

NOVAC

The Newsletter of the Northern Virginia Astronomy Club

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The star is not extinguished when it sets
Upon the dull horizon; it but goes
To shine in other skies, then reappear
In ours, as fresh as when it first arose.
- *Horatius Bonar, Life After Death*

Board of Directors:
Brent Archinal
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NOVAC Bylaws and Programs At NOVAC Meetings

by Brent Archinal

Topics: The 31" telescope and Hidden Hollow '91, The Telescope Makers of NOVAC

Well, once again we've got some great programs lined up, after our last two meetings which had some wonderful video tours. In September, those present were lucky enough to not only witness the July 11 eclipse again, but also got to follow Blaine Korcel around Stellafane with his new video camera. And in October, we once again we treated to a tour by Blaine - this time of NVTM'91. It made us wonder why we bothered to go to NVTM itself (well, not really...)! But for our November and December meetings we really have some promising programs lined up.

At both of these meetings, there are some important items of business to attend to, but hopefully these are items that will be dealt with very quickly. Now that our Articles of Incorporation have been ratified and have been sent off to the state, we officially have become a corporation in the State of Virginia - and even have to start acting like one! One important item of business is to take a vote

on our proposed Bylaws. These have been available for examination at every meeting since July, so now it's time for a final yes or no vote on them. Our nominating committee will also make its report at the November meeting and further nominations for next years trustees will be accepted, with elections to take place in December or January. But the main event of our November 20 meeting will be a great presentation (we'll see!) by none other than yours truly, on "The Warren Rupp Observatory and Hidden Hollow '91". This will obviously be a dual coverage of both the Rupp Observatory, site of a 31" f/7 Newtonian, amateur operated telescope, and the annual convention held there. Its location is near Mansfield, Ohio, and this year the convention/star party was held this past October 11-13. Although relatively new as national astronomy conventions go, only starting on a serious level in 1987, it already has grown to having 300-400 people, a slew of significant speakers, hill tops full of telescopes, and some wonderful observing through the 31"! Actually the main subject of the talk will be the 31" telescope itself, one of the largest telescopes in the world used exclusively by amateurs, including the story of how it came to be, its construction, and how it's being used now by members of the Richland

Astronomical Society (RAS). As NOVAC completes the process of becoming a non-profit corporation maybe we can look forward to the day of having such a telescope and observatory too!!

December's traditionally a poor month for observing. So come on in out of those cloudy and cold nights, and stop by for the December 18 meeting of NOVAC (one full week before Christmas). Our topic will once again be TELESCOPE MAKING!, with the main presentations to be given by Myron Wasiuta and Bob L'Homme-dieu, on their new homebuilt telescopes. These are 'scopes that were featured at both Stellafane and NVTM'91, both being easy to build 'scopes, with fairly simple and straightforward wooden construction. Myron

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will be displaying and speaking on his 10" f/8 reflector, with a homemade equatorial fork mount, which he uses extensively for planetary observing. His philosophy in building such a 'scope was to make it low in cost, easily portable, and easy to build. Bob will be showing off his 4.25" f/4.9 reflector, explaining its features of having a detachable wooden tripod, octagonal tube, polystyrene plastic coated wood bearings, homemade mirror cell, and even a homemade mirror to match! A further feature will be the display by Gerry Wolczanski of the 8" mirror recently donated to NOVAC by the Arlington Planetarium. Gerry has now completed figuring of the mirror and hopes to have a complete Foucault tester setup at the meeting. So not only will we be able to have a miniature workshop on how to test mirrors - but everyone will really be able to check if Gerry did a good job!!

In any case, if observatories, or mirror and telescope making are at all among your interests, make sure you don't miss the November and December NOVAC meetings!

These regular meetings of the Northern Virginia Astronomy Club are currently held the third Wednesday of each month at 7:30 PM, at the Arlington County Planetarium, 1426 N. Quincy Street, Arlington, VA 22207. Admission is free and open to the public, but seating is limited so please arrive early. Call the NOVAC hotline (703-256-8359) to check for schedule changes, cancelation, or to leave a message to obtain further information. The Northern Virginia Astronomy Club would also like to express its continued appreciation and thanks to Steve Smith and the staff of the Arlington Planetarium for allowing us to hold our meetings there.

