

NOVAC

THE NEWSLETTER OF THE NORTHERN VIRGINIA ASTRONOMY CLUB

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Why volunteer? Why not?

by Bob Parks

Don't we have an amazing club? NOVAC provides a phenomenal range of services and benefits to its membership and our community. When your motto/mission statement is "to observe and help others observe," you have a pretty good blueprint for building a great club.

Each year our Outreach Program gives hundreds of people the opportunity to catch a glimpse of the night skies. Some of them also catch the fever and find that astronomy is a hobby that stays with them for the rest of their lives. A few of the children that attend our outreach events may find that science is actually fun and go on to choose a career in the sciences.

We have Monthly Observing Sessions (MOS) that regularly bring out 50+ members when the weather is good and 40+ when it's lousy! To my knowledge, no other club offers regular observing sessions including programs like: the Star Hopping Tutorial, Star Tours, Equipment Shootouts, and tutorials on How to Use Astro Gear.

We have a Mentor Program that joins new observers with more experienced members to share their knowledge and love of the hobby.

We have an award-winning website that continually adds new features that enhance our communication with other members and the world.

Roboscope is progressing smoothly—soon our members will be able to observe under the dark skies of West Virginia from the comfort of their

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MESSAGE FROM THE PRESIDENT

Thanks for a great Astronomy Day

I'm sitting here on a cloudy Sunday in late April. Normally, this would be cause for moping about, bemoaning the opaque skies, cursing the weather demons and wondering who jinxed the seeing by ordering a new telescope. Not today.

Today I'm relaxing after an incredibly successful Astronomy Day! That's right, for the first time in a handful of years NOVAC

held this event—and what a success it was! We had over 70 cars on the field at Crockett Park, and since some club members set up more than one telescope . . . well, you can do the math. While the public didn't come out in unmanageable hordes, we did have well over 100 folks join us for a nice day and night of sharing our hobby.

Congratulations to the organizer, John Deriso, and his crew of presenters, greeters, parking monitors and all the super people who made the day and night so great. And the nights have been pretty great this season, certainly in contrast to last year. I hope you're taking advantage of the opportunity to complete your observing list or test-drive that new scope. Maybe you're planning to travel to a regional star party or revel in the Milky Way from Spruce Knob come summertime! Maybe you're practicing some "sidewalk" astronomy in your neighborhood? What better way to allay your neighbors' suspicions about you. After all, you come home bleary eyed, usually well after midnight, your vehicle packed with curious equipment and boxes and crates of

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NOVAC President
Rob McKinney

ASTROPHOTO CORNER: JUPITER AND GANYMEDE



Club member Alex Lim took this image of Jupiter from Camp Highroad on March 13, 2004. Both Ganymede and its dark shadow were in transit. Ganymede is the lighter dot on the left.

Specs:

- 6" f/6 Mak-Newt on CG5 mount
- 225x
- Seeing: 7/10
- Canon A40 at ISO 400, 1/10 sec
- Registack to stack more than 50 images

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Voyagers' success something to celebrate for years to come

By Mike Lewis

I recall my first gaze through a "real" telescope. I was around age 13 and the scope was a borrowed high tech looking piece of optical wizardry the likes of which few in my small hometown in east Alabama had laid eyes on. My father brought home a stubby device sporting an inescapably bright orange outer coloring. This thing was built like a tank and stored in a heavy trunk as large as our biggest suitcase. It turned out that it was called a Celestron C-8 and owned by a wealthy family friend. My father wanted to see what it could do.

I'll never forget that night in 1977 when we excitedly aimed the odd instrument skyward and focused on a bright "star" peeking above the trees. It shocked me to see the eye-piece reveal that little bright light in the heavens as a whole other world complete with four moons of its own. Jupiter became real and I was hooked.

That same year NASA set a course for the gas giant Jupiter and the great beyond through the launch of the Voyager 2 and Voyager 1 spacecraft, in that order. Aboard these amazing ships were golden discs with the recorded sights and sounds of all humanity. Space would never seem the same.

