

NOVAC

THE NEWSLETTER OF THE NORTHERN VIRGINIA ASTRONOMY CLUB

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Cloud observing

by Steve "If You Can't Beat 'Em, Join 'Em" Johnson

Someone addressed our group as "fellow cloud watchers." I was relieved to learn that there are some other enthusiasts out there. I have been wanting to contribute one of my observations, but was unsure how much interest there might be.

I went out to my favorite cloud observing site last night. I like to watch from my driveway. I used to drive to Camp Highroad but I have found that the sky coverage there is just overwhelming. There, I can't concentrate on any one object. From my tree- and house-lined driveway, I find that I can aim my 8" Newtonian straight up and really focus on just one cloud at a time.

As usual, I found it completely impossible to see more than a tiny fraction of the object in my 32-mm Erfle, which has only about a 1.0-degree field of view. Also as usual, I found no evidence of any "leak-through" of deep sky objects. This was a really solid, dense cloud—a fine example of a "local nebula," as I like to think of them.

The cloud moved slowly, but other clouds seemed intent on preventing any starlight from filtering through. Thus I was assured of no distractions—I could really concentrate on just cloud observations.

It is amazing to consider how much we understand of the universe despite being enveloped in these dense H₂O formations. How the professional astronomers pieced together the distances to the stars, the structure of galaxies—things that seem forever hidden behind the local nebulae—is nothing short of inspiring.

continued on page 2



Steve Johnson and other local observers reported seeing naked-eye "nebulae" like this one.

MESSAGE FROM THE PRESIDENT

Thanks for your hard work

We have two veteran volunteers stepping down this month for a little rest and some time to look at the stars, Joe Pierson,

Master

Membership

Maven (M3)

and Mike Mills,

Award Winning

Editor (AWE),

are retiring

from their posi-

tions and three new volunteers have

stepped up as their replacements. Many

thanks from all of the members for your

service. However, you did too good a job

to get away free and you will be called on

again in the future. —Ed. ★



NOVAC President Ed Karch



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Clouds, from page 1

But, back to my observation. The cloud was uniformly white. There were no spiral arms, no stripes, no central star. Observing with my naked eye, I got the impression that it was a multiple system. The clouds were probably gravitationally associated, because they appeared to be moving together in space.

Does anyone know of a good H₂O filter? Cloudy skies! ★

NASM/Einstein Planetarium Public Observing

Join Sean O'Brien, staff astronomer of the Albert Einstein Planetarium, and other local amateur astronomers, for public telescopic observing under dark, star-filled skies, away from city lights. The evening begins with a short night sky orientation at dusk, followed by telescopic observing of various astronomical objects, ending at 11 pm.

Sky Meadows State Park is west of Washington, D.C. on US Route 17 North, 1 mile south of US Route 50, or 7 miles north of Interstate 66, Exit 23. The park contact phone number is 540-592-3556. There is a \$4 parking fee per car. Dress warmly. In case of clouds or rain, an amateur astronomer will lead a short alternate program.

2003 Schedule—Sky Meadows State Park, Paris, VA

July 19	2 days before Last Quarter Moon
August 10	4 days after Last Quarter Moon. Same night as NOVAC MOS
September 13	3 days after Full Moon. NOVAC Stargaze September 20
October 18	Last Quarter Moon. Same night as NOVAC MOS
November 8	Full Moon—Total Lunar Eclipse!

Editor's note: This is a fun program for NOVAC members to help out with. Sky Meadows park has great skies, and the public is always very receptive. Plus, NOVAC members who bring their telescopes to share may stay until 1 am.

2003 Year-Long Star Party at Spruce Knob

by John Nusbaum

The official 2003 dates for the Year-Long Star Party at Spruce Knob are:

2003 Schedule—Spruce Knob, WV

July 31–August 3	Thursday–Sunday nights
August 28–31	Thursday–Sunday nights
September 25–28	Thursday–Sunday nights
October 23–26	Thursday–Sunday nights

The cost of reserving the facilities for this event was more than double the cost of last year. This event was made possible this year through the financial and organizational support of the NOVAC board and its members and through over \$1,000 in additional pledges of support by both NOVAC and non-NOVAC members.

For complete information about the Year-Long Star Party (YLSP), go to the YLSP website at www.novac.com/spruce/.