Public Programs

by Lynn Schumann

It seems that our little, obscure astronomy club is not so small and obscure

any more. Lately, NOVAC has received more requests for support than it can fill. If we're not careful, we could become world famous in Northern Virginia!

In the past month, NOVAC has brought amateur astronomy to more than 400 people at three events. Two hundred Girl Scouts and their families lined up behind only two telescopes at Crockett Park to have a look at the moon and Saturn. Blaine and Al were stunned by the size of the crowd; they were expecting half a dozen or so. A week later, another two hundred folks sampled the almost full moon and Saturn at Burke Lake Park. Again, there were only two telescopes; Bill Burton and Al shared the duty at this one. At both events, everyone was thrilled and excited at the telescopic views. Also, at both events everyone was advised of the upcoming telescope meet. The third gathering was more of a classroom situation for the Montgomery Village Foundation in Gaithersburg, MD. This involved an hour lecture, including the all new NOVAC slide briefing, and the rest of the evening under the stars. All three programs were very successful.

On the down side, we had a request from the Arlington County 4-H Club to participate in the Arlington County Fair in mid-August. This could have been a big one in terms of publicizing the telescope meet. However, we couldn't find anyone to attend.

As we get better known, the number of requests for astronomy programs will doubtless increase. Sure would be nice if we could count on some volunteers to cover them. For indoor situations, don't forget the aforementioned briefing. With the slides and script, any one of us can wow a bunch of civilians. If you have a chance to give a talk on astronomy and want to use the briefing, give us a call at (703) 971-3257.

Sky Sweep for November/December by Kevin Jones

Well, the cold north wind of winter seems to be bearing down upon us. Time to start bundling up like eskimos for those late-night observing sessions and remembering the hot cocoa or coffee! This issue's observing focus will be, appropriately, the northern sky.

The constellation of Cassiopeia, the Queen, is high in the north on November and December evenings. This bright and distinctive "W" of stars embedded in the Milky Way contains a rich collection of open star clusters and nebulae. The cluster M52, in the far western reaches of Cassiopeia, is an easy 7th magnitude open cluster. An interesting feature of this cluster is the fact that its brightest stars seem to be clumped to one side of the otherwise rather spherical object. This cluster is located at about 4000 light-years from us and is possibly 15 light-years across. Its age is thought to be roughly comparable to that of the Pleiades.

Cassiopeia's other Messier object, M103, is far less imposing through the eyepiece. It is roughly as bright as M52, but contains roughly one-fifth the number of stars and is twice as distant. About the only thing making this object stand out from the backdrop of the Milky Way is its distinctive elongated triangle shape.

About midway between these two Messier clusters is the open cluster NGC 103. This grouping of stars is smaller and fainter than the two clusters previously mentioned, and is a good example of the many small star clusters sprinkled throughout the Milky Way in this region.

Located in far southern Cassiopeia are two interesting, relatively bright dwarf galaxies. NGC 147 and 185 are companions to the Great Andromeda Galaxy, M31, located about 7 degrees to the south. Both of these small

ellipticals are 12th magnitude, within the grasp of many amateur telescopes. These galaxies are among some of the intrinsically faintest galaxies known, being thousands of times fainter than their parent galaxy, M31.

Looking north of our galactic plane, we encounter the dim and sprawling constellation of Camelopardalis, the giraffe. This obscure region of sky contains few bright objects of interest. It does, however, contain two large spiral galaxies located rather close to our Milky Way galaxy.

IC 342, located at approximately +68 degrees declination, 3 and 3/4 hours right ascension, is a very large and faint face-on spiral. It is perhaps the third closest spiral galaxy to ours, beyond the Andromeda Galaxy and M33 in Triangulum. Because of this galaxy's location near the plane of the Milky Way, it is heavily obscured and would no doubt appear quite impressive were it located near the galactic pole.

An easier, although slightly more distant, spiral is NGC 2403 found in eastern Camelopardalis. It glows brightly at 9th magnitude, and can be spotted in binoculars and finderscopes in dark skies. NGC 2403 is located just beyond our Local Group of galaxies, possibly in the same galaxy cluster as M81 and M82 in Ursa Major, 8 million light-years distant.

