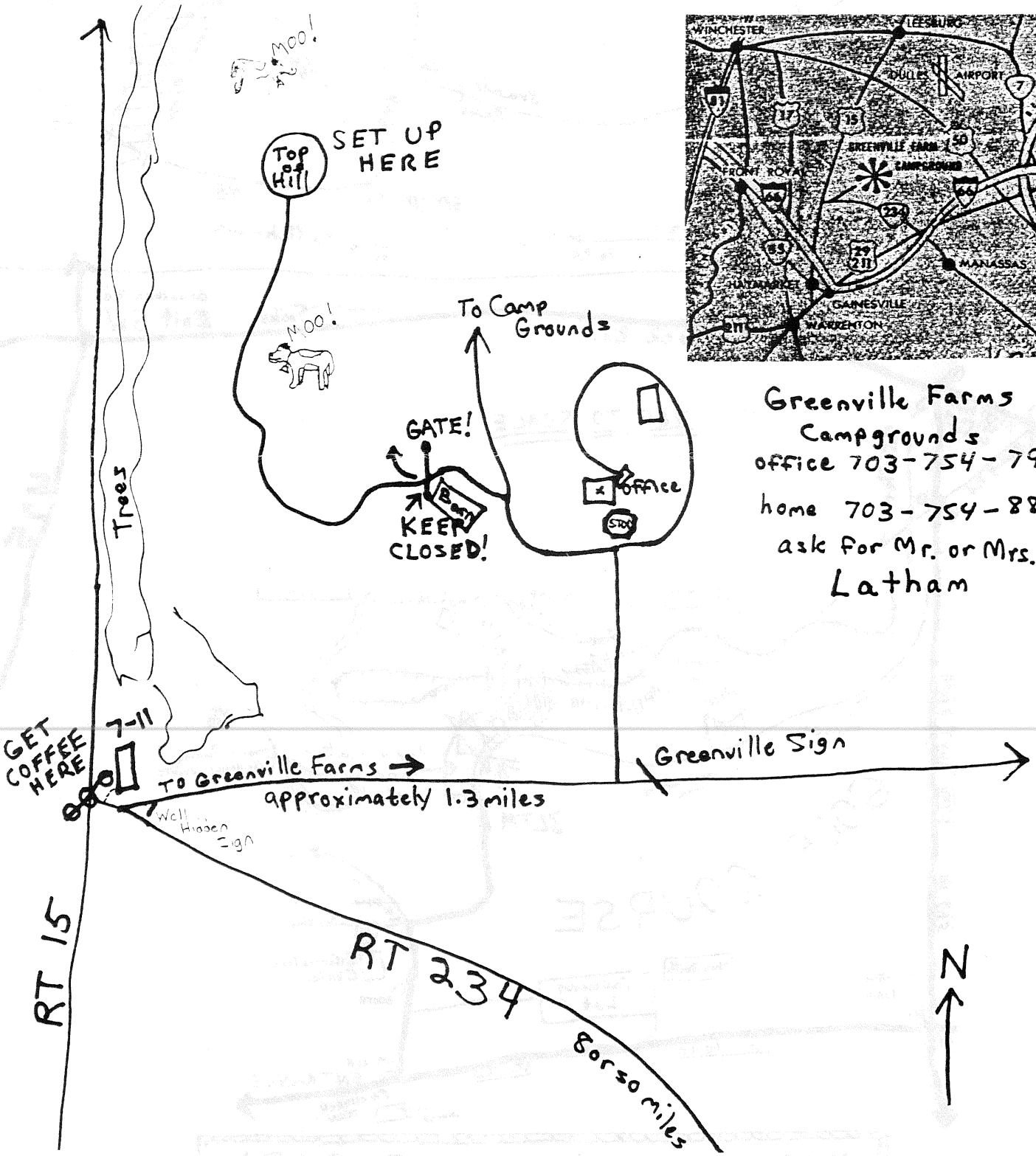
TECH CENTRAL - 7Ø3-256-4777 - Technical support for computer equipment, Astronomy, features other BBS listings, text, ascii, color - animated graphics screens. Open access. Club members get high security level for longer on line time. Free except for long distance $$. IBM, MS-DOS, or APPLE][support. Many files. Runs on Leading Edge Model D.

The FROG - 703-644-5510 - Flag Run Observational Group (FROG)
Supports Astronomy, other BBS listings,
Open access public message posting
APPLE][, APPLE //gs, MS-DOS support.
Runs on Apple//e.

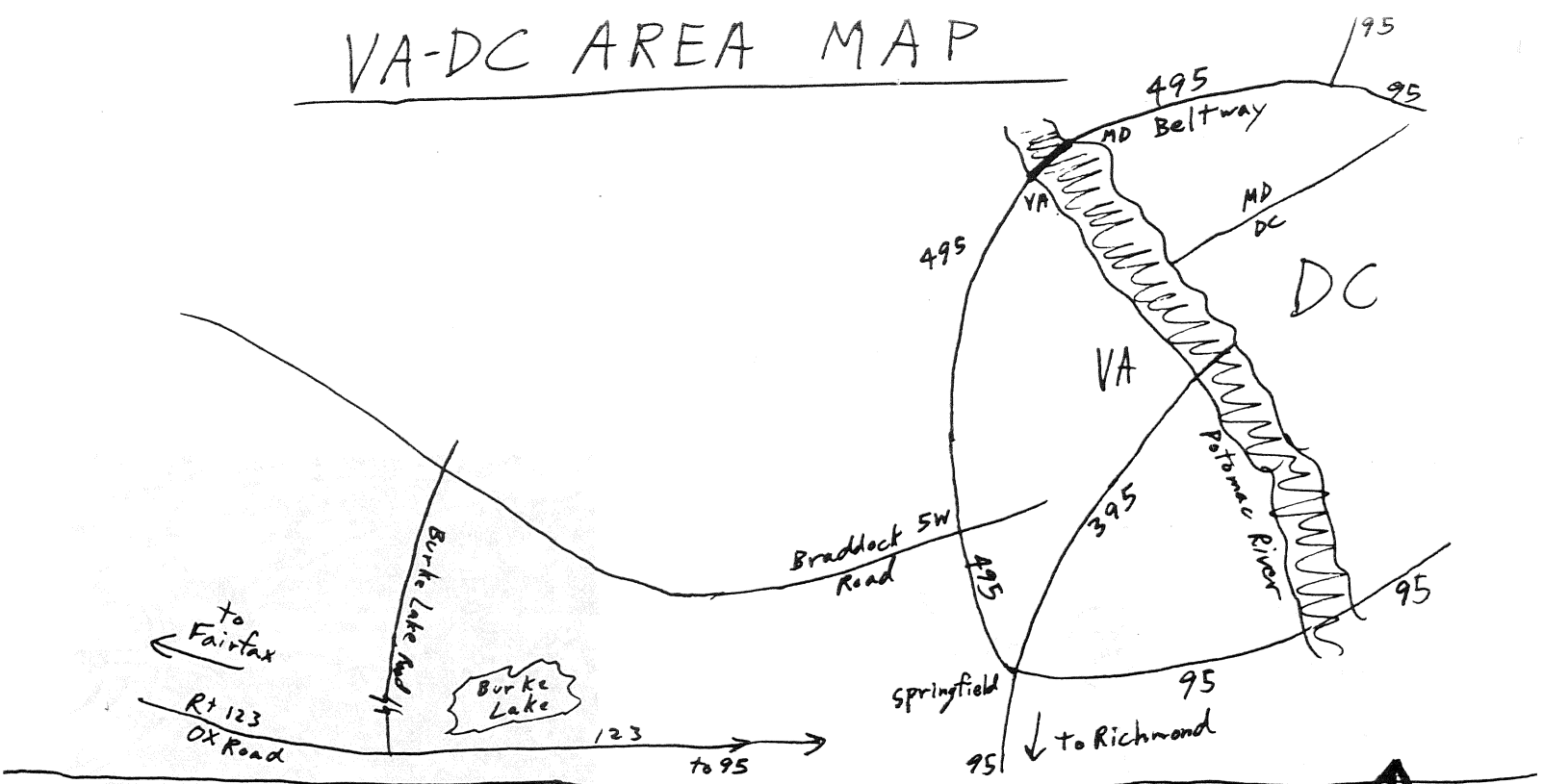
The current NOVAC Corona will always be posted along with membership information. Please call and leave the System Operators ideas for expansion. Both are just starting and need your thoughts.

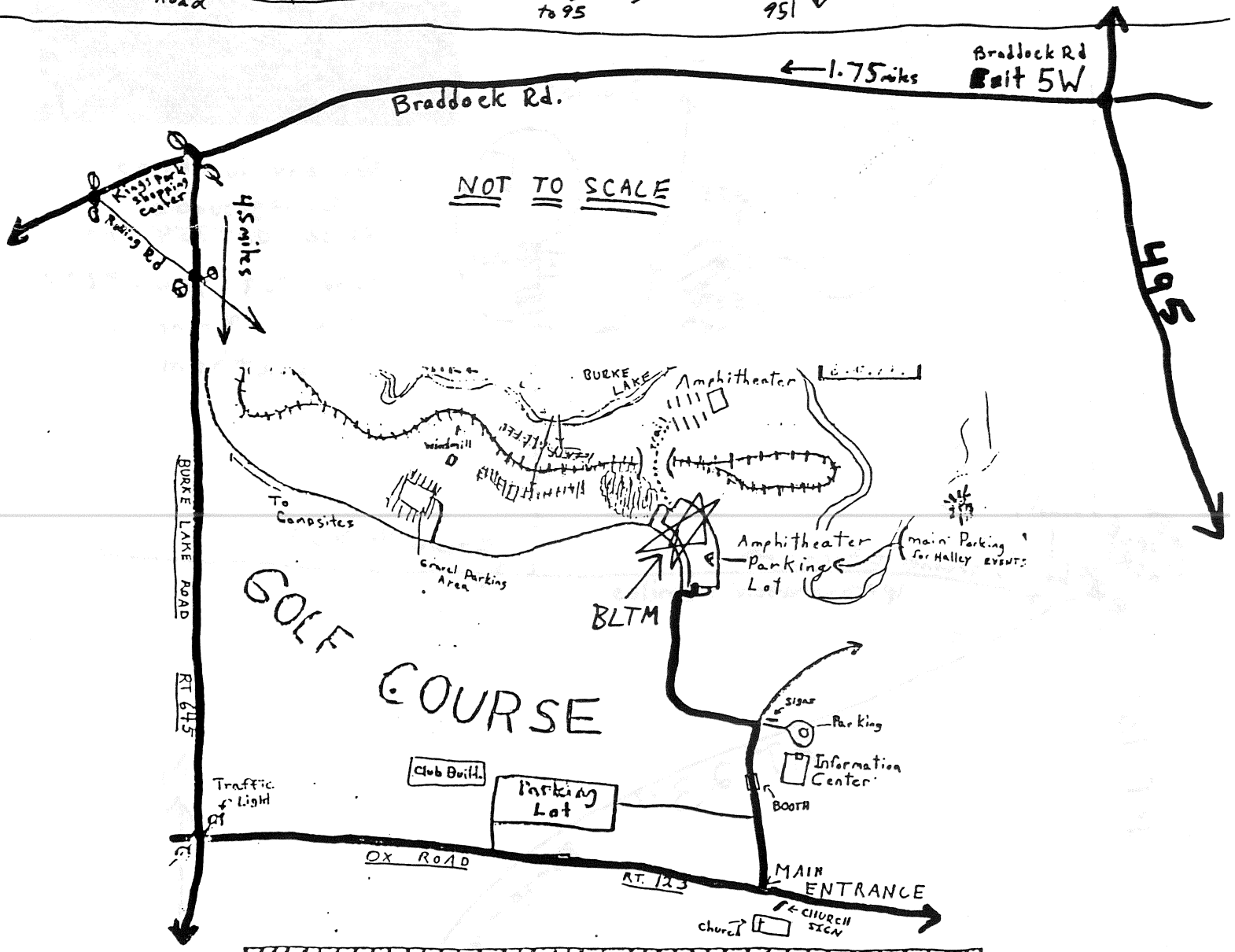


Greenville Farms
Campgrounds
office 703-754-7944
home 703-754-8877
ask for Mr. or Mrs.
Latham



VA-DC AREA MAP





MAP OF BURKE LAKE PARK

Who's Runnin' the Show?

Blaine Korcel

Many of you are probably wondering who is running the club now. At our last meeting, we ratified all of the amendments stated in the last newsletter. A new Constitution will be mailed soon. As a result of these amendments, we held elections. The five Board of Directors are:

Gerald Perman - 536-8321
Al Boldt - 379-5721
Gilbert Swift - 451-4610
Al Schumann - 971-3257
Lynn Schumann - 971-3257

Our Secretary/Treasurer is now John Huggins - 644-4331 and the President is Blaine Korcel - 256-4430. Let's see a bountiful year and a hard membership drive.

BLTM87: This Friday and Saturday!

John Huggins

This Friday and Saturday, July 17 and 18 starting at 8:00pm, the fifth annual Burke Lake Telescope Meet will be held at Burke Lake. Enclosed with this issue of the Corona you will find a poster and a handout. Please spread these advertising items around to your friends and work companions. Copy and display the poster wherever you see fit. The best advertising is done right before the event. This is one of the reasons that we delayed this issue. A lot of the work has been done for us already. The park authority has submitted a press release to the media. The Springfield Times has done an article on us. Now it is our turn. Please help out in whatever way you can. Leave me a message at 644-4331 if you have comments.

This years BLTM will be like past ones. Friday will be primarily for amateur astronomers although the park is asking the public to come also. Saturday is the night for everyone to attend. We will be hosts while we show people objects through our equipment. There will be slide presentations on both nights. Judging will be done secretly throughout the event. Awards will be given on Saturday night.

The response to the Astronomy and Sky & Telescope ads was tremendous. Let's make sure that this event provides all those involved with the chance to enhance their familiarity with astronomy.