NOVAC prepares outreach handout on light pollution

by Bob Hand

While discussing the club's outreach efforts, NOVAC's board recently concluded that it would be useful to have something on the local effects of light pollution which public attendees at sky-gazing events can take with them. A handout was prepared and is available from the Outreach Committee upon request.

"How do city lights affect observing the night sky?" is a frequently asked question at these events. Virtually all club members know the extremely negative effect light pollution has on the hobby, but a quick, precise

Virtually all club members know the extremely negative effect light pollution has on the hobby

yet simple response—and one that encourages the guest to consider how sky glow and direct glare might affect their lives—can be difficult to formulate. This handout will hopefully help and represents a less passive way to generate wider support for the concerns of amateur astronomers.

The pamphlet describes how, even at the club's most used sites for public events, light pollution removes 70–90 percent of potentially visible stars from naked-eye reach and limits deep-sky observing. Recognizing that not everyone attending a NOVAC event becomes fascinated with the night sky, the impact of bad lighting on practically everyone is highlighted, from highway and boating safety to home security, family health and the survival of wildlife. Whatever the impact, inefficient lighting is regarded as a waste of energy resources. Full cut-off lighting is described as an available option that needs greater support. The pamphlet suggests that readers try to be more aware of lighting practices in the region and consider improving their own use of outdoor lighting while urging business and government to do the same. ★

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Meeting highlights

Board of Trustees Meeting Tuesday, May 6, 2003 Arlington Planetarium

- ★ **Alan Figgatt** message reported that he attended the April meeting, where he learned of progress in fund raising and plans to start building construction. The Society has scheduled public viewing on Friday nights, but the weather has not cooperated.
- ★ **John Deriso** reported success in getting books checked out by bringing a box of them to the General Meeting.
- ★ **Bob Traube**, with the assistance of **Bob Garrett** and **Donna Blosser**, presented an revised process for considering outreach requests. For each event to which NOVAC will respond, a member of the **Outreach Committee** will be designated as lead who then works with a designated event lead in preparing for the event. He noted that only 9 club members responded to the outreach survey, which others said was typical of survey attempts in the past. The Outreach Committee plans to send via e-mail a shorter, simpler questionnaire (5 questions) to solicit outreach volunteers.
- ★ **Bob Traube** sought and received approval to allow the **National Air and Space Museum** post public club events on a monthly basis, similar to what was printed for 2003 in the *Washington Post*.
- ★ **Bob Hand** recalled the desire to have a **handout on light pollution** in order to raise public awareness of this problem. He prepared a draft, which Bob Traube formatted in a trifold, and circulated it for consideration. Support was expressed for the effort, and it was clarified that its contents did not present a problem for the club's status as a non-profit organization. Further suggestions were made, and it was hoped a final version would be available for the outreach events at MOS at week's end.

- ★ **Craig Tupper** reported that computer operation of the **Roboscope** is moving ahead and that he was awaiting word on the construction of the structure. Comments indicated that the project was well ahead of most expectations. It was suggested, however, that the Board assess the situation at its next meeting.
- ★ **Bill Burton** has developed an arrangement with the park that would allow the Barns Manager to supervise an all-night observing session when the club was at the park for a specific event. There seemed to be a high demand for stargazing events in Loudoun County. The August 23 MOS may be moved to Franklin from Camp Highroad.

General Membership Meeting Sunday, May 18, 2003 George Mason University

- ★ A crowd which reached 81 attended the meeting. **Ed Karch** led a description and review of ongoing activities and projects of interest to members and guests who may join the club, including the Mentoring Program, the Monthly Observing Sessions, club telescope projects and the Astronomical League were all covered.
- ★ **Bob Stewart**, describing the **VOID SIG**, announced that he was donating an Astrovid video camera to the club.
- ★ **Bob Traube**, for the Outreach Committee, noted **Bob Stewart** and **Bob Garrett** recently handled an event at Camp Highroad. He also discussed several developments, including a new light pollution handout available to club members. A short survey form will soon be ready for club members to indicate their ability to help out with Outreach events. As a demonstration of public appreciation for outreach efforts, kids at one school put together a book based on a talk by **Ed Witkowski**, while kids at another school made 9 "**Astrocan**" **telescopes** based on a model provided by **John Avellone**.

- ★ **Bill Jensen** expressed concern about the potential affect of a **new baseball stadium** in Northern Virginia on the local night sky.
- ★ **Alan Figgatt** provided a Sky Tour focusing on the constellation **Corvus**, fairly easy to find as a trapezoid southwest of the bright star Spica in Virgo. Among the highlights of this constellation are "The Antennae" or "Ringtail Galaxy" (NGC 4038 and 4039), the variable star R Corvii, the good size but faint planetary nebula NGC 4361 and the doubles Delta Corvii and Struve 1669. The Sombrero Galaxy, while not in Corvus, is most easy to find star-hopping from Corvus. **John Deriso** supplemented the Sky Tour with a presentation of the **Virtual Moon Atlas**, available as freeware and a great tool for lunar observing. Bob Stewart introduced the "NOVAC 45," a list of 37 Messier and 8 other objects for an all-night marathon planned for the end of July or beginning of August.
- ★ NOVAC member **Mike Mills** was the featured speaker at the meeting. The title of his talk was "**Get Ready for Mars!**" due to the red planet's closest encounter to Earth in about 60,000 years. Mike noted that, while an alien world, Mars has a similar inclination and rotational period to Earth's, but a more elliptical orbit produces seasonal variations that can change the planet's appearance. Mars is in the southern sky, favoring observers at lower latitudes. Avoiding heat sources and making sure the telescope is at air temperature will improve seeing, while the high magnifications required to see features make an equatorial mount with tracking a great help. Color filters also will help. It is suggested that observations should be made throughout the period of Mars' favorable apparition, and that the planet

should be sketched to enhance observing ability. Using a 42 mm template is recommended, as it provides a 1 mm to 100 km scale. **MarsWatch 2003** accepts contributions from observers and provides a daily record of the disc as facing Earth. Mike also described some visible Martian features that can be observed through the telescope, like Syrtis Major, Hellas and the polar caps.

Board of Trustees Meeting Tuesday, June 3, 2003 Arlington Planetarium

- ★ Treasurer **Pedro Martinez** circulated financial data as of May 31, 2003 (Attachment #3). In short, **Actual revenues for 2003** have been \$6,980.94 while expenditures have been \$6,319.49, for a net revenue of \$661.45. **Spruce Knob donations** constituted the main source of recent revenues. The pending payment of annual **Astronomical League dues** will soon change the revenue picture considerably. **Picnic expenses** will also have some impact.
- ★ **AL coordinator John Avellone** indicated that there are two requests with the League for awards based on observations submitted by club members. He also reported that, as Pedro Martinez indicated, the bill for the dues to the League will be arriving soon, and that it is therefore a good time to discuss the utility of belonging to the **Astronomical League**. Some present indicated that what the club receives from the AL—the awards and newsletter—does not justify the large annual payment, and that other groups, like ALPO and IOTA, did more to accomplish the AL's original goal of facilitating amateur-professional cooperation. Individual NOVAC members could join the AL if they wished to receive these benefits, although the fees for individuals recently went up. On the other hand, others noted the AL was useful to the club when it was smaller, especially in making insurance available, and the payment is reasonable if calculated on a per capita basis. While a large club may receive less benefit from AL membership, maintaining this membership was part of the

club's responsibility to the hobby.

- ★ **Alan Figgatt** continues to look for **eye-piece donations** for some telescopes, as well as a new custodian for the 10-inch Dobsonian that was donated by Ed Boyer.
- ★ **Outreach Committee** members noted the work that **Ed Seward** is devoting to the MOS's, including much that is helpful to outreach.
- ★ **John Avellone** reported that the "**Sweet-16**" has been unfolded and now has better image quality. **Mike Mills** informed the Board of the purchase of truss tubes to be used with the **Powers Mirror**, and that plenty of grit is now available for work on the mirror. **Craig Tupper** indicated that there was little new to report on the Roboscope project since his last status report to the club.
- ★ Various arrangements for the **club picnic** on June 21 were discussed. **Ed Witkowski** will cook. A swap meet will occur if people bring things to swap. Similarly, an **ATM SIG** meeting will take place if there is interest. **Rob McKinney** indicated MOS organizers' willingness to help out and went through a checklist of items needed.