Now, stepping back from the telescope for a minute, you look up to the north and... Wait! Are you just bleary-eyed from trying to trace the outline of Camelopardalis or is that... an aurora! At this point in the solar cycle, aurorae are quite possible even from the latitude of northern Virginia. As a matter of fact, NOVAC presidential candidate Myron Wasiuta and wonderful newsletter editor George Uhl (and faithful companion Gus the astro-dog) saw an aurora from Crockett Park this past Tuesday (Oct. 29). While it may not have looked like the trees were on fire, rumor has it that it was a rather

impressive display, especially in light of the fact that it was seen from this far south. So you never know--keep an eye on the sun by day, and if large sunspot groups are transiting, keep an eye out for aurorae by night!

May your nights be clear, not-too-cold and maybe even aurora-filled!

Conjunction of Jupiter, Mercury and Regulus: 10 Sep '91

by Guy Moore

In a 30 year period ending in 2005, Jupiter and Mercury have come within six arcminutes of each other only twice, both times in 1991, the first time visible only from Hawaii. To see Jupiter paired again with Regulus in this close a conjunction we'll have to wait until July 2027. So this morning's event was for me a once-in-a-lifetime thing. And about as often the weather gods are favorable to amateur astronomers -- and this morning they were!

When I arrived at my observation site (the walkway over Highway 50 at N. Jackson Ave.) the sky was almost entirely clouded over. The first star I saw in the east-south-east sky was Rigel. Sometime later I was able to pick up Sirius, then Procyon, as the sky showed signs of improving. My 7x35 Nikons were my guides and served me well. I arrived at the site about 4:30 a.m. and by 5:30 I had found Venus 12 degrees above and to the right of the Jupiter-Mercury "star" I was seeking. Shortly after that I located the bright "star" with my binoculars. At first it appeared as a star, but with improving conditions I could see it easily with the unaided eye. As it got higher in the sky & conditions continued to improve I was able to see the "star" as elongated, and, finally, in brief but good seeing, I could distinctly separate the two planets. They appeared as a close, unequal double star. In the binoculars they were a beautiful double star with Regulus flashing in and out to the

lower right of the pair, scintillating in a lovely manner. I watched the spectacle with pleasure until the dawn erased all but Venus, at which time I came home and back to bed, chilled by the early morning vigil.

The low cloud cover actually was helpful in that I for the first time easily saw the crescent phase of Venus in 7x35s. And I believe the filter effect was probably helpful in steadying the air to assist me in dividing Jupiter and Mercury with the unaided eye, while they were only four arcminutes apart.

After having been so often disappointed by adverse weather conditions precluding my viewing of astronomical events, I must exclaim over being this once rewarded for my patience in the face of daunting odds ...

Rediscovering The Moon - Part: III Lunar Volcanism

by Bill Burton

Before the unmanned lunar probes and the Apollo missions, there was considerable debate about whether the craters on the moon were primarily volcanic in origin or impact-related. It was thought that they could represent collapsed volcanoes, or calderas, which are common on the Earth and feature large central circular depressions. It is now, of course, known that the vast majority of these circular features are due to meteorite or asteroid impacts. But volcanism has also played a considerable role, especially in the eruption of the huge lava flows that now comprise the lunar maria. Other, minor volcanic features on the Moon can be seen in a small telescope. These are generally much smaller and more recent features, postdating the great paroxysm of cratering and mare formation that ended on the Moon over three billion years ago.

One type of feature on the Moon is called the volcanic dome. Domes are thought to have two origins: 1) layer after layer of fluid lava erupts out of a

central vent to produce a broad shield-shaped volcano like Mauna Loa in Hawaii or Olympus Mons on Mars. Some of the lunar domes have tiny central depressions suggestive of summit craters on volcanoes; and 2) narrower, steeper mounds formed by viscous silica-rich lava that cannot flow great distances, like the dome within the crater of Mount St. Helens. Figure 1 shows a very subtle positive-relief feature (arrow) northeast of the major crater Copernicus (the images are inverted) that is actually a composite of the lunar features K and KA Copernicus, which may be volcanic domes. The floor of Copernicus contains a number of much smaller domes, which represent volcanic activity following the impact that produced the crater.

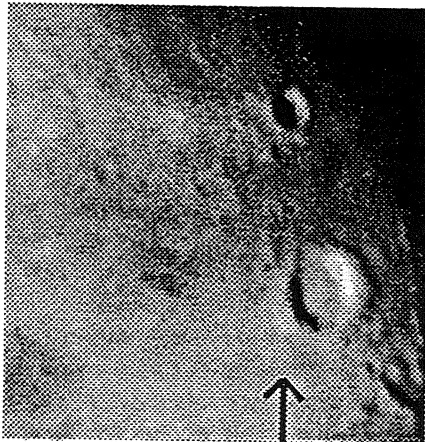


Figure 1

Another, better-known volcanic feature on the moon is the rill. Rills are sinuous depressions that snake their way for tens or hundreds of kilometers along the floors of maria, and they are thought to represent long lava tubes whose ceilings have collapsed. Lava tubes are common on the earth in regions of basaltic volcanism. They form when the outer crust of an elongate lava flow hardens and the hot fluid magma of the interior empties out of the toe of the flow, leaving a hollow tubular cavern. Good, explorable lava tubes can be found in central Oregon, southern Idaho, and northeastern California. Thanks to

erosion and weathering, however, true rills are unknown on the earth's surface.

The best example of a lunar rill on the near side of the moon is Schroter's Valley (arrow, Figure 2) near the bright crater Aristarchus. High-power visual examination shows that this rill originates at a dome with a central depression and breached wall, resembling Mount St. Helens itself, that was the volcanic source for the rill. The area around Aristarchus, with its evidence for relatively recent volcanism, is also the area where the mysterious glows known as Transient Lunar Phenomena (TLP) are most commonly seen.



Figure 2

Many other rills can be seen in a small or moderate-sized telescope under the right illumination, and they are some of the finest and most delicate planetary features visible to the amateur astronomer. See if you can discover some more.

Although craters are known now to be primarily meteoritic and not volcanic in origin, one of the most intriguing lunar features combines both processes. The crater Wargentín, nestled between the craters Phocylides and Schickard near the southwest limb, was initially a depression formed by impact which subsequently filled up with lava to produce an elevated plateau (Figure 3, arrow). Near it (to the upper left in photograph) is the unusual elongate crater Schiller. This feature may be the result of a very low-

angle meteor impact which plowed the lunar surface, or it may be a tectonic depression. Look for both of these features about two days before the full moon.

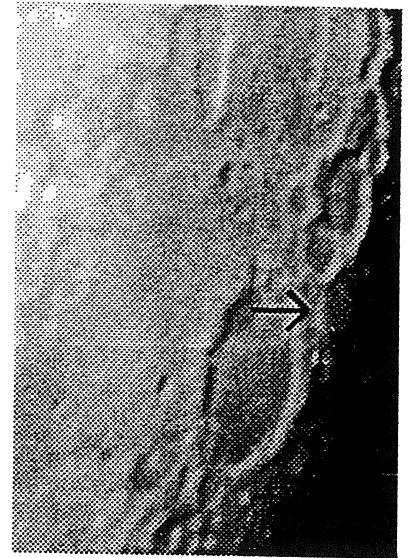


Figure 3

About the Images:

The photographs accompanying this series of articles were taken with a Nikon 2020 camera using Kodak Ektar 1000 film, through an 8-inch f/7 Newtonian reflector. The camera was mounted on the telescope with a homemade plywood rig for eyepiece projection. The eyepieces used were a Meade 25mm ocular attached to a Televue 1.8x Barlow, plus a telescope adapter on the camera, giving an approximate magnification of 115x. The exposures were unguided, and were either 1/8 or 1/15 sec. in duration. The original photographs are not perfectly sharp, and although some of this is undoubtedly due to the unguided drift some may also be due to shutter vibration, which I hope to correct in future photography.

Current NOVAC Executive Nominees

President - Myron Wasiuta:
Former President of Birmingham (AL) Astronomical Society (BAS) for one year before relocating to North-

ern Virginia. The BAS was similar in size (120 members) and in function to NOVAC. Myron believes in encouraging member growth in astronomy through education and activities. He would like to invite experts and professionals to speak to the club during our monthly meetings. He would also like to establish workshops (such as making mirrors, astrophotography, etc.) to help members enhance their skills. Myron is a contributing member of ALPO (Association of Lunar and Planetary Observers) and regularly makes observations at the USNO using the 12-inch refractor. He also uses his own homemade 10-inch f/8 newtonian reflector. Myron is an avid observer and you can often find him at Crockett Park.

Vice President - George Uhl:

George is an active member of NOVAC. Besides fulfilling the duties of Newsletter Editor, George is a member of the Board of Directors and is finishing his second term. He was the coordinator for this year's telescope meet NVTM'91. Like Myron, George is an avid observer (but not quite as serious as Myron) and you can often find him at Crockett Park.

Treasurer - Brenda Jones:

Brenda brings proven experience to the office of Treasurer, as she fulfilled that role over 2 years for another non-profit organization. Brenda has been an active NOVAC member for 4 years, and often attends the executive meetings. She currently is a member of the Board of Directors of the Arlington Educational Association.

Secretary - Bob L'Hommedieu:

Bob is a new member to NOVAC, but is interested in helping out. A former member of the Dallas Astronomy Club, Bob has built his own telescope and won an award for it at Stellafane. He is a member of the Board of Directors of the Vetrinarian Association and is a member of several professional societies.

Not In My Backyard!!

by Al Schumann

A while back I celebrated my 58th birthday. My wife, Lynn, our children and grandchildren were all on hand for the event. It was really great. Of course, everyone in the family knows of my passion for astronomy, so it was especially nice when the youngsters pooled their resources and presented me with a special present -- a neutrino collector. Just imagine, a neutrino collector of my very own. Talk about icing on the cake!

For those of you who might be unaware of it, a neutrino is a neutral particle smaller than a neutron and having a mass approaching zero. In fact, some neutrinos are thought to have no mass at all. We're talking small here. We're also talking fast as these particles travel at or near the speed of light. Neutrinos are generated deep in the cores of stars, and they travel outward in all directions. The sun, of course, is our local star, and it churns out neutrinos at a prodigious rate. Neutrinos are tricky little rascals to account for, because they are so small and innocuous that most can pass right through the earth without interacting with another atom of matter. I hate to tell you this, but during daylight hours neutrinos by the million are streaming right through all of us before continuing through the earth and assaulting the Chinese on their way out. We're not even safe at night, because we get zapped in the sanctity of our own homes milliseconds after the folks on the sunlit side of the earth were penetrated. Scary, huh? And that is just from the sun; think of all the other stars!

How does one detect these minute particles? Most detectors have been located in mines thousands of feet deep. One, for example, is sited at the bottom of the Morton salt mine in Ohio. The deep underground locations ensure that other particles of radiation are filtered out. So, anything

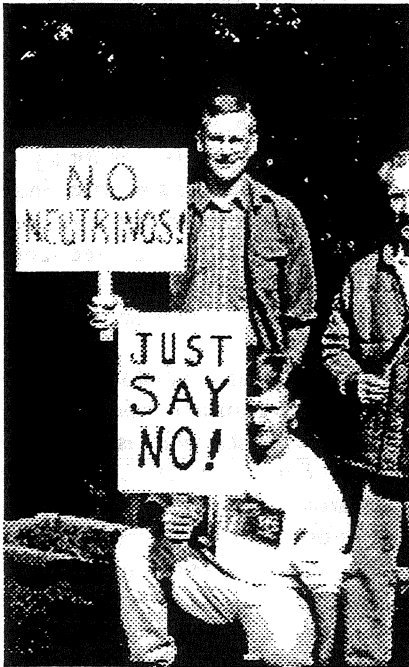
finally getting to the detector can easily pass the duck test. If it waddles like a neutrino and quacks like a neutrino it's a neutrino! Right?

The heart of a neutrino detector is a large pool with a capacity of many tons of fluid. Some of the tanks contain water. At least one other pool is filled with cleaning fluid. I understand a gallium filled model has been proposed. Gallium is a liquid metal, lighter but somewhat like mercury in consistency. Heavy water, Deuterium oxide, has been suggested as well. In the cleaning fluid model, I have been told there are photo multipliers in the fluid, and physicists look for a photon flash when there is a neutrino interaction. Trillions upon trillions of neutrinos might pass through the tank before there is a single reaction, so this is an iffy proposition to say the least.

It seems that a fabulous number of neutrinos is formed inside the collapsing core of a star which is about to blow up. Supernova 1987A heightened awareness and interest in neutrinos, because there was a decided increase in neutrino detections around the time the star was seen to explode. When that happened, it seemed that everybody and his brother-in-law wanted to get in on the act in hopes of picking up a huge grant. Which brings us to the Schuman neutrino detector. I want a piece of the action. Bear in mind that in scientific research what you DON'T find is often just as significant as what you DO find. I believe I can be just as unsuccessful at detecting neutrinos as somebody else with a multi-million dollar budget, a salt mine and a train load of Clorox. Furthermore, I can be just as unsuccessful for a helluva lot less money! Look at it this way, if we can pay farmers not to plant soy beans why not throw a few bucks my way for NOT putting the finger on a handful of neutrinos. Makes sense to me.

There are no deep mine shafts in Springfield, Virginia, so our collector had to be erected above ground.

That's when the trouble started. The neighbors became highly incensed at the prospect of neutrino spills and the possible release of radiation into the atmosphere. Also, there were passionate outbursts about the ozone layer, neutrino disposal, global warming, hiring quotas, spotted owls, red squirrels and sexual harrassment at our research center. Whew. It's a wonder that anything ever gets accomplished.



Fortunately, in our neighborhood there are no specific zoning prohibitions regarding neutrino collection, so work continued with only minor interruptions. As for disposal, we do have to sort out bottles, aluminum cans and newspapers, but neutrinos are okay. Sooner or later, the zealots will force the government to enact an anti-neutrino ordinance, so we need to work fast. Meanwhile, there were other problems. Believe it or not, there is not a single store at the Springfield Mall that deals in bulk gallium or heavy water! So much for the cutting edge of technology. Cleaning fluid was definitely out because of the EPA and the Clean Air Act. Therefore, our detector had to follow the plain water model. Thus, we had to be on the

lookout for water molecule proton decay, which is the sign of neutrino interaction. I'm not certain, but I think proton decay is the slimy greenish stuff that forms on the bottom of small ponds. I'll have to get with Dr. Brent Archinal at the U. S. Naval Observatory to check on that for sure.

Various filtration methods have been used to date in order to isolate and collect that elusive first specimen. The experts agree that neutrinos are very small, so I ruled out coarse grid materials like chicken wire; the spaces are too large, and undoubtedly most neutrinos would slip through. The crab trap might have had some results, but the chicken neck we used for bait drove the dog crazy. For a couple weeks I used a kitchen colander. No luck with that either. I would have continued using the colander for a while longer, but we had pasta for dinner one night and needed to drain the spaghetti. Window screen seemed a good bet for the next step. We used both the metallic and nylon varieties, thinking a neutrino might stick to one or the other, but it was no go. Cheese cloth followed the screen, and that was followed by a Mr. Coffee filter. Each failed to stop a neutrino. The Silk scarf we employed next trapped a lot of interesting material, but no neutrinos. We thought we had something for sure during a routine sweep a week ago Thursday. There were two tiny particles stuck in the silken fibers which after closer inspection seemed to be a pair of quarks. Lynn thought they were mating, so we freed them right away.

So, lack of success has been the result thus far. However, you may rest assured the quest will continue -- with or without the grant -- and I am confident that one day Lynn and I will be able to present a framed neutrino for placement in the NOVAC museum.



The author panning for neutrinos.

NVTM'91 Recap by George Uhl

As you all know by now, the weather for the telescope meet was awful! Well, what did you expect? After 3 consecutive weekends of cool, crystal clear evenings, we were bound to get trashed. OK, Friday was somewhat tolerable, but the sky transparency was equivalent to a hot and humid July evening. Saturday was a washout (no pun intended). However, we did get a good turnout - thanks to the efforts of club members to get the word out.

About 40 telescopes were set up in the field on Friday night. Despite the humidity, there was a lot of observing going on. The dew got me around 10PM, at which point I sat around and socialized for awhile. Others began to packing it in when the dew got to be a real problem, or the sky conditions became too crummy. There was no mass exodus, just one or two cars leaving every so often during the course of the evening.

At midnight I packed up both telescopes and was headed out for home and a nice warm bed, when a slight

breeze was picking up. All of a sudden, the sky conditions began improving. There were a few diehards still there, including Myron Wasiuta. As I was leaving, I drove past Myron and asked him how late he was staying. "Till the sun comes up or I collapse, whichever comes first", Myron replied. I've always been a sucker for gee-whiz heroics and Myron's attitude psyched me up considerably. I unpacked my dobsonian and enjoyed the skies until 4 AM. By 4 AM, the breeze died and then the dew came back stronger than ever. Myron and I packed up, locked up the park, and had breakfast before going home.

The forecast for Saturday was bleak. However, the afternoon was dry and those that showed up early got to view the masses of sunspots as well as hike the Solar System Model Tour. As evening came upon us, the long awaited cold front began inching its way towards the park.

The talks went great. Bill Burton gave an entertaining talk on amateur telescopes. Myron Wasiuta informed everyone on the effects of light pollution. Finally, the featured speaker, Dr. Bradley Schaefer, of NASA talked about "Seeing Sunset", and explained why we see the sun the way we do, and what phenomenae we can observe.

The few people who did not attend the talks, got a chance to see Saturn, although very briefly. The clouds finally came in and covered the sky, just as the talks ended. A few sprinkles got most of us packing our equipment early. After that it was time to socialize. Most people left long before the deluge came. Jim Schaeffer and I were the last to leave. We left about 1 AM when the monsoon let up for a few minutes. So ended another NOVAC Telescope Meet.

As this year's coordinator, I want to express my gratitude and appreciation for all the volunteers that helped out at NVTM'91. Since I don't have my list

of names in front of me right now, I won't name them individually, as I will inadvertently leave one or two of them out. Thank-you volunteers!! It would never have worked without you!!

Al Schumann did his usual heroic effort of informing the astronomical periodicals (S&T, ASTRONOMY), the regional astronomy clubs, and the local newspapers about this year's event. Yes, we made it in the Washington Post! Twice, too! Blaine Friedlander did a little piece on NVTM'91 which highlighted his October Sky Watch column. We made it in the Weekend Section, however we were shoved way in the back. Maybe next year we will get better coverage by the Weekend Section. Thanks for your help, Al.

Once again Gary Kwolek, Roger Pence and the Crockett Park staff were absolutely marvelous in their support and in spreading the word. The park has put up with us for a long time, and despite the bit of trouble we caused them this summer, they are willing to accommodate us for awhile longer. Thanks Gary and Roger!!!

OK, now that I've said all that, who is going to be the coordinator for NVTM'92?

October NOVAC Meeting Minutes

The meeting was called to order at on October 16, 1991, at 7:30 PM with Blaine Korcel presiding. Thirty four members and guests were present. The minutes of the previous meeting were read and accepted.

OLD BUSINESS:

1. Blaine Korcel solicited comments about the recently held telescope meet. Despite Saturday night's weather everyone thought the event was a success. Kudos were given to George Uhl for his fine work in putting the meet together.

2. Brent Archinal noted that non-profit status paper work for the IRS was just about completed. Next, corporation papers will be filed with the state of Virginia and Fairfax County.

NEW BUSINESS:

1. Blaine reminded the membership that terms of office for the present club officers expire at the end of the year. He noted that the following people had been nominated or had volunteered for office:

President: Myron Wasiuta
Vice President: George Uhl
Secretary: Bob L'Hommedieu
Treasurer: Brenda Jones

There are also five openings on the Board of Directors. Blaine has volunteered to serve on the board, and he asked for other volunteers or nominations.

2. It was noted that September 25 and 26, 1992 will be the dates for NVTM'92. The new moon occurs over that weekend.

3. Bill Burton announced he will be holding an astronomy outing at Big Meadow on either November 9 or 10 depending on the weather.

4. Brenda Jones noted there will be astronomy activities at the Arlington Outdoor Lab on November 16 and December 14. NOVAC members are welcome to bring telescopes and participate.

5. Brent Archinal gave a recap of the Hidden Hollow telescope meet in Ohio. He also asked for ideas or volunteers to put on a program at the December meeting.

7. Jerry Wolczanski announced that the new eight-inch club mirror has been finished. He will bring it to the November meeting for display and testing.

8. Steve Smith mentioned the new planetarium program "Death of the Dinosaurs." The program will be run on Friday and Saturday evenings at 7:30 pm and on Sundays at 1:30pm. The program is scheduled to run from October 18 to November 24. Call the planetarium office at (703) 358-6070 for reservations.

The meeting was adjourned at 8:15 PM at which time Blaine Korcel showed a video tape which highlighted various NVTM events.

Respectfully submitted,
Al Schumann, Secretary

NOVAC NOTICES

1992 NOVAC SCHEDULES

by Al Schumann

Believe it or not, this is the final edition of the NOVAC newsletter for 1991. Since the secretary's duties include advising the membership of upcoming meetings I wanted to get a jump on things so we're all ready to hit the ground running at the start of the new year. Therefore, it gives me great pleasure to announce the general membership meeting schedule for 1992. Just as a reminder, NOVAC meetings are held on the third Wednesday of the month at the Arlington Planetarium, 1426 North Quincy St., Arlington, VA, 22207. Meetings begin at 7:30pm. The dates for 1992 are as follows:

Jan 15	Feb 19	Mar 18	Apr 15
May 20	Jun 17	Jul 15	Aug 19
Sep 16	Oct 21	Nov 18	Dec 16

The formal part of our meetings rarely exceeds 15 or 20 minutes. After that, we try to present a program of general interest to the members. We had some dandies in '91 including a seminar on mirror making & testing, Stellafane highlights and a two meeting orgy covering the July 11 solar eclipse. Mark your calendars and come out

and join us.

The following dates make up the tentative observing schedule at C. M. Crockett Park for 1992:

January - 3,4,24,25,31
February - 1,28,29
March - 6,7,27,28
April - 3,4,24,25
May - 1,2,29,30
June - 5,6,26,27
July - 3,4,24,25,31
August - 1,21,22,28,29
September - 18,19,25,26
October - 16,17,23,24
November - 20,21,27,28
December - 18,19,26

The dates for NVTM '92 are September 25 & 26. Again, mark your calendars and join us.

November/December Calendar

Fr/Sa, Nov 1/2, Dark - Club Observing Nights at Crockett Park

Fr/Sa, Nov 8/9, Dark - Club Observing Nights at Crockett Park

We, Nov 20, 7:30 - NOVAC General Membership Meeting at Arlington Planetarium

Fr/Sa, Nov 29/30, Dark - Club Observing Nights at Crockett Park

Fr/Sa, Dec 6/7, Dark - Club Observing Nights at Crockett Park

We, Dec 11, 7:30 - NOVAC Executive Meeting - Blaine Korcel's house

We, Dec 18, 7:30 - NOVAC General Membership Meeting at Arlington Planetarium

Fr/Sa, Dec 27/28, Dark - Club Observing Nights at Crockett Park

Blue Clouds on Jupiter

Myron Wasiuta has reported seeing two intense blue "clouds" on Jupiter

earlier this month. He reported his observations to ALPO (Association of Lunar and Planetary Observers), which confirmed his observations with that of other astronomers.

The "clouds" are actually holes in the Jovian atmosphere caused by hot water vapor that have evaporated the clouds from the upper atmosphere down into lower regions of the planet. These regions are measured as the hottest in the planet.

Early morning is the best time to observe Jupiter during November and December when the giant planet placed high in the sky. The blue clouds should be around at least several weeks.

Myron determined their location to be 95-degrees (System I) below the North Equatorial Belt and protruding into the equatorial zone.

OBSERVING SITE RULES

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

The gate is locked at sunset and the combination is shown on your Observing Pass. Do not reveal it to anyone. The combination will be changed from time to time and you will receive a new

pass along with your newsletter. After setting the combination, the shackle must be pushed in slightly before it will release. You must lock the gate behind you after entering and please remember to lock it after you leave. No loud radios, no alcoholic beverages; no loose pets; do not leave trash or debris behind. We are guests of the park and our observing privileges may be revoked at any time because of the carelessness of one person.

Directions to Crockett Park

From the Washington D.C./Northern Virginia area, go west on I-66 to the Manassas exit, 234 SOUTH.

Continue on 234 until reaching Route 28--turn right. (If you are familiar with the area, there is a little short cut to Route 28 just past the "Po Folks" restaurant in Manassas. It goes past the IBM plant and saves about a mile.)

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

After crossing the Fauquier County line there are about six miles to go. You will drive through the sleepy little hamlets of Catlett and Calverton. After you cross over the railroad tracks in Calverton, you only have a few miles to go, thus you should start paying attention to where you are driving. Make a right turn on 643. CAUTION: the first 643 sign to come into view goes only left--DON'T TURN THERE! Continue for about a mile, and there is another Route 643 going right (to Warrenton). There is a small country store (Mayhugh's) on the corner of the intersection.

Turn right on 643 and proceed about a mile. Look for a small sign for C.M. Crockett Park on your right. Go about 100 yards and turn left. There will be a sign indicating "Dead End .5 miles". The park gate is at the end of the road. We suggest you get there before dark the first couple times. If it is dark, turn off your headