NOVAC

THE NEWSLETTER OF THE NORTHERN VIRGINIA ASTRONOMY CLUB

Issue Number 84 **Volume 19** **July/August 1999**

President's Message — Tilly Smith
NOVAC IS MOVING

In July 1999 NOVAC is moving the monthly General Membership Meetings from the Arlington Planetarium to a new location, a new day and a new time.

New Location – George Mason University (GMU)
New Day – Second Sunday of Each Month
New Time – 6:00 P.M.
Starting Month – July 1999
Location – Lecture Hall 1 (next to Fenwick Library)
Free Parking – Lots F, G and H
Pay Parking – Parking Deck

As you know, we have been searching for a new location for our monthly Membership Meetings for some time. Your Board of Directors unanimously feels that the time has come to move to a larger meeting room. The current room at the Arlington Planetarium holds a maximum of only 75 people. For the past several years we have been unable to advertise our general meetings, except on the Web Page, for fear of having insufficient room for the public. Currently your club is at approximately 350 members. Our present meeting space cannot even hold one quarter of our members should more members desire to attend.

We have just entered into an exciting arrangement with GMU that will not only provide us a much larger, state-of-the-art auditorium (capacity about 250) ***At no cost***; but will provide NOVAC some very interesting avenues for future growth. The opportunity to be aligned with a major university is just too good to pass up.

Although we are moving from the Arlington Planetarium, we do not plan to sever our working arrangement with Steve Smith and the Planetarium. Currently we hold our monthly Director's meeting at the Planetarium and have no plan to change that meeting's location. Further, if after six months at GMU, the transition is not as smooth as we hope it to be, we can return to the Planetarium.

In order to get the best deal, we have changed the day and time of the meetings to facilitate room scheduling, minimize traffic and to provide sufficient FREE parking for NOVAC members and the public. Directions to the new meeting room are provided below. Also, you can view a map of GMU on their Web Page < www. gmu edu > under "Visitors center" and then "Campus Map" **Come join us for a new adventure.**

Directions to GMU Meeting Site

To reach GMU, take either Rt. 66 to Ox Rd.(Rt. 123 South) or Braddock Rd. to Ox Rd.(North). Enter GMU at the main entrance off Ox Rd., which is University Drive, and proceed to parking lots F, G or H for Free parking. Pay Parking is also available in the Parking Deck.

The meetings are in the Lecture Hall, next to Fenwick Library, on the North side of campus across Patriot Circle from parking lots F, G, and H.

What's Up?

Al Schumann

There was a very helpful article about Mars in the April issue of *Sky & Telescope*. The article contained a chart which showed the longitude of the central meridian at 0.00 Universal Time (UT). It covered every day from March 1 through August 31. Further, there was a simple method for making adjustments for times other than 0.00 UT. Complementing this meridian chart was a series of composite pictures of the Martian surface at 45 degree intervals. Those two snippets of information were ideal planning tools, and one could figure out beforehand what face Mars would show to the telescope.

I took my first shot at Mars on May 4, a few days after closest approach. I used the C-8 with the four-inch off-axis mask, a 2X Barlow, and a variety of eyepieces running up to 400X. Also, I made test runs with my home made filters, and a couple of the red-colored filters worked best for me. The same setup was used for the rest of my dozen or so backyard observations during May and early June.

Here we go with some general comments. The reddish/orange color we see with the naked eye disappears when the planet is observed through the telescope. It looks more ivory or off-white. It was a bright little rascal, and even with the mask it was bright enough to view comfortably. In fact, without the mask it was too bright. The north polar cap was not all that obvious. It took a filter and a lot of looking for me to make out any kind of demarcation line between the cap and the rest of the planet. On some nights I could not make out the cap at all. The only surface feature that jumped out was Syrtis Major, and it brought other adjacent features along with it. When Syrtis Major was facing us, I saw a nice wide, extended V shaped dark area with a still darker Syrtis Major at the apex of the V. That was a real treat.

Otherwise, there was not much else to see. During May I was able to look at all sides of Mars. There were fleeting occasions when I could make out very small, faint dark areas during moments of good seeing. However, I could never see enough to make any kind of positive identification. Even under the best of circumstances, identification of surface markings as depicted on maps or photos is difficult for Schmidt-Cassegrain Telescope (SCT) users. An SCT with a diagonal gives a right side up but mirror image view. Photos and maps almost always have an upside-down orientation which favors viewers with Newtonian reflectors. It's the old "south is up" deal. If it were merely a matter of turning the map around, it would be easy, but to make the map fully compatible for SCT use, we're supposed to make a copy of the map and look through the back side of the paper while using a light table or flashlight to illuminate things from below. Got that? Yeah, right! And so's your old man!

Anyhow, 400X is the highest I can go with my set-up. I often felt that if I had higher power I might have seen more. However, even at 400X all those flecks of dust, pollen, or the errant bit of cat fur become big nuisances. Then, there are the eyeball floaters which sometimes make it seem as if I'm watching bacteria in a drop of water through a microscope rather than a planet millions of miles away. I wonder if Percival Lowell had an over abundance of floaters. That might account for the myriad canals he claimed to have seen.

By and large, my Mars runs were very successful. Fact is, I saw everything I expected to see: Syrtis Major, the ice cap, and a bit more. Fifty to sixty million miles is still a fur piece down the pike as we say down south, and I reckon we'll have to wait a couple years for a better, more detailed view of Mars.

Sometime back I wrote about losing my neighborhood observing site. Well, recently I checked out a spot at Fort Eustis, a nearby army post in Newport News. The post lies on the eastern shore of the James River which is more than a mile wide at this point. There are some nice picnic areas on the riverfront, and best of all there are no lights nearby. The sky is a little darker at home, but the south and western horizons are wide open. There is some sky glow from Surry and Williamsburg well off to the west across the river, but I can live with that for the chance to see broader vistas. Tall trees line the eastern edge of the area, and they block out light from the rest of the post and Newport News. On the down side, the mosquitoes are vicious, so it is imperative to keep arms and legs covered and use prodigious amounts of insect repellent.

For my unofficial site survey, I took the Astroscan rather than lugging one of the bigger telescopes. It was very quiet and pleasant. Wisely, I left my Serbian terrorist disguise at home, so nobody paid me any mind. While there, I took a general tour through the parts of the sky that are obscured by trees at home. Hadn't seen M-81 & M-82 in a long time. Also, I roamed around looking at some of the brighter globular clusters with the four-inch telescope. I even saw the Sombrero Galaxy, M104. It was a pleasant night. Should be a nice change of pace, and I look forward to the cool months when the bugs are gone and the air is more transparent.

Hats off to Myron Wasiuta for his excellent article on observing along the Amazon. Talk about an experience of a lifetime. Southern-Hemisphere observing while serving humanity. Way to go Myron!

Editor's Note

Elliott Fein

Please keep those articles coming in!

The 10th of the month preceding publication is the cutoff. Material that I receive after the 10th will appear in a later newsletter. Copy (in ASCII, please), not previous published, for the July/August issue must be in my hands by June 10.

When I receive copy for an article, I start to format and edit it. If later, I receive an updated copy of the full article, I need to either figure out what changed and update the article in progress, or throw away the work I've done and start anew with the second copy. It would be much better if authors would tell me what changes they want made to the first, or if the changes are too complex for that, send me the second one and tell me the paragraph or whatever that has been changed.

NOVAC Programs at theGeorge Mason University

Pete Johnson *All meetings start at 6:00 P.M.*

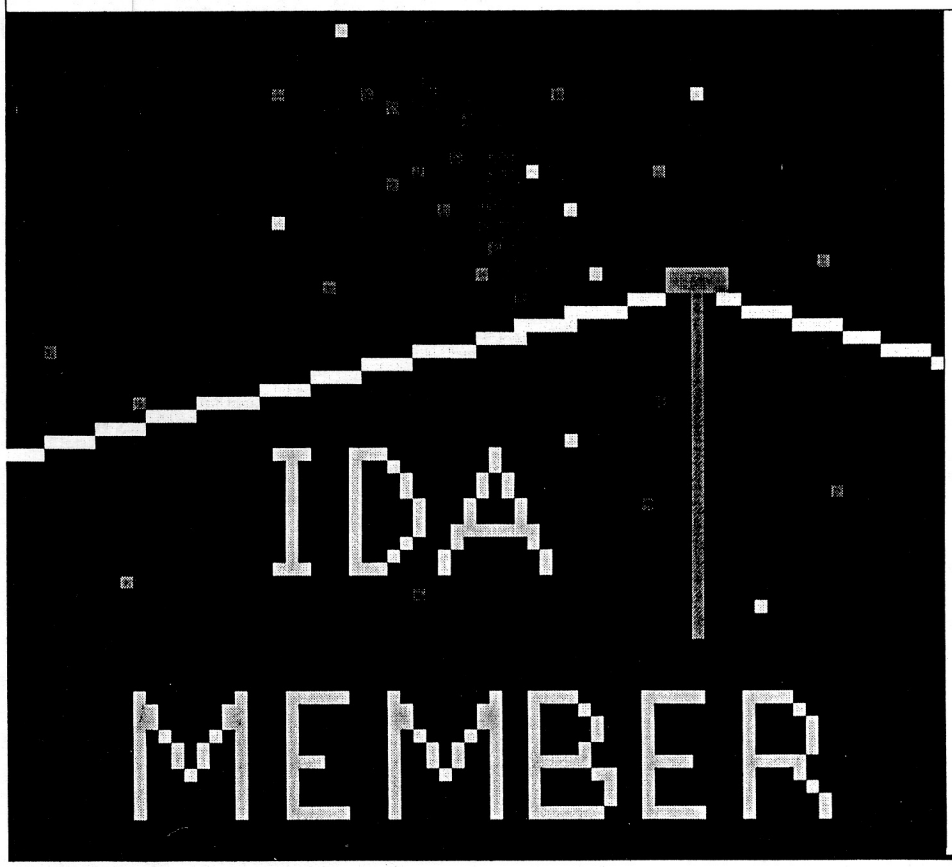
July 11 –
Members – ATM
(Amateur Telescope Making)

August 8
Peter Gural
Leonid Meteor observing from Mongolia

September 12-TBA

October 10-TBA

November 14
Members
Buying a Telescope -



Inside This Issue

Jeff's Observing Report

Jeff Stetekluh

Jeff's astronomical calculations are made for the Northern Virginia area. See credits at the end of this article.

The Sun	rises	sets
May 19	5:53 AM	8:17 PM
Jun 16	5:42 AM	8:35 PM
Jul 21	6:00 AM	8:29 PM
Aug 18	6:24 AM	7:59 PM
Aug 18	6:24 AM	7:59 PM
Sep 15	6:49 AM	7:17 PM

The Moon

Jul 6	Last Quarter
Jul 12	New Moon
Jul 20	First Quarter
Jul 28	Full Moon
Aug 4	Last Quarter
Aug 11	New Moon
Aug 18	First Quarter
Aug 18	First Quarter
Aug 26	Full Moon
Sep 2	Last Quarter
Sep 9	New Moon

Events

Jun 28 Mercury at Greatest Elong: 25.5?E (†from Espenak)
Jul 25 Neptune at Opposition (from Espenak)
Jul 26 Mercury at Inferior Conjunction (from Espenak)
Jul 28 Partial Lunar Eclipse; mag=0.399 (from Espenak)
Jul 28 Partial lunar eclipse for western N. America (††from S&T)
Jul 28 Southern delta-Aquarids ZHR=20, Jul 12 to Aug 19 (†††from IMO)
Aug 8 Uranus at Opposition (from Espenak)
Aug 11 Total Solar Eclipse; mag=1.024 (from Espenak)
Aug 11 Total Solar Eclipse for parts of Europe and S. W. Asia (††from S&T)
Aug 12 Perseids ZHR=140, active Jul 17 to Aug 24 (†††from IMO)
Aug 14 Mercury at Greatest Elong: 18.8?W (from Espenak)
Aug 20 Venus at Inferior Conjunction (from Espenak)
Sep 8 Mercury at Superior Conjunction (from Espenak)