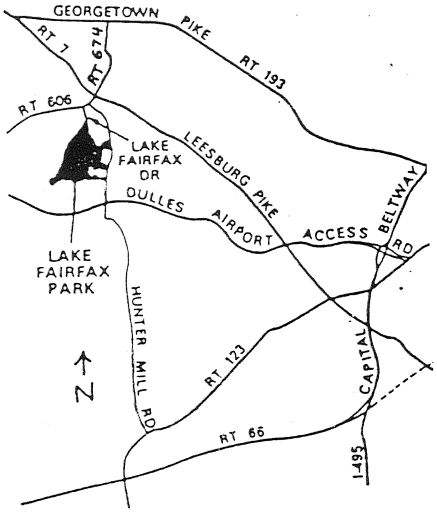
1987 Summer Public Observation Sessions

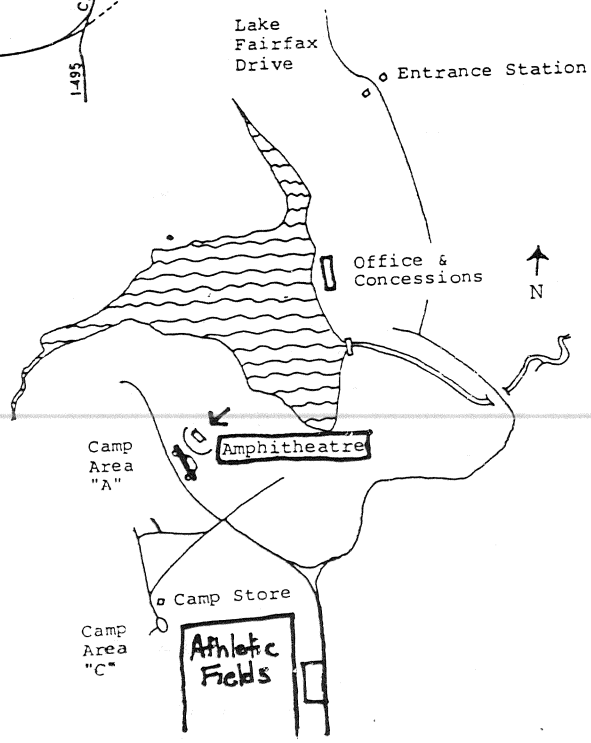
Laurel Wanrow

I would like to ask the assistance of NOVAC members at several upcoming public observations. As a naturalist with Fairfax County Park Authority, I have scheduled two introductory astronomy programs to be followed by stargazing, if clear. I am seeking NOVAC members with knowledge, binoculars and/or telescopes that would be

Directions and Location Maps

Lake Fairfax Park is located at 1400 Lake Fairfax Drive, and may be reached by taking Beltway Exit 10-W (Route 7, Leesburg Pike) to left on Route 606 (Baron Cameron Ave.). The Park entrance is located one quarter mile down on the left. Follow the signs in the park to the amphitheater.





willing to allow visitors to view prominent deep sky objects (galaxies, nebulae. clusters) as well as other sky phenomena observable at the time. The dates, times and directions to the parks follow. Both tend to have fair to good viewing. Please give me a call if you are able to help out, or need further information. Work # is 759-3210; Home 273-7165. Thanks!

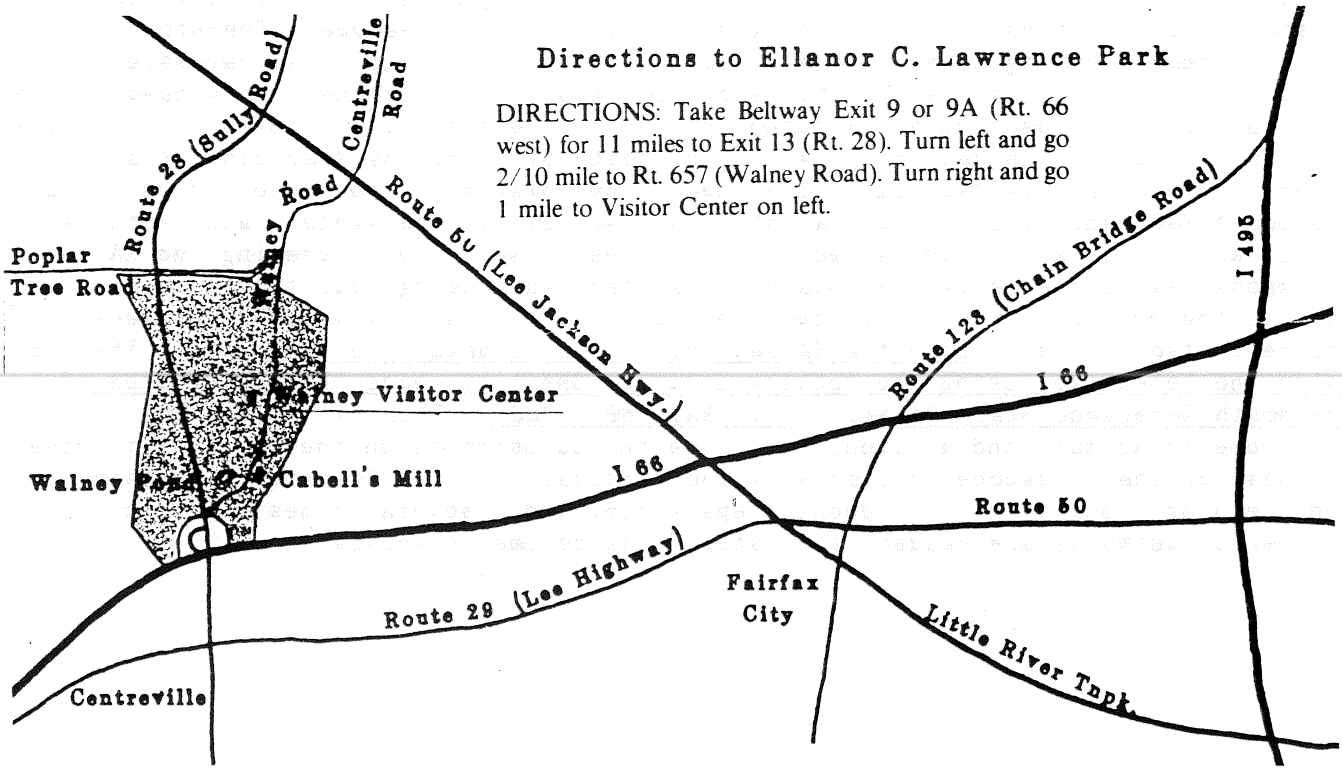
And don't forget our own club sponsored public observation on Saturday, July 18th at Burke Lake Park. A slide program begins the evening at 8:30pm in the amphitheater, followed by viewing in the parking lot (near the train station and ice cream parlor) if clear. The entire program will be cancelled in case of rain. Contact John Huggins (644-4331) for the specifics and more information on the Burke Lake Telescope Meet (BLTM).