Eleven years and a career later (my interest in astronomy had long been on hold) I picked up a copy of *Smithsonian* magazine (September 1988). It sparked an old familiar feeling. The cover emblazoned with the huge Deep Space Network "Mars" dish at Goldstone drew me inside to James Chiles' prose. To quote:

If you happen to be outside at 9 o'clock, Pacific daylight time on the evening of August 24, 1989, look into the Milky Way above the western horizon. The gassy blue-green planet Neptune will be hiding among that spray of stars, too dim to see. Your tax dollars will be at work up there, on board the spacecraft Voyager 2, which will be making its closest approach to the eighth planet at that hour. It will be the final checkpoint on Voyager's four-planet "grand tour" of the outer solar system. After that, eternity beckons.

I began looking up again.

On November 5, 2003, if I may borrow the wording of Mr. Chile's excellent piece, our tax dollars were again paying huge dividends. That evening, I braved the rain to walk three blocks from work to the National Air and Space Museum for a public NASA-JPL lecture. Despite having to negotiate the puddles and mud getting there, I was thrilled to hear the details of this achievement like no other.

Voyager 1, it was announced, had reached the mind-boggling distance of 90 astronomical units (8.37 billion miles) from the sun and was poised to breach the boundary of the heliopause, the cocoon of solar wind dominated by the sun's magnetic field that envelopes our solar system.

I felt honored to sit in on a very technical discussion of the progress of the Voyager Interstellar Mission (VIM) conducted by Voyager Team members professor Edward C. Stone, California Institute of Technology; Gary Zank, University of California; and Edward Massey, Voyager Project Manager,



Both Voyager spacecraft took never-before-seen images of Jupiter, including this view of the great red spot.

Courtesy NASA/JPL-Caltech

NASA-JPL. I saw people of all ages in the audience with me and I suspect that many in the huge IMAX theatre were, like myself, laymen unaccustomed to the heavy jargon of astrophysics. I cannot hope to convey all the technical points of the lecture, but rather I will try to portray the great enthusiasm of the moment.

For starters, the pride exhibited by Massey, Zank, and Stone in their mission—26 years in the making and still far from over—passed like an electrical current onto the crowd. As we learned, unlike any of man's previous (unmanned or manned) missions, Voyagers 1 and 2 were not only breaking records for humanity's outward reach into our galaxy, but both spacecraft have been "alive" and reporting back home for over a quarter century. It is hard to reach a conclusion as to which feat is the more remarkable.

Indeed, it takes a radio signal some 12 hours, traveling at the speed of light, to reach the Voyager 1 now coursing through what these scientists described as the "termination shock" or the buffer between the sun's influence and the heliopause which signals the effective boundary of our solar system and the beginning of interstellar space.

By way of background, according to a 1993 NASA-JPL news release, Voyager 1 is traveling 35 degrees above the plane of the ecliptic at 320 million miles per year. Voyager 2, which is two billion miles behind, is some 48 degrees below the ecliptic and racing away from our home star at a speed of about 290 million miles per hour.

Our hosts told us that despite an already incredibly long and unexpected lifespan and the unforgiving climate of space, the Voyager spacecraft have enough power left to keep telegraphing home their measurements for perhaps another 20 years.

I found interesting the way in which scientists have been able to detect and locate the boundaries of the heliopause surrounding our little nine-planet neighborhood. Our lecturers told us that the distance of the heliopause from the sun can be calculated by measuring the length of time it takes for solar plasma eruptions, with their intensely charged particles, to travel from the sun through the solar system and crash into the heliopause. This collision creates a radio wave reaction in the boundary area that in turn can be monitored. Through a series of such observations as well as through measuring fluctuations in the solar wind that have allowed cosmic rays in from outside,

scientists have pretty much determined that the heliopause lies between 90 and 100 AU from the sun.

Earlier that same day, November 5, 2003, NASA officially announced that Voyager 1 had reached the termination shock region and was approaching the elusive heliopause. This conclusion was based on the readings taken by the spacecraft going back several months that indicated that the environment around Voyager 1 was no longer dominated by intense solar wind. Indeed, there appeared to be erratic tell tale signs of cosmic rays which would not be expected until entering the boundary of the heliopause.

To be fair, not all scientists are in agreement as to whether Voyager 1 has actually entered this boundary area (crossed into the termination shock). But there seems to be a consensus however that if Voyager 1 is not there yet, it soon will be, perhaps within a few more years.

In a time resplendent with the photographic miracles of the Hubble Space Telescope, the Mars Rovers, and the Cassini

mission to Saturn, it would be easy to overlook the seemingly low-tech wonders of the Voyager program.

While the Voyager spacecraft did give us some of the first breathtaking views of Jupiter and Saturn, and Voyager 2's famous images of Uranus, Neptune and their bizarre moons are still the best we have of those systems, the public's brief attention span has largely faded from the Voyager program.

There will be no stereoscopic, panoramic portraits being beamed home to planet Earth from the cold dark edge of interstellar space to record that fateful moment. Yet from the perspective of Voyagers 1 and 2, humanity is on the verge of realizing its greatest adventure.

Think of Voyager's contributions the next time you look deep into the night sky. Somewhere above—three times the distance of Pluto—lies a little of us all. What's next for Voyager beyond the heliopause? As James Chiles put it, "eternity beckons." *

The Voyager Mission Web Site is located at voyager.jpl.nasa.gov.

Sky Meadows public observing nights

2004 schedule

Date	Comments
May 22, Saturday	3 days after new moon
June 19, Saturday	2 days after new moon
July 17, Saturday	New moon
Aug 14, Saturday	2 days before new moon.
Sept 18, Saturday	4 days after new moon.
Oct 9, Saturday	3 days after last quarter moon.
Oct 28, Thursday	Lunar eclipse! Program starts at sunset. Umbral phase starts 9:14 pm; total eclipse 10:23–11:45 pm; ends 12:53 am Friday
Nov. 13, Saturday	1 day after new moon.

Saturday observing time is sunset–11 pm.

Sky Meadows State Park, near Paris, Virginia—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.

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. Please cover flashlights with a red filter or a brown paper bag. Dress warmly. In case of clouds or rain, an amateur astronomer will lead a short alternate program.

This isn't an official NOVAC event, but NOVACians are the preponderance of telescope volunteers. Telescope volunteers get in free, and can observe until 1:00 am.

Meeting notes

Board of Trustees Meeting

March 2, 2004

- * Treasurer, **Pedro Martinez**, said the club was doing well financially. He noted that members seem unaware of how to properly seek renewals to their magazine subscriptions. President, **Rob McKinney**, also noted that the Board needed to consider ways to invest its money giving better returns.
- * Membership Director, **Gene LaTour**, reported the club now has **813 members from 626 households**. Comments by those renewing their membership were generally positive. There was one who said club events were too far from Rockville, Maryland, for active participation, while another maintained a dark observing site was needed.
- * It was suggested that the **Sky Tour** and the **Observing Challenge** should take place on alternate months at General Meetings. **Alan Figgatt** reported that the **Analemma Society** held a successful fund-raiser and applied for permits for constructing a building at **Observatory Park**. Board members expressed continued interest in using the park as an observing site.
- * Astronomy League Coordinator, **Laquetta Karch**, said one person has recently turned in a log in order to obtain a certificate, while a certificate has been received for another. She noted confusion regarding the observing clubs and made a presentation which showed how some of the observing programs are for beginners while others are quite advanced. It was suggested that a presentation on observing programs be done at a **Monthly Observing Session**.
- * Webmaster, **Greg Piepol**, reported the donation of a **Personal Solar Telescope** by Coronado Technology Group. **Alan Figgatt** summarized the use of the club's telescopes. There was a suggestion that the club invest in additional 8-inch Dobsonians.

- * **Donna Blosser** and **Bob Traube** reported on outreach requests. They also reported that **Esther Li** has indicated NOVAC's acceptance into the **NASA Night-Sky Network**. Esther will serve as the club's liaison regarding the Network.
- * **Bob Parks** reported the location of a potential club site in Fairfax County. The Board thanked Bob for taking this initiative.

H I G H L I G H T S

- Increase in cost of Astronomical League Membership may lead to \$30 dues
- New Membership Director: Phil Wherry replaces Gene LaTour
- New Observing Sites coordinator: Will Stewart replacing Tilly Smith
- NOVAC accepted into NASA Night Sky Network

- * NOVAC's **Astronomical League Membership** received considerable discussion in light of a jump in dues. It was recognized that the club had to make a decision by the end of June regarding its continued membership in the Astronomical League. **Laquetta Karch** summarized the situation, noting that it is good to look at the dues question as it is becoming a major expense. While some look at this cost in aggregate for the club, others view it on a per-person basis which makes it seem like a good deal. On benefits, some point to the various observing programs making club membership worthwhile, while others feel the money paid to the Astronomical League could be used for a more beneficial, club-specific activity.
- * **Bob Gent**, a NOVAC member, but also AL President, pointed to what the AL does to fight **light pollution**, to promote the hobby and to provide a

high quality newsletter/magazine, the *Reflector*. He noted the important role NOVAC played in the AL as the largest single club, leading the way with an award-winning newsletter and website. He also stressed how thinly stretched AL volunteers were, but concluded that the AL would consider any NOVAC ideas for its direction and general work. Various Board members expressed their views on the situation. It was agreed that this needed further discussion and a Board recommendation to the club. In addition, it was generally agreed that the final decision on membership in the Astronomical League should be made not by the Board but the club as a whole.

Board of Trustees Meeting

April 6

- * President, **Rob McKinney**, announced that **Phil Wherry** will replace **Gene LaTour** as Membership Director, **Will Stewart** will replace **Tilly Smith** as Observing Sites Coordinator and that **Beau Harbin** will assume the new position of Database Manager. Board members welcomed the three and expressed their appreciation to the retiring officers for their efforts on behalf of the club.
- * **Pedro Martinez** reported that, for the first quarter of the year, the club took in \$5,907 in revenue. Of that, membership dues is the leading source, at \$3,790, but Pedro noted brisk T-Shirt and sticker sales generating \$512. The newsletter, Spruce Knob site lease, and the Robotic Telescope Project dominated the expenditure column, but the net revenue remained black at \$1,296, giving the club in excess of \$20,000 in cash to start the second quarter.
- * **Phil Wherry** reported that membership continues to increase, now at 862 individuals from 671 households. Among comments from renewing members, practically all club programs were praised. A few suggestion making the **General Meeting** shorter, and having

more speakers on the cutting edge of astronomical research.

- * **Ed Seward** said his April speaker **Ian Jordan** will focus on the **Umbral Missions Blocking Radiating Astronomical Sources (UMBRAS)** technique for direct observation of planets around other stars. The May speaker, **Sten Odenwald**, will discuss **new discoveries in 21st century astronomy**. For the June meeting, it was originally planned to focus on images of the **transit of Venus**, but it was decided to focus on **astro-imaging activities** by club members instead.
- * **Alan Figgatt** noted good turnout for the Friday night sessions at **Observatory Park**, and it was suggested that these events could be good outreach venues.
- * **Greg Piepol** reported on the new host for the website, and how to resolve some problems with the "Members Only" section. **Beau Harbin** indicated some of the new opportunities for the website, including updating membership information and paying dues online. There was an effort to move forward on some of these activities, but there needed to be some additional comparisons of options and what information on club members would be publicly available. Beau was asked to report back to the Board in May. **Bob Traube** noted a low turnout to a survey of members on making membership information publicly available, with an even split approving and opposing. It was agreed that further work on this issue should await a better indication of how much security can be provided on the website to membership data.

- * **Alan Figgatt** reported on the current status of **loaner telescopes**. Greg Piepol will become the new custodian of the hydrogen-alpha filter. While not a loaner telescope per se, the Sweet-16 will need a new custodian. It was suggested that a new custodian be sought via the e-mail list. A motion was made, seconded and carried to purchase one 8-inch Orion XT8 Dobsonian telescope. The cost with accessories is capped at \$500.

- * The Board expressed gratitude for **Tilly**

Smith's service to the club as Observing Site Coordinator. As **Will Stewart** assumes the responsibilities, the Board discussed briefly the advantages of having more observing sites and of having fewer observing sites, including the public observing session commitments that accompany club access to various sites.

- * **Bob Traube** reported on outreach requests. He suggested, and the Board approved, that members be notified of outreach events by two additional monthly e-mails on the Novac-announce list. **Alan Figgatt** suggested discussion of a policy for canceling events due to weather, as people show up regardless of how bad the weather seems to become. It was generally agreed that there should be a high threshold for canceling events.
- * In anticipation of remaining in the AL and the club taking on some new projects, a dues increase was discussed. A motion was made, seconded and carried to propose **increasing the annual membership dues to \$30**.

General Meeting March 14

- * President **Rob McKinney** welcomed the 61 persons in attendance and went through several important items of club business. Astronomical League Coordinator **Laquetta Karch** presented **Donna Blosser** with an Honorary Messier Certificate. **Bob Traube** raised several outreach opportunities for which volunteers were needed, and introduced **Esther Li** who will serve as the club's liaison on **NASA's Night-Sky Network**.

- * For the **Sky Tour**, **Alan Figgatt** noted the maximum elongation of both Mercury and Venus in the evening sky at month's end, as well as the prospects for two comets in May. He gave an update on the popular attempt to split Sirius and its companion, "the Pup," noting increasing separation between the two and reporting a successful split the night before, thanks to good seeing. **John Avellone** also displayed his **sunspot charts** for everyday he could observe them over the past year.

- * The featured speaker was **Greg Redfern**, who gave an enthusiastic behind the scenes tour of **Palomar Observatory** in California. He particularly focused on the 200-inch **Hale Telescope**, which in its precision and craftsmanship is one of the engineering marvels of the world. He noted how greatly the Palomar telescopes and the renowned and sometimes colorful astronomers, advanced our knowledge and understanding of the universe.

Spruce Knob schedule

2004 dates (tentative)

May 15-22	8 nights
June 18-19	2 nights
July 16-17	2 nights
August 13-14	2 nights
September 11-18	8 nights
October 14-16	3 nights

Monthly Observing Sessions

2004 Schedule

May 15	Mason Neck SP	
June 12	Crockett Park	NOVAC Picnic
July 10	Camp Highroad	
August 14	Spruce Knob	
September 11	Crockett Park	NOVAC Star Gaze
October 16	Mason Neck SP	
November 13	Observatory Park	
December 11	Camp Highroad	

U.S. House reaches out to amateurs

by Mike Wilson

Amateurs who write their congressional representative complaining about the fate of the Hubble Space Telescope should also take time to thank their lawmakers for showing an unusual interest in promoting amateur astronomy.

On March 3, 2004, the U.S. House of Representatives passed by a 404 to 1 vote legislation to reward amateurs for successful efforts in discovering and tracking near-earth asteroids.

Known as the Charles "Pete" Conrad Astronomy Awards Act, the legislation which is also designated as HR 912, orders the creation of awards for three areas of amateur involvement in night sky exploration.

Category 1: Annual award to an amateur who, using only amateur equipment, discovers the largest absolute magnitude new asteroid having a near-Earth orbit during the preceding calendar year.

Category 2: Annual award to an amateur for pre-discovery and recovery efforts including the discovery of asteroids by an amateur as a result of information produced by professional telescopes or as a result of the amateur's use of time on professional equipment; and/or efforts to locate newly discovered asteroids using old images and already discovered near-Earth orbit asteroids that have been lost.

Category 3: Annual award to an amateur, or professional not funded for optical astronomy, who provides the greatest ser-

vice to update the minor planet catalogue. Eligible discoveries may be made by visual, photographic, or electronic means.



PhotoDisc

The winner in each of these categories would get a \$3,000 check from the U.S. Treasury.

The awards, which would be made based on the recommendations of the Smithsonian Minor Planet Center, would be reserved only for winning amateurs, and bars participation from

government and professional astronomers from the Near-Earth asteroid project. The sponsor of the legislation, U.S. Rep. Dana Rohrabacher, R-CA., chairs the House Science Subcommittee on Space and Aeronautics. Rohrabacher introduced his bill to bolster efforts to protect the planet from

potential impacts from outer space.

"Given the vast number of asteroids and comets that inhabit Earth's neighborhood, greater efforts for tracking and monitoring these objects are critical," Rohrabacher observed. "Asteroids deserve a lot more attention from the scientific community."

The Charles "Pete" Conrad Astronomy Awards Act (HR 912) is named for former astronaut and space scientist Pete Conrad. The legislation has been passed on to the U.S. Senate for action.

A text of the bill can be found by visiting thomas.loc.gov and entering "HR 912" in the "Bill Number" field. *

President, from page 1

strange gear...what must they think?

Whether you were part of Astronomy Day, braved the questions of a group of children at a recent Outreach event, shared the heavens with a friend or neighbor, just joined the International Dark-Sky Association, or practice good lighting at your house, thanks for furthering the growth and well-being of our hobby.

I look forward to seeing you at our club Picnic in June, as well as beneath the star-spangled night sky. *

New members

Sabiha Sungur

Fairfax, VA

Sharon Lee

The Plains, VA

Tim, Hillary, Justin & Liz Dennison

Oak Hill, VA

Steven Speil

McLean, VA

Gisela Bolte & Dr. Kenneth Cho

McLean, VA

Carl Wigginton

Springfield, VA

Stanton T. Kalnitzky

Linden, VA

Dan and Donna Ward

Oakton, VA

David W. & Wendy S. Andrews

Clifton, VA

Margie & Jim Pruitt

Ashburn, VA

Barnaby Harkins & Daughter

Arlington, VA

Michael Cronin

North Potomac, MD

Andrew Gutierrez

Arlington, VA

Ann & Paul Rochmis

Vienna, VA

Thomas Burrell

Sterling, VA

Ed & Meredith Serba

Alexandria, VA

Charles Sheasley

Alexandria, VA

Joyce Foster

Centreville, VA

Gary Purinton

Herndon, VA

Bret Empie

Arlington, VA

Tom Wyckoff

Springfield, VA

Renee Pleasant

Goldvein, VA

Members to vote on dues increase

by Rob McKinney

At the April Board Meeting, the Officers and Trustees voted to raise NOVAC's dues from \$25 to \$30 a year.

We will vote on this proposal at the June General Meeting. Our club's rules specifically require any changes in dues to be voted on by the membership before it can be enacted. All members are entitled to vote, whatever category of membership they hold, but must be present to exercise that privilege.

If passed, the new dues rate will become effective July 2004 and apply to new members and renewals after that date. This affects only the "Regular" category of dues—the rate most of us pay. All other dues rates stay the same.

I encourage you to attend the meeting and approve the increase in our dues. Let me tell you why.

The club's financial position is secure, but reality is catching up to us. For the first time that I know of our budget projection (for 2004) shows expenses exceeding income. NOVAC has grown tremendously in the last four or five years. That's good, but basic costs of running the club also increase with size. Administrative costs for the newsletter are a big part of our current budget. Maintenance and leases for observing sites, those essential Porta-Potties, insurance (always a requirement for us to use observing sites), and other similar expenses also add up.

The club has also moved forward with some challenging projects, like Roboscope, and budgeted for more "operations" expenses as we strive to expand outreach efforts and give you more places and opportunities to do your own observing.

One expense not under our control was an increase in the dues to the Astronomical League (AL). You know from reading your *Reflector*, the AL magazine, that they have opened a national office. You've also seen the *Reflector's* new format. Naturally, some of those costs are borne by AL members—you and me. When you consider the good work AL does for our hobby, from dark-sky advocacy to observing programs, I think we'd agree it's a worthwhile expense. It's also the best membership rate you can get by obtaining AL membership via NOVAC.

It's not all spend, spend, spend. We save where we can and watch costs in several

areas. I want us to offer the NOVAC newsletter, via our web site, to everyone with a computer, with hardcopies going only to those without electronic access. That will save on printing and mailing fees. We've also held the line on website costs while expanding the website's content. Additionally, a substantial amount of "donated" material, as well as time and effort, also help us remain prudent in using your money for club purposes.

Still, looking at the "value" you get for your dues, be it observing sites, loaner scopes, guest speakers and club events and so on, I believe the proposed dues increase is reasonable. No other club in the region offers as much, and most of them have higher dues than our current amount. With cash flow "in the black" we can pursue

plans to make NOVAC even bigger and better. At our Board off-site in March we put together a list of goals for the future, including finding a dark-sky location for an observatory, improving website membership services so you can join, renew, and pay through the Internet, and contributing more to the fight against light pollution.

That's a glimpse at the picture behind our proposal. I encourage you to look at the budget published in the newsletter, and contact any of the Board members to ask questions or voice your opinion.

Most importantly, plan to attend the General Meeting on June 13th to vote on this issue. ★

NOVAC events in May

Sunday, May 16

General meeting

New Discoveries in 21st Century Astronomy • Dr. Sten Odenwald

(Please note the guest speaker will start this meeting)

This talk will be a celebration of where we have come and where we may be headed in the next few decades. The last four years have offered us a breath-taking journey into the cosmos, with the promise of even more spectacular discoveries to come in the next 95 years. The recent discovery of a "tenth planet" in our solar system and over 100 planets beyond our solar system, water on Mars, along with the discovery of dark matter and dark energy, suggest that we are on the verge of opening up an entirely new cosmos to human exploration. Even the very fabric and dimensionality of our universe are now under theoretical investigation. Our horizons will only be limited by our imagination and our collective willingness to continue this grand journey of exploration.

Dr. Odenwald is the author of several books including *The Astronomy Cafe* and *Back to the Astronomy Cafe*.

Tuesday, May 4

Monthly Board Meeting

7:30 pm • Arlington Planetarium

During this meeting the board goes over administrative topics, budget items, schedules, etc. All are welcome!

Observing nights

May 7–26 Crockett Park open to club members

Saturday, May 8 Crockett public night

Saturday, May 15 NOVAC Monthly Observing Session at Mason Neck State Park

More information:

<http://www.novac.com/members/mos.htm> (requires member login)

For more information on the schedule please contact Ed Witkowski at edwsk@comcast.net or visit the members section of our website at www.novac.com.

Astronomy Day 2004





Phil Wherry



Phil Wherry



Mike Lewis



Nagesh Kamrude



Phil Wherry



Nagesh Kamrude



Mike Lewis

Jeff's observing report

by Jeff Stetekluh

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

Jupiter eclipse events on Friday and Saturday nights

May 8	9:49 pm	Callisto eclipse start
May 9	12:47 am	Callisto eclipse end
May 9	9:51 pm	Europa eclipse end
May 15	9:59 pm	Io eclipse end
May 22	11:54 pm	Io eclipse end
Jun 25	9:16 pm	Ganymede eclipse end

The Sun

May 9	rises at 6:01 am	sets at 8:09 pm
Jun 13	rises at 5:42 am	sets at 8:35 pm

The Moon

May 4	Full Moon	Jun 3	Full Moon
May 11	Last Quarter	Jun 9	Last Quarter
May 19	New Moon	Jun 17	New Moon
May 27	First Quarter	Jun 25	First Quarter

Events

May 2	Venus is at greatest brilliancy (magnitude -4.5)
May 4	Total lunar eclipse (visible in the Eastern Hemisphere)
May 4	The Eta Aquarid meteor shower peaks (active Apr 19 to May 28)
May 14	Mercury is at greatest western elongation
Jun 8	Venus is in inferior conjunction
Jun 18	Mercury is in superior conjunction
Jun 20	Summer solstice

The Planets

May 9	Rises	Transits	Sets
Mercury	5:08 am	11:32 am	5:56 pm
Venus	7:50 am	3:34 pm	11:17 pm
Mars	8:33 am	4:03 pm	11:33 pm
Jupiter	2:07 pm	8:40 pm	3:16 am
Saturn	9:17 am	4:38 pm	12:03 am

Jun 13	Rises	Transits	Sets
Mercury	5:16 am	12:41 pm	8:06 pm
Venus	5:19 am	12:33 pm	7:47 pm
Mars	8:00 am	3:22 pm	10:43 pm
Jupiter	12:01 pm	6:30 pm	1:04 am
Saturn	7:18 am	2:38 pm	9:58 pm

Notes

May 9	Mag	Diam	Elev
Mercury	0.9	9.0"	
Venus	-4.5	41.7"	33* W
Mars	1.7	4.2"	37* W
Jupiter	-2.2	39.3"	60* SSE
Saturn	2.4	17.1"	43* W

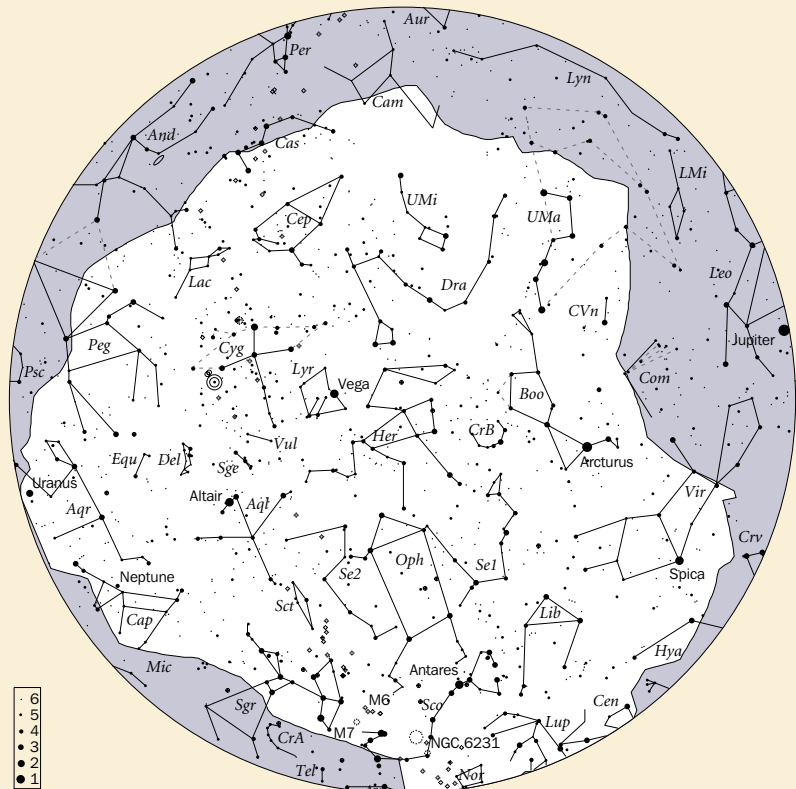
Jun 13	Mag	Diam	Location
Mercury	-1.7	5.2"	14*
Venus	-3.9	56.7"	
Mars	1.8	3.8"	23* W
Jupiter	-2.0	5.4"	49* SW
Saturn	2.3	16.6"	14* WNW

mag: apparent magnitude; **diam:** apparent equatorial angular diameter; **elev:** degrees elevation at sunset taking into account atmospheric refraction

May skies from Savage Farm



June skies from Savage Farm



“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:

Phil Wherry
2721 Baronhurst Dr.
Vienna, VA 22181-6158
703-242-2618
703-242-1167 fax
psw@wherry.com

Change of address

All notices of change of address should be sent to Phil Wherry. 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: Friday, June 11 for the July/August 2004 newsletter.

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Vunteer!, from page 1

computer at home!

We also offer many other benefits that help members get more out of the hobby like: the NOVAC Newsletter, Library, Loaner Scope, Observing Sites, and Observing Awards to name a few.

What makes all of this possible? Dedicated members who give some of their precious free time to make the club better are our lifeblood. Many volunteers are long-time members who want to give back something to the club in return for the benefits that they have enjoyed over the years; others are new members that haven't received their first newsletter. Some have vast astronomy knowledge and some are just getting their feet wet. What they have in common is an interest in astronomy and a desire to become more involved in a dynamic and growing group like NOVAC. You just can't find a better group of people to spend some time around, with or without the stars overhead.

NOVAC stands at a crossroad. We now have over 850 members and will likely

exceed a thousand members before the end of the year. With the addition of new programs and features, our need for members to become involved also grows. Popular programs like Outreach, MOS, and the Mentor Program are currently stretched so thin that we will have to reduce some of the activities if additional volunteers do not step forward.

During a recent NOVAC Board Strategy session, we discussed the programs currently available and those that we would like to offer in the future. It is clear that much of what we'd like to do can't be done, unless we can motivate more members to get involved.

Here are some of the suggestions under consideration. Please review the list and see if any of them spark your interest. If so, "step up to the plate!" This is your chance to get involved and help improve the club. If there is something that you think would be a benefit to the club but isn't listed, send an e-mail to the president. However, if you really want it to happen, volunteer to coordinate the project.

- Purchase/find a permanent observing site and build an observatory.
- Build/buy a large research grade tele-

scope with CCD camera for members to pursue "real" science.

- Form a partnership with local schools and universities to use our facilities for research.
- Host a multi-day regional star party each year.
- Organize trips to star parties and distant observing sites like Hawaii and Chile.
- Work to reduce light pollution.
- Find a space for ATM activities and have mirror making and telescope building classes.
- Establish a Public Relations/Media Relations position to get the word out to world about the great things that we are doing.
- Establish a fundraising position/group to solicit large donations/grants to pay for club activities and support educational initiatives.

As you can see, there isn't a shortage of good ideas; we just need people to make them a reality. So jump in. Help take the club to the next level. You won't be sorry. ★



c/o Phil Wherry, Membership Director
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