The Planets

May 19	rises	transits	sets
Mercury	5:33 AM	12:36 PM	7:39 PM
Venus	8:40 AM	4:14 PM	11:49 PM
Mars	5:26 PM	10:56 PM	4:30 AM
Jupiter	4:19 AM	10:46 AM	5:13 PM
Saturn	5:09 AM	11:52 AM	6:36 PM

May 19	mag	diam	notes
Mercury	-1.5	5.1"	
Venus	-4.2	18.8"	W, 38*
Mars	-1.3	15.4"	SE, 29*
Jupiter	-2.1	34.4"	
Saturn	2.1	16.2"	

Jun 16	rises	transits	sets
Mercury	7:15 AM	2:45 PM	10:14 PM
Venus	9:14 AM	4:24 PM	11:33 PM
Mars	3:34 PM	9:02 PM	2:34 AM
Jupiter	2:43 AM	9:17 AM	3:50 PM
Saturn	3:28 AM	10:15 AM	5:02 PM

Jun 16	mag	diam	notes
Mercury	-0.2	6.5"	WNW, 17*
Venus	-4.3	25.1"	W, 33*
Mars	-0.7	12.7"	S, 40*
Jupiter	-2.2	36.3"	
Saturn	2.2	16.6"	

Jul 21	rises	transits	sets
Mercury	6:55 AM	1:43 PM	8:31 PM
Venus	9:04 AM	3:31 PM	9:58 PM
Mars	2:14 PM	7:26 PM	12:41 AM
Jupiter	12:39 AM	7:19 AM	1:58 PM
Saturn	1:20 AM	8:09 AM	2:59 PM

Jul 21	mag	diam	notes
Mercury	3.9	11.5"	
Venus	-4.5	41.8"	W, 17*
Mars	-0.1	9.9"	SSW, 34*
Jupiter	-2.5	40.0"	
Saturn	2.2	17.5"	

Aug 18	rises	transits	sets
Mercury	4:55 AM	12:01 PM	7:06 PM
Venus	6:56 AM	1:12 PM	7:28 PM
Mars	1:37 PM	6:33 PM	11:29 PM
Jupiter	10:51 PM	5:35 AM	12:16 PM
Saturn	11:30 PM	6:24 AM	1:15 PM

Aug 18	mag	diam	notes
Mercury	-0.6	6.6"	
Venus	-4.0	57.9"	
Mars	0.2	8.4"	SSW, 28*
Jupiter	-2.6	43.7"	
Saturn	2.1	18.4"	

Sep 15	rises	transits	sets
Mercury	7:19 AM	1:28 PM	7:36 PM
Venus	4:18 AM	10:50 AM	5:23 PM
Mars	1:15 PM	5:56 PM	10:37 PM
Jupiter	8:59 PM	3:43 AM	10:22 AM
Saturn	9:40 PM	4:34 AM	11:24 AM

Sep 15	mag	diam	notes-
Mercury	-1.1	4.8"	W, 3*
Venus	-4.5	44.6"	
Mars	0.5	7.4"	SSW, 25*
Jupiter	-2.8	47.4"	
Saturn	1.9	19.3"	

(* degrees elevation at sunset taking into account atmospheric refraction)
(mag = apparent magnitude, diam = apparent equatorial angular diameter)

References for Jeff Stetekluh's Observing Report

Sun and moon rise and set times, moon phases and Galilean moon events are calculated using my software that is based on algorithms from the book "Astronomical Algorithms" by Jean Meeus, 1991. This includes Bretagnons and Francou's VSOP87 (the 1987 version of Variations Seculaires des Orbites Planetaires) planetary theory, the Chapront ELP-2000/82 (ELP means Ephemerides Lunaires Parisiennes, although this work is not an ephemeris (a list of calculated positions), but rather an analytic theory (a series of periodic terms)) lunar theory and Lieske's theory E2 and E2x3 of Jupiter's satellites.

The Preliminary NOVAC Observing Reports are created using my software. Some of the algorithms are listed above and in the following as noted. from Espenak: Fred Espenak's Twelve Year Planetary Ephemeris: 1995 - 2006 (NASA Reference Publication 1349, available at http://www-lep.gsfc.nasa.gov/code693/TYPE/TYPE.html); from S&T: Sky & Telescope's Evening and Morning Highlights for Skygazers (available at http://www.skypub.com/whatsup/whatsup.shtml; from IMO: the International Meteor Organization calendar

New Members - April 12 through May 8

Kevin Brown

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Dorothy A. Adams
4201 South 31st Street, #814
Arlington, VA 22206
Home# - 703-578-2542
Work# - 202-493-0376
Dorothy.Adams@marad.dot.gov

Nathan Bailey
15071 Stillfield Pl.
Centreville, VA 20120
nbailey9@erols.com

A. Paul Barker, M.D.
2604 N. 18th St.
Arlington, VA 22201
Home# - 703-525-9474
apb91@aol.com

Anthony & Susan Boyle
40 Bickel Ct.
Sterling, VA 20165
Home# - 703-406-7571
Work# - 703-265-5682
vaboyles@aol.com

David L. Corum
1609 Arbor View Rd.
Silver Spring, MD 20902
Home# - 301-933-1484
dcorum@erols.com

Charles A. Crabtree
10202 Chase Commons Dr., Apt. 301
Burke, VA 22015
Home# - 703-426-2446
Work# - 703-739-9795
chuckc@summerproductions.com

Roger C. & Kevin Fairchild
20291 Shelburne Glebe Rd.
Purcellville, VA 20132
Home# - 540-338-6407
Work# - 703-818-3217
rfairc5552@aol.com

Lawrence A. Friedl
1831 California St., N.W. #32
Washington, DC 20009
Home# - 202-238-0708
Work# - 202-564-6933
lfriedl@alumni.princeton.edu

Robert T. Garrett
4216 Ann Fitz Hugh Dr.
Annandale, VA 22003-3849
Home# - 703-978-3387
Work# - 301-413-0155
rgarrett@cais.net

Terri & Eddie Henry
11137 Freemans Ford Rd.
Remington, VA 22734
Home# - 540-439-3587
Work# - 540-825-8371

David L. Jobson
2628 Sheringham Dr.
Herndon, VA 20171-2429
Home# - 703-476-5002
Work# - 703-329-5710

Stephen K. Johnson & Lynn E. Rafferty
3412 Hickory Hills Dr.
Oakton, VA 22124
Home# - 703-860-1951
Work# - 703-277-1375
sjandlr@aol.com

Gene E. Latour
807 S. Filbert Ct.
Sterling, VA 20164-4712
Home# - 703-444-6674
Work# - 301-231-0307
genel2r@email.msn.com

Daniel C. McGlinchey
6375 Edsall Rd.
Alexandria, VA 22312
Home# - 703-941-5640
Work# - 202-647-0487
dcmcglin@idsonline.com

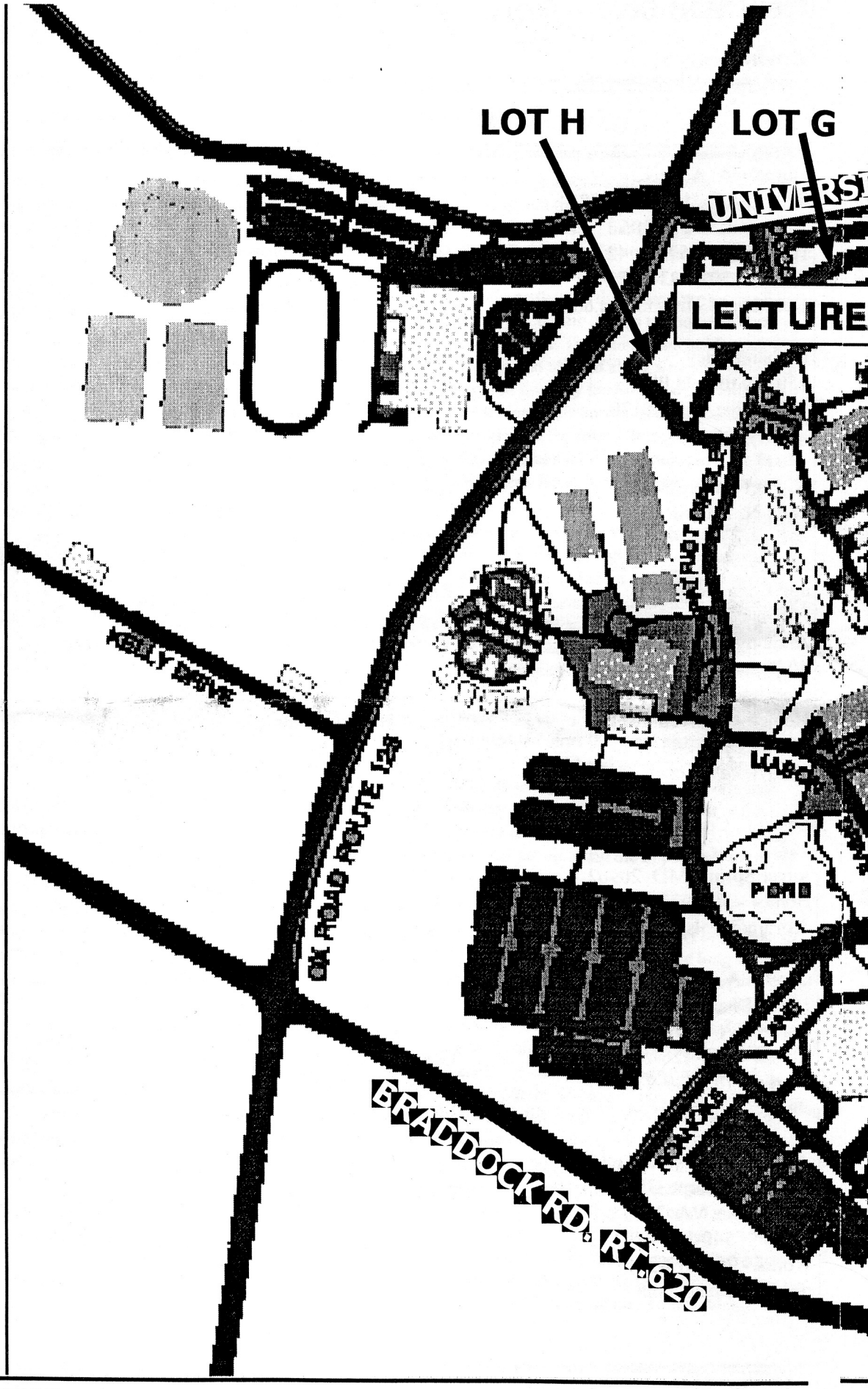
Sharon E. Mitchell
6296 Rosevale Ln.
Broad Run, VA 20137-1935
Home# - 540-347-0691
elecmtrtech@earthlink.net

James A. & Kristine M. Mosora
3803 Inverness Rd.
Fairfax, VA 22033
Home# - 703-273-0049
Work# - 703-693-1502
mosora@ibm.net

James L. Olds
3810 North Upland St.
Arlington, VA 22207
Home# - 703-533-9805
Work# - 703-993-4378
jolds@krasnow.org

Arthur H. Sanfelici
5 Oak Shade Rd.
Sterling, VA 20164
Home# - 703-450-4686
asanfelici@compuserve.com

Gretchen C. Schwarz
4639 Mayhunt Ct.
Alexandria, VA 22312
Home# - 703-256-2569
oneillj@erols.com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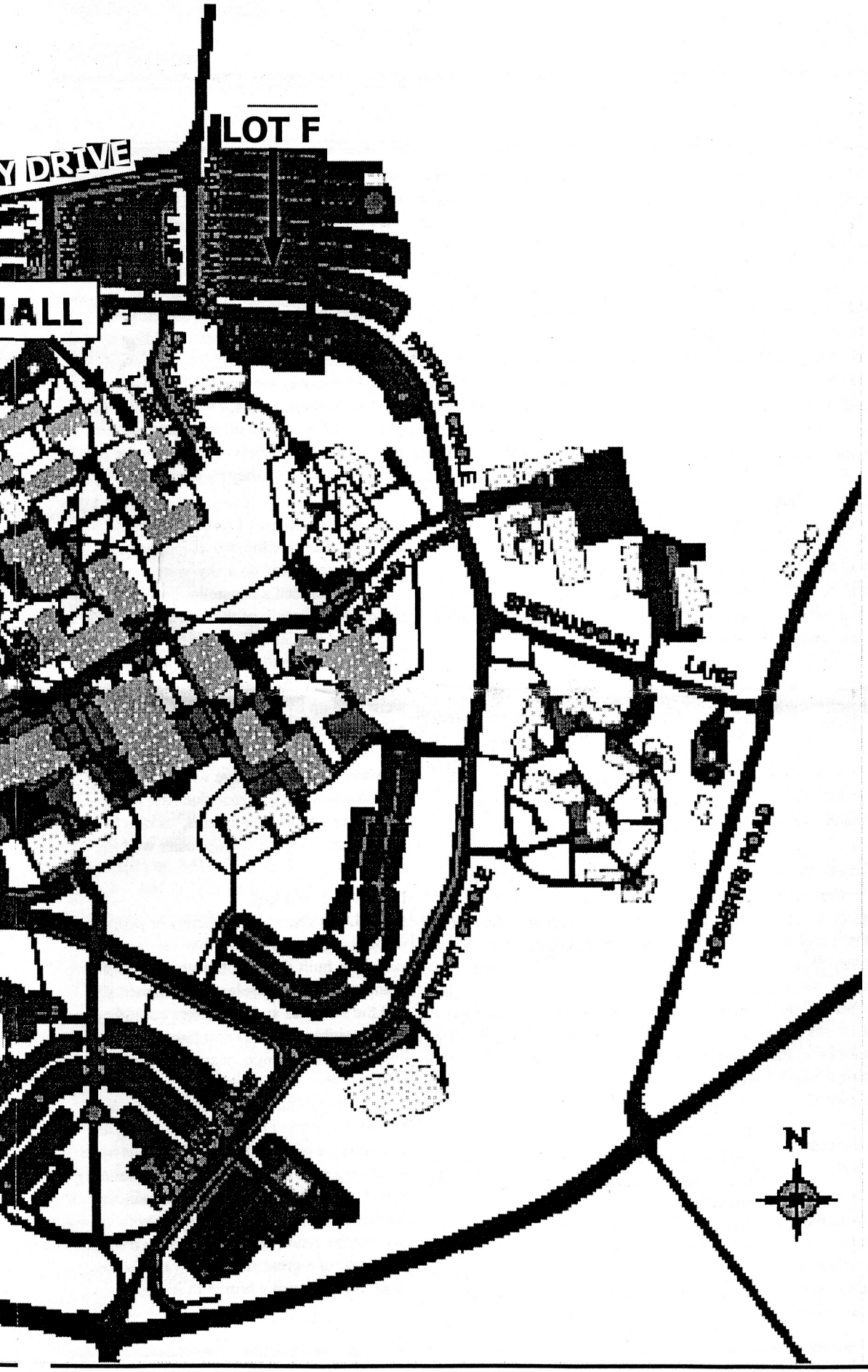

Original by GWU
Enhanced for printing by
Pete Johnson

Here Comes The Sun

Marc DeFrancis

For Young Astronomers ages 8 and up

One of the oldest and still most important uses of sky-measuring is to divide up the year correctly, to know when the season for planting has arrived, or when the summer warmth will flood a river with the snow-melt from distant mountains, or when the bears will rise from their dens and hunting can begin. People all over the world, in every culture, and as far back in history as we can see, have practiced this kind of calendar astronomy. A common way to do it is by tracking the Sun.

If our Earth circled around the Sun each year like a good toy soldier, pointing straight up, our daily spinning would make the Sun look like it was rising and setting at the same places every day. It would come up exactly where the compass points East (due east), and set exactly due west in the evening. But our planet circles like a tilted top rather than a toy soldier, and it stubbornly keeps its tilt pointed in the same direction. When we are spinning on one side of the sun, we in North America are leaning more toward the "floor" when the sunlight hits us, but six months later, we are leaning more toward the "ceiling." The first lean causes us to get hit with a more direct splash of sunlight each day--that's the summer. The opposite time is the winter.

You can see these changes by watching where the Sun crosses the sky. In the winter, the Sun seems to cross very low, as if slouching across the sky's southern half. In the summer, it crosses much higher. When the Sun's path gets as far north as it can go, we call that time the summer solstice. The Sun not only climbs higher, but it rises from a point on the horizon that is quite far to the north of due east, and that evening it sets north of due west as well. Because it traces a bigger arc across the sky, it is up longer and we have the longest day of the year. Nowadays this happens on June 21.

Little by little, as the weeks go by, the Sun's path moves south after this solstice, until by the beginning of autumn it actually rises exactly in the East. That day is called the autumn equinox. The word equinox gives a hint at its meaning: the number of daylight hours are then ***equal*** to the number of dark, night hours. Three months later, just around Christmas, the Sun reaches its lowest, most southern path, rising from a place well to the south of due east. The sunlight hits us at a low glance, so it is weaker, and there is less of it---the day is shortest. The air above us has little time to get warmed up, so it's not surprising that this is when the snow starts falling! After this equinox, the Sun's path slowly moves back up, rising a little more to the north each week. The day slowly get longer, until it is equal in length to the night at the spring equinox.

A few weeks before this newsletter was printed, the Sun gave us this year's summer solstice. In honor of that important day, and of our parent star, here are a few examples of how people living all over the world have tracked our parent star's motion through the year.

In the American Southwest,
the Hopi Indians give the very important job of predicting the summer solstice to a man they call the Sun Priest. This seasonal change is vital to the Hopi, who farm corn and beans. The Sun Priest must predict the solstice a week ahead of time so his people can be ready to begin an elaborate solstice festival, filled with sun dances and prayers. To do this job, the Sun Priest walks along the high mesa before dawn each morning, and checks stone markers that he has set up beforehand. By sighting along these stones, he can locate the spot on the distant mountain horizon where the sun ought to rise at the solstice, and seeing how much farther it has to go, calculate the remaining time. He must be careful and keep good records. If he is mistaken by a few days or more, he can face punishment.

In West Africa,
the Batammaliba people design their homes according to celestial patterns, to mirror the creation of the world. A farming people, they have been successfully planting traditional crops here for thousands of years. They consider the Sun to be something like a mirror held aloft by a unique everlasting god (who cannot be directly seen). This Sun God, whom they say "no one, no power, ever could create," has his home in the West, from where he watches over the world. For this reason, they align their homes so that the doorway always opens due west, basing this on the equinox sun setting point. The main beam holding up the roof is also aligned along a perfect west-east axis. In this way the Sun God can look directly into their homes. Like all traditional people, the Batammaliba must accomplish this without a compass--they know the exact directions because they measure the solar year.

Among American Plains Indians,
the Skidi-Pawnee Indians of modern-day Kansas once relied on a sky-watching tradition that included a constellation system and patient observation of the movements of Venus and the Sun. This is clear from the way they built their communal lodges. The roofs of these large dome-shaped structures were held up by strong wooden posts painted in colors that symbolized the Morning Star (Venus) and other celestial bodies. The doorway of the lodge was always built so that when the Sun rose due east at the spring and autumn equinoxes, its rays lit up an altar set up along the opposite wall inside the lodge.

In Ancient Britain,
some 4,000 years ago, a society of people whose language and ways have long since vanished, built dozens of large stone circles. Many of the stone circles were aligned so that the solstices and equinoxes could be exactly sighted. In the most famous of these, known as Stonehenge, nearly a hundred stone pillars, some weighing many tons, were carved. And these stone pillars were arranged in concentric circles covering an area the size of a football field. It must have taken hundreds of people and great planning to build it. A priest or chief could stand at the center of it and on the summer solstice day, see the rising Sun momentarily framed at the end of a great stone hallway, like another chief honoring him with its visit.

Highlights of NOVAC Board Meetings and General Meetings

Kevin Brown

May 12 Board Meeting

The April 14 Board Meeting was held at George Mason University, one of the potential new sites for the monthly General Meeting. The Board Members met Prof. John Wallins at 7:30 and he took us on a tour of the potential meeting room facilities. After the tour, the board convened in the astronomy lab room and conducted the rest of the meeting.

Tilly Smith reviewed plans for Astronomy Day on May 22.

Tilly Smith and Kevin Brown presented the new NOVAC business card and new observing pass format. The new observing pass will be business card size so that it will fit in the member's wallet.

Tilly Smith led a discussion on the new meeting room candidates.

Submitted by Kevin Brown,
Secretary

April 21 General Meeting

19:30 Tilly Smith, President, called the meeting to order. The prospective and new members introduced themselves.

Tilly Smith discussed the Astronomy Day public event at Crockett Park on May 22 and the NOVAC picnic on June 12.

Tilly Smith discussed the status of the search for a new meeting site and a possible change of the General Meeting from Wednesday to Sunday night.

Jon Stewart-Taylor presented certificates for the Messier Marathon that was held in March.

Officers' Reports:

Pete Johnson gave the Vice President's report on upcoming general meeting programs.

Jonathan Bein reported on the upcoming public events.

Jon Stewart-Taylor updated the membership on the activities of the Light Pollution SIG.

Following the officers' reports, Jeff Stetekluh gave the observing report.

Bill Burton gave the sky tour.

For the main program, Joe Donovan gave a presentation on the status of the Franklin Park Observatory project.

There were 51 in attendance, 9 of whom were not members.

Submitted by
Kevin Brown, Secretary

May 12 Board Meeting

19:30 Tilly Smith, President, called the board meeting to order.

Tilly Smith and Jonathan Bein reviewed plans for Astronomy Day on May 22.

Pete Johnson updated the board with some new information concerning GMU as a site for the NOVAC general meetings. The board voted to move the meetings to Sunday night at GMU on a trial basis for 6 months, tentatively starting with the July meeting.

Tilly Smith, Pete Johnson, and Tom Dietz gave updates on observing site improvements at Crockett, Mickie Gordon, and Savage respectively.

Jon Stewart-Taylor gave an update on the Light Pollution Project.

Pete Johnson discussed the upcoming general meeting programs.

Pedro Martinez presented a financial update.

Submitted by

Kevin Brown, Secretary

May 19 General Meeting

19:33 Tilly Smith, President, called the meeting to order. Prospective and new members introduced themselves.

Tilly Smith discussed the Astronomy Day public event at Crockett Park on May 22.

Tilly Smith informed the members of the new observing schedule at Savage. Members may now observe at Savage on any Friday, Saturday, or Sunday night without having to give prior notice.

Officers' Reports:

Pete Johnson gave the Vice President's report on upcoming general meeting programs.

Tilly Smith updated the membership on the activities of the Light Pollution SIG.

Following the officers' reports, Jeff Stetekluh gave the observing report.

Ian Keith gave the sky tour.

For the main program, Dr. Bob Craddock of the Smithsonian's National Air and Space Museum gave a presentation on his current research on the Martian surface.

There were 51 in attendance, 4 of whom were not members.

Submitted by

Kevin Brown, Secretary

DINNER BEFORE THE MEETINGS?

Brent Archinal

I think the plan should be to wait until the first meeting or first few meetings and try to get a consensus on what folks want to do. If we're going to continue with an organized dinner, we need to select a restaurant in the area there - an area with I'm pretty unfamiliar.

It also might be worth considering switching to a more informal method and having dinners after the meeting. Then whoever was interested could get together at the meeting and decide where they wished to go. This worked very well in some other clubs with which I was active.

For this meeting there will be no organized dinner, but folks may wish to get together and go out after the meeting.

I may not make the July meeting myself, since it now conflicts with the observing at Spruce Knob - however, I'll try to make it if the weather turns bad in WV.

NOVAC Notices and Benefits

Discounts on *Sky & Telescope* and *Astronomy.*

As a member of NOVAC, you can get astronomy magazine subscriptions at a discount. To obtain *Sky & Telescope* for $29.95 (instead of the standard $37.95), make your check out to "Sky Publishing Co." You can subscribe to *Astronomy Magazine* for $29.00 for one year. Make your check payable to "Kalmbach Publishing Company". In each case, note on the check: "new subscription" or "renewal." If a renewal, include your customer number. Send your check to Treasurer Pedro Martinez, Jr., 6319 Anneliese Dr., Falls Church VA 22044.

You can also order any publication directly from Sky Publishing at a 10% discount. Just mention the Club Discount Plan and that you are a member of NOVAC.

Discount on Books

NOVAC is participating in the discount book sales program offered by Kalmbach Publishing. They will sell our members any astronomy-related book in their catalog for 25% off the list price when we send in a group order. Kevin Brown is coordinating the sales. If you are interested, please see him at a meeting, or call him at home (703) 503-9523 to place an order. Make your check payable to "NOVAC" for the price of the book minus the discount, when you place the order. We anticipate doing this 3 - 4 times a year if demand warrants.

Club Telescopes and Binoculars

NOVAC makes available two six-inch (*f*/5) Newtonian reflectors for club members to check out, free of charge, and use for a limited time.

One telescope is a Celestron model SP-C6 on a Super Polaris German equatorial mount and wood tripod. The telescope comes with Orion Ultrascopic 10mm and Meade MA 25mm eyepieces with 1.25-inch barrel sizes.

The other telescope is a homemade six-inch reflector on a Dobsonian mount, and comes with a 25mm Kellner eyepiece. It is easy to transport to dark sky sites, and easy to use.

To borrow a telescope you will need to show your NOVAC observing pass and leave a $500 (for the Celestron) or $250.00 (for the Dobson) security deposit. To borrow the Celestron, contact Doug Mistler at (703) 437-0513; for the Dobson, contact Bob L'Hommedieu at (703) 978-0946. Note: Checks must be made payable to "NOVAC". The club also has a pair of 10x50 binoculars available for members to borrow. They are kept in the club library in the back of the planetarium, and can be checked out after the regular monthly meeting, for a period of one month. Please show your observing pass.

NOVAC Library

NOVAC has established a library at the Arlington Planetarium for use by NOVAC members. Books may be checked out and returned only at the monthly meetings. Members may check out books for one month at a time. To borrow books, see NOVAC Librarians Pedro Martinez or Craig Tupper at the monthly meeting.

The NOVAC library seeks book donations to the library. If you have any astronomy books or materials you are thinking of discarding, please consider a donation to the NOVAC library.

A complete list of all library holdings is available upon request.

General Membership Meetings

General Membership Meetings are held at George Mason University (GMU), Fairfax Campus, off Ox Road (Rt. 123) on the second Sunday of every month. To reach GMU take either Rt. 66 to Ox Rd. (South) or Braddock Rd. to Ox Rd. (North). Enter GMU at the main entrance off Ox Rd. (University Drive) and proceed to Parking Lots F, G, or H for free parking. Pay Parking is also available in the Parking Garage.

The meetings are in the Lecture Hall, next to Fenwick Library, on the North side of campus across Patriot Circle from the parking lots. Meetings start at 6:00 p.m.

Trustee Meetings are held on the first Wednesday of every month. Members who are not trustees but are interested in attending should contact a club officer or board member for further information.

NOVAC On-line

NOVAC maintains an e-mail mailing list. Messages sent to the list include reminders about scheduled observing sessions, announcements for unscheduled sessions, requests for quick observing session summaries, MIR observability predictions, etc. For more information, send a message to Chewning Toulmin, pct@his.com.

NOVAC Observing Site Rules

C. M. Crockett Park: We have permission from Crockett Park to unscrew the light bulbs on the light sensor fixture on the side of the gate guard building facing the observing field (south side).

Please leave the lights on the far side (north side) active so people can see the gate.

Weekends (Fri./Sat. only), NOVAC has unlimited access to the park for all weekends. The weekends will also be open to the public. The gate will be locked and will not be unlocked unless a NOVAC member enters the park; after which time the gate will stay open to approximately 10:00 p.m., when the Assistant Park Manager will ask the public to leave. The gate will then be locked, and should remain locked through the rest of the evening. NOVAC members may remain until they are finished with their observing sessions.

Weekdays (M-Th & Sun.), NOVAC members need to notify Assistant Park Manager Bonner Davis by e-mail (crocketcow.aol.com) or phone (540-788-4867) by 2:00 p.m. on the day they plan to observe. Assume approval unless the park notifies you in the negative. The weekdays are not open to the public. The gate should remain locked after you enter the park and throughout your observing session.

If any NOVAC member notices any member of the public violating park policy, he or she is to notify the Assistant Park Manager, who lives in the house adjacent to the end of the parking lot. During EDT, set up on the large field to the left. During EST, set up on the paved cul-de-sac 200 yds. past the gate. No loud radios, alcoholic beverages, or loose pets permitted. Please do not leave trash or debris behind. We are guests of the park; Park Management may revoke our observing privileges at any time due to carelessness of one person.

Savage Farm Site: Weekends (Friday/Saturday/Sunday): NOVAC has unlimited access to the park for all weekends.

Weekdays (Monday-Thursday.): For unscheduled observing sessions, contact the park manager, Paul McCray, at (703) 729-0596 or <wodtrail@erols.com> at least 24 hours in advance, and leave a message with your phone number or e-mail address. You may use the site for that session ***unless*** you hear from Mr. McCray stating otherwise.

No loud radios, alcoholic beverages, or loose pets. Pick up after yourself, and do not leave any trash behind. Make sure the gate is locked whenever you are in the park, and when you leave. We are guests of the NVRP and could have our access to this site revoked at any time if it is abused.

Mickey Gordon Regional Park:

There is a light pole on the road entering the park and it is a problem towards the entrance of the park. We recommend you set up further back in the park or on a lower field behind the baseball diamond to escape the light.

The park is available without notice to all members seven days a week. As sports season begins we will post the schedule when the lighted baseball facility will be in use.

Directions to NOVAC Observing Sites

C. M. Crockett Park

From the Washington, D.C./Northern Virginia area, go west on I-66 to Exit 43A in Gainesville onto Rt. 29 South toward Warrenton. After 11.8 miles on Rt. 29, stay left (toward Culpeper), to bypass Warrenton (but still on Rt. 29 S.) Go about 1 mile to the Rt. 643 exit, Meetze Road. Turn left (East) on Rt. 643. Go 7.5 miles on Rt. 643. Watch for the C.M. Crockett Park sign on your right, and turn right into the Park Entrance Road.

Alternate directions to Crockett

From Washington, D.C./Northern Virginia, go West on I-66 to exit 44. (234 bypass around Manassas). Take 234 bypass to Rt. 28 West. Stay on Rt. 28W for about 13.7 miles, through Nokesville, Catlett and Calverton. Turn right at Rt. 643 (store on corner). Go 1 mile to Crockett Park entrance road on left.

Savage Site:

From D.C. I-66 West to Route 17 North. Stay on Route 17 North until it intersects with Route 50 at Ashby Gap. Turn left onto Route 50 and go 1.0 mile and turn right on Route 601. Continue on Route 601 (Blue Ridge Mountain Road) and go two miles past the main gate of the FEMA installation. Turn right at the park entrance after passing the gateposts with *Belle Allee* and *Ball Alley 1875* on your right.

The park entrance on Route 601 is marked by a small NOVAC sign. As you turn into the park, go straight ahead until you reach the gate, which is secured by both a keyed padlock and a combination lock. These locks are located to your left behind the gate as you face it from the outside. The combination is on your NOVAC observing pass. **Always** lock the gate behind you. The NOVAC lock **must be locked to the keyed lock, not to the chain,** to allow emergency access by the fire department. Drive to the observing area (the stone patio next to the house). There is very limited parking at the observing area itself, so please park in the parking area on the right as you face the patio.

Alternative Directions to Savage via the Dulles Toll Road

Take the Dulles Toll Road west to the Dulles Greenway. Take the Greenway west about 14-15 miles to where it ends at Route 7 near Leesburg. Stay in the left-hand lane to go to the exit for Route 7 West. Take Route 7 West for about 18 miles to Route 601, Blue Ridge Mountain Road, which is at the top of Snickers Gap and marked by a flashing yellow light on Route 7. Turn left onto Route 601 and continue 2.4 miles to the park entrance, which is on the left about two-tenths of a mile past a driveway on the left with a stone wall marked with the name "Ben Lomond." There is a white "NOVAC" sign nailed to a large tree to the right at the entrance to the somewhat rutted gravel driveway that leads to the park. Drive up to the white gate at the top of the hill. The combination for the gate is on your observing pass. The driveway curves down and around to the right to the observing area after you pass through the gate. Please lock the gate behind you and remember to use parking lights only as you approach the observing area, which is on the left as you reach the lawn in front of the old house.

One additional note. Parking at the observing area itself is much more limited at Savage than at Crockett or Mickey Gordon. Please try to leave an access lane to the area around the stone patio. If possible, unload your telescope and then park your car away from the area. There are plenty of places to park around the lawn and even south of the old house. This will allow those who arrive later to have access to whatever spots remain without having to lug equipment across the lawn. If you plan to leave early, please be considerate of others and either pack up away from the stone patio or avoid using backup lights when you drive down to pack up your equipment.

Mickey Gordon Regional Park

The park is located fifteen miles west on Rt. 50 from the intersection of Rt. 28 and Rt. 50. It is only a 20-minute drive from the Centreville area and should be a convenient site for most members in western Northern Virginia. Directions to the park: take Rt. 66 west to Rt. 28 north. Take Rt. 28 to Rt. 50 West. Go 15 miles until you see the brown Mickey Gordon Regional Park sign. Make a right on Rt. 627, Carters Farm La. Go a few hundred yards to the park entrance on the left. The park has a gate but should never be locked.

Site Locations

Here are the locations of four observing sites as provided by NOVAC members:

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The NOVAC Newsletter
Northern Virginia Astronomy Club

NOVAC Newsletter

Membership in the Northern Virginia Astronomy Club is $18.00 per year and is open to anyone interested in astronomy or the sciences. Additional memberships at the same address without additional copies of the newsletter are $6.00 per person. Contact Secretary Kevin N. Brown, 5755 Walnut Wood Ln., Burke, VA 22015, 703-503-9523.

NOVAC Newsletter

1999 NOVAC Observing Schedule

C. M. Crockett Park
All weekend nights (Friday/Saturday)

NOVA Star Party - October 16

Savage Farm
All weekend nights (Friday/Saturday/Sunday)

Prime Observing Nights
July 9, 10, 11, 16, 17, 18
August 6, 7, 8, 13, 14, 15
September 3, 4, 5, 10, 11, 12, 17, 18, 19
October 1, 2, 3, 8, 9, 10, 15, 16, 17
November 5, 6, 7, 12, 13, 14
December 3, 4, 5, 10, 11, 12, 31
January 1, 2, 2000

Meteor Shower Dates for C. M. Crockett, Mickey Gordon, and Savage

August 12 Perseids meteor shower
October 21 Orionid meteor shower
November 17 Leonid meteor shower
December 14 Geminid meteor shower
December 22 Ursid meteor shower

NOVAC

The Northern Virginia Astronomy Club
c/o Kevin Brown
5755 Walnut Wood Lane
Burke, Va. 22015-2710

Inside:
New Meeting Place,
What's Up?,
And more . . .