Saturday, August 1

Lake Fairfax Park Outdoor Amphitheater. A 45 minute slide program begins at 8:30pm to be followed by star gazing if clear. The program will be cancelled in case of rain. If its not in use, the better place to view from would be the athletic field. Please check with me first - I will be at the amphitheater by 8pm. Turn out last year was about 90 people. See map on page 5.

Wednesday, August 19

Ellanore C. Lawrence Park's Outdoor Amphitheater. A 45 minute slide program begins at 8:30pm to be followed by star gazing if clear. However, one catch, I have set up a cloud/rain date of Thursday, August 20. We will be making a decision by 4:30pm of Wednesday afternoon for that evening. I can be reached at 759-3210 if weather is questionable. Viewing is best on the lawn adjacent to the parking lot. I will be there by 7:45pm to open the gate to move onto the lawn to set up. Turnout last year was 75 people. See map below.



Polar Aligning Your Telescope

Dr. Gerald Perman

It has become obvious to me that many new members of the club are at a loss to polar align their clock-driven equatorially-mounted telescopes. This may hold true for more advanced amateurs as well, who may have given up trying to learn this mechanical process, settling into becoming expert star hoppers. One benefit of never learning polar alignment is that you probably end up knowing the sky a lot better than those of us who rely on setting circles. But having been born into the instant gratification television generation, I like to get outside, set up and align my scope, and dial in deep sky objects one after another in rapid fire fashion.

A well known method of polar alignment is the "Drift Method" which was described in the October 1985 NOVAC Corona. This method may be more elegant than the one I am going to present because it uses the motion of the earth as the basis on which adjustments in the telescope's mounting are made. It is, however, time consuming and tedious since you have to wait until the star drifts across the field of view, then adjust your telescope, find another star, wait until it drifts slowwwly across the field of view, etc., etc., etc.

The method which I am about to describe is called the "Easy Two-Star Method of Polar Alignment." I wish I could say that I discovered it, but I didn't. With a few modifications that I will mention, I got it from Orion Telescopes and an instructional chart is advertised regularly in S&T for $3.00.

The first step (1) is to locate Polaris, the North Star. To do this just follow the pointers of Ursa Major. Then (2), after your clock drive is running, set your telescope in declination to about 90 degrees and aim it (lifting and turning the whole tripod) towards Polaris. The next step (3) is to level your tripod. whereas the Meade 8" SC reflectors have a bubble level built into the mounting, it is obvious that it is impossible to look at the level straight unless your head can dissolve and its atoms interdigitate with those of your telescope. Therefore, I would recommend buying a small level (about 3" long) from your local hardware store for a dollar or two and use this to level your mount. It obviously only needs to be level along two perpendicular axes and this will take but a few minutes of adjusting your tripod legs. The next step (4) is to locate by sight any star other than Polaris, preferably as far south (i.e. away from Polaris) as possible, to be called the South Reference Star. Capella (5:17 RA; +46 DEC) in the winter, and Arcturus (14.15 RA; +19.3 DEC) in the summer are the ones I use. Then loosening the RA and DEC knobs, swing the telescope towards this star, and, using your finder scope, get it into the center of your telescope field of view with a medium power eyepiece. The next step (5) is to move the RA setting circle to match the star's RA. Then (6) swing the telescope, using the setting circles, until it reads the coordinates of the North Reference Star -Polaris (2:12 RA; +89.1 DEC). Then (7) adjust the telescope in azimuth and altitude (i.e. use the adjustments on the mounting to move the base of the telescope horizontally and vertically) until Polaris is centered in the field of view. Finally, repeat steps 4,5,6, and 7 several times until no further adjustments are needed, i.e. step 7 has become unnecessary.

This may seem complicated, but it really isn't. With some practice you can be set up and ready to go for the night within about fifteen minutes. Each time you kick the tripod, however, or your battery becomes disconnected from the clock drive, you need to start over again. The latter problem can be greatly ameliorated by buying a twelve volt motorcycle battery (I use a sealed rechargeable one I bought from a motorcycle store that fits nicely into a cheap camera bag) which you can keep on the ground under your telescope. Then you are not tripping over the wire from your scope to your car.

If you have any questions, please give me a call at (703)536-8321.

An Eye on Image Processing
by Blaine Korcel

With today's relatively low cost micro computers, one can digitize his or her astrophotos and keep them on magnetic media for future applications and processing. In this month's article I have focused on a system that does a reasonable job in storing and retrieving digitized astrophotos. This system is the Silent Partner BIOS AT desktop publishing computer.

The BIOS AT boasts both fast memory and math calculations, due to its relatively new, or at least it was new, 80286 microprocessor. When processing such images as those of Halley's Comet or M-17, speed is very important. Many math calculations must be made to construct the complicated image of these photographs.

Also included in this system is a high resolution Bit Mapped monitor which gives a resolution of 1280 picture elements (dots, or pixels) horizontal and 800 pixels vertical.

To do this kind of resolution any justice, a laser printer must also be used which provides at least 300 dots per inch resolution on your final printed output.

Enough of the technical jargon. The fact is that technology has come a long way since the abacus. The procedure is simple. Take your finished photograph and scan it through the included digitizer. This converts your image from a continuous tone to a dithered format, made up of tiny dots, or one that looks like your newspaper's photographs. This is then written to some form of storage and in my case a standard microcomputer 5 1/4 floppy disk. At this point, the software that you use to display the image on the screen will determine how much processing you can do.

Over all, the system provides good results as long as the limitations of the system are recognized. The biggest limitation is the price. Yes, I lied. The BIOS AT system complete and ready to go varies between $8000 and $8700 dollars. It is primarily intended for text or graphic arts where high contrast is all that is neccessary. In this aspect, it exceeds all others I've seen in producing camera ready artwork for newspapers, magazines, and newsletters.

In the next issue, I hope to write about another image enhancement technique generally used with high grade vidicon tubes and CCD's.

FOR SALE

Complete Astrophotographic System

C-8, Wedge, Tripod, custom "Kencor Worm Drive", 8x5Ø finder, Declination drive, over sized declination setting circle, Off-axis guider w/ illuminated reticle eyepiece, Large Astro-physics telecompressor, T-adaptor, 2Ømm and 6mm oculars, and a 2x barlow. These optics were hand picked. Astrophotos with this scope will not be beaten in resolution by any other C-8. Asking $8ØØ.ØØ or best offer. Call Joseph Macrie evenings at 66Ø-6Ø42, days 377-6Ø4Ø.

The CORONA deadline is the 15th of the preceding month. For more information regarding club activities call 7Ø3-644-4331. Send all material regarding the club, including that for publication, to the President; Blaine Korcel (7Ø3-256-443Ø), 54Ø1 Danville Street, Springfield, Virginia 22151. ▪

N.O.V.A.C.
THE NORTHERN VIRGINIA ASTRONOMY CLUB
TO OBSERVE AND TO HELP OTHERS OBSERVE
5401 DANVILLE STREET
SPRINGFIELD, VA 22151

Laurel Wanrow Dec 31 87
3804 Carolyn Avenue
Fairfax VA 22031