General Membership Meeting Sunday, June 8, 2003 George Mason University

- ★ Approximately 68 people attended the meeting, which reviewed ongoing club activities of interest to members and guests. **Ed Karch** announced the need for a new editor of the newsletter and a new

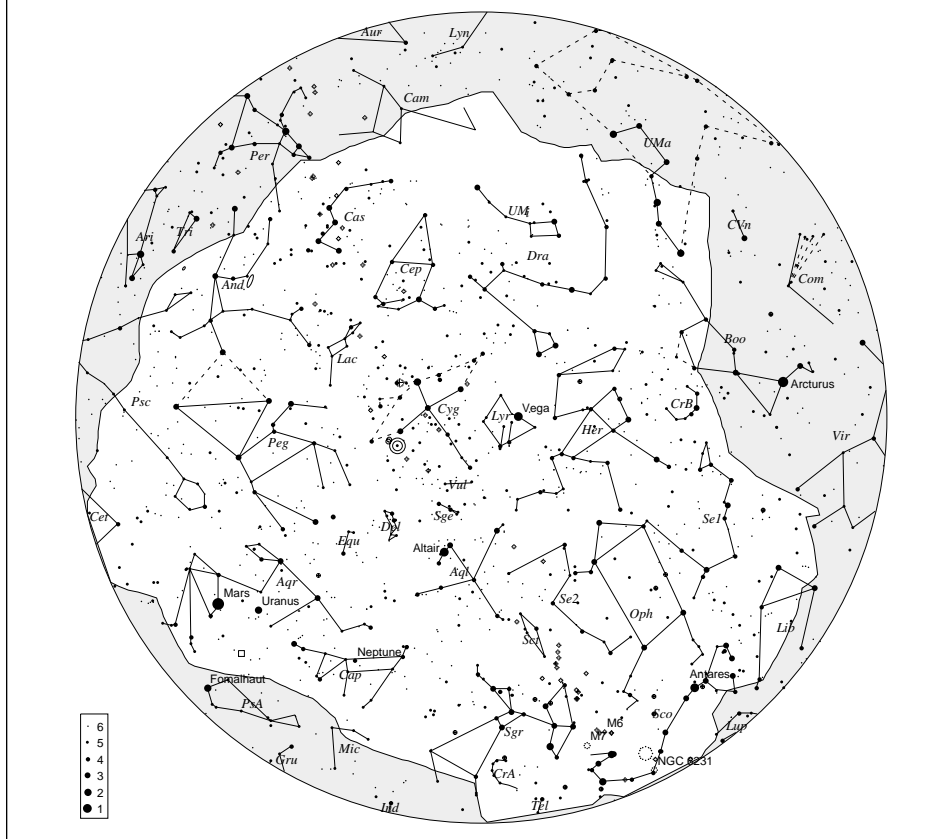
membership director, both critical jobs. **Bob Parks** and **Bob McKinney** both described the details of preparation for the June 21 NOVAC picnic and **Monthly Observing Session**, which will feature a telescope "shoot out" demonstrating how different types and sizes of telescopes will see the same object differently, as well as a lesson on star-hopping. New members of the MOS organizing team were welcomed.

- ★ For the Sky Tour, **Alan Figgatt** gave updated ephemerides for Mars at the times of the June and July club events. The planet will be transiting closer to midnight and brightening to a magnitude between -1.2 and -1.5. Located near **Capricorn**, Alan suggested taking a peak at **Uranus** and **Neptune** nearby. He then highlighted **Centaurus** as the pick constellation of the month. The unique galaxy Centauri A, a radio source, is barely visible from this far north, as is the incredible globular cluster **Omega Centauri**. The bright star Alpha Centauri, with its probable companion and closest known star to the Sun Proxima Centauri, on the other hand, remain below the horizon at northern Virginia latitudes.
- ★ Lacking a featured speaker for the evening, **Craig Tupper** put together a small panel to answer a myriad of astronomy questions from the audience. This led to considerable discussion on a variety of topics. Subsequent e-mails indicated that this "**Stump the Panel**" session was a great success.

Events in July and August

July		6 13 21 29			
		FIRST	FULL	LAST	NEW
4-6 25-27	Prime observing weekends				
5	Monthly observing (Camp Highroad)				
13	General meeting				
26	Public observing (Crockett)				
1-6 21-31	Crockett open				
August		5 12 19 27			
		FIRST	FULL	LAST	NEW
1-3 22-24 29-31	Prime observing weekends				
10	General meeting				
23	Monthly observing —Mars Mania! (Franklin Park)				
30	Public observing (Crockett)				
1-3 20-31	Crockett open				

July skies from Savage Farm



Jeff's observing report

Jeff Stetekluh

Jeff's astronomical calculations are made for the Northern Virginia area. See www.novac.com/jeff/refs.html for calculation references and further details.

Jupiter eclipse events on Friday and Saturday nights

Jul 5 9:30 pm Io Eclipse End

The Sun

Jul 13 rises at 5:54 am sets at 8:34 pm
 Aug 10 rises at 6:17 am sets at 8:10 pm
 Sep 14 rises at 6:48 am sets at 7:19 pm

The Moon

Jul 6 First Quarter
 Jul 13 Full Moon
 Jul 21 Last Quarter
 Jul 29 New Moon
 Aug 5 First Quarter
 Aug 12 Full Moon
 Aug 19 Last Quarter
 Aug 27 New Moon
 Sep 3 First Quarter
 Sep 10 Full Moon

Events

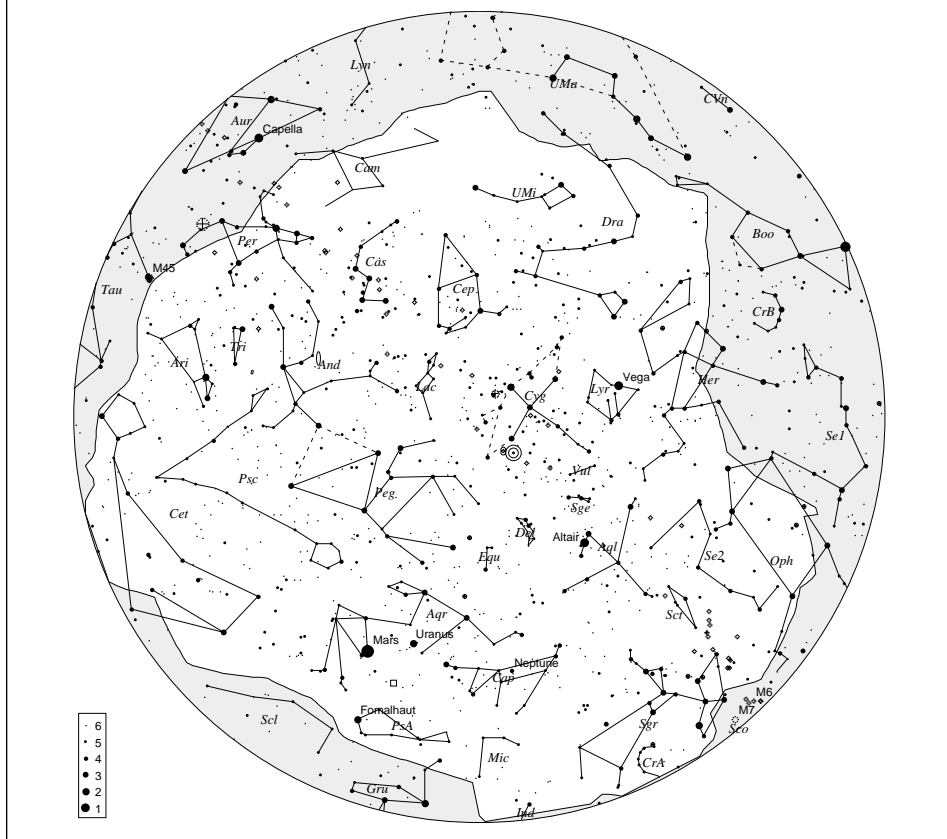
Jul 5 Mercury at Superior Conjunction
 Jul 28 The Southern delta-Aquarid meteor shower peaks
 Aug 4 Neptune at Opposition
 Aug 13 The Perseid meteor shower peaks
 Aug 14 Mercury at Greatest Elong: 27.4°E
 Aug 18 Venus at Superior Conjunction
 Aug 22 Jupiter-Sun Conjunction
 Aug 24 Uranus at Opposition
 Aug 28 Mars at Opposition
 Sep 10 Mercury at Inferior Conjunction

The Planets

July 13	Rises	Transits	Sets
Mercury	06:35	13:56	21:15
Venus	05:07	12:32	19:56
Mars	23:11	04:33	09:52
Jupiter	08:23	15:16	22:09
Saturn	04:46	12:06	19:26

Aug 10	Rises	Transits	Sets
Mercury	08:36	14:55	21:14
Venus	06:04	13:06	20:08
Mars	21:29	02:44	08:03
Jupiter	07:02	13:49	20:35
Saturn	03:11	10:30	17:50

August skies from Savage Farm



Each map depicts the sky at 0 hours for the 15th day of the respective month. The shaded area approximates the local horizon obstruction at the site.

“To observe, and to help others observe”

NOVAC is a non-profit, all-volunteer organization chartered to advance amateur astronomy in Northern Virginia. Members benefit from:

Access to dark sky observing sites:

NOVAC maintains agreements that provide club members with year-round access to observing sites away from city lights

Monthly meetings

Monthly meetings are held at 7 p.m. on the second Sunday of each month in Room 80 of the Enterprise Building on the campus of George Mason University. Each meeting features a lecture on an interesting topic by a local expert. See the web page or future newsletters for a schedule of speakers.

Bimonthly newsletter

The NOVAC newsletter provides information specifically for NOVAC members, as well as general interest articles on such topics as observing reports, equipment reviews, upcoming events, ATM projects, and more.

High-quality telescopes to borrow

NOVAC members may borrow one of the clubs several “loaner” telescopes at no charge. Members may choose from among three 6" reflectors, two 10" f/6 reflectors, an 8" SCT, and a hydrogen-alpha solar scope. Binoculars are also available for loan.

Club website

Up to date information about club events and activities is maintained on the club website at www.novac.com.

Large club library

NOVAC maintains a well stocked library that members may borrow from by contacting John Deriso (seaotter@bellatlantic.net). A full list of titles is available from the club website.

Private e-mail list-serve

Members keep up with current club information by subscribing to the NOVAC e-mail list, without fear of flame wars or spam e-mails.

Public outreach opportunities

Several times each year, volunteers from NOVAC present astronomy programs to schools, churches, Scout troops, and other public groups.

Membership in the Astronomical League

Through NOVAC's membership in the Astronomical League, NOVAC members gain access to the AL's newsletter, services, and observing programs.

Discounts on astronomy magazines and books

Subscriptions to *Sky & Telescope* and *Astronomy* magazines are offered to club members at a considerable discount. Also, astronomy books purchased through the club are eligible for a 10–25% discount.

See your Membership Guide for more details.



The *NOVAC Newsletter* is the official publication of the Northern Virginia Astronomy Club and is published six times per year. The NOVAC Newsletter is sent to members of NOVAC as a regular membership benefit.

Membership

Membership in the Northern Virginia Astronomy Club is \$25.00 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 \$5.00 per person. Contact:

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Change of address

All notices of change of address should be sent to Joe Pierson. Please include both old and new addresses.

Advertising

NOVAC does not knowingly accept advertising for products of inferior quality nor does it accept responsibility for the quality of advertised products.

Submissions to the newsletter

NOVAC members are invited to submit articles for publication in the *NOVAC Newsletter*. The editor reserves the right to edit all materials submitted. Send article submissions to the Editor, Dave Yustein, at david.yustein@aero.org. **The deadline for submissions is two weeks in advance of publication: August 15 for the September/October 2003 newsletter.**

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Upcoming NOVAC meeting programs

July 13, 2003

Space rocks • Greg Redfern

Greg is a NASA JPL Solar System Ambassador who will lead us on a tour of rocks in space. He will present the science and status of NASA's Stardust mission to return a sample of comet dust to Earth, and will also discuss meteorites and the Chesapeake Bay Crater. NOVAC members who own pieces of meteorites are invited to bring them in for display and discussion.

August 10, 2003

Astronomical software • Phil Cioni

Phil will lead a demonstration of some of the many pieces of astronomical software available.

September 14, 2003

The sunny side of stargazing—understanding H- α solar filters

• Greg Piepol

Hydrogen-alpha solar filters have exploded onto the amateur astronomy scene offering exciting views of the active and ever changing sun. Join NOVAC member Greg Piepol as he explains how to observe the solar chromosphere with these interesting filters. Topics include the operation, types, and costs of filters as well as the details you see with them. There will be two different types Hydrogen-alpha filters on hand.

NOVAC meetings are held at 7:00 pm on the second Sunday of each month in Room 80 of the Enterprise Hall at George Mason University in Fairfax, Virginia. See www.novac.com/GMU.htm for a map and directions. **Please note:** The schedule of speakers is subject to change. Please check at www.novac.com/craig/speakers.htm for the latest info prior to the meeting.

What's YOUR interest? Let ctupper@erols.com know. Come share and learn about your favorite topic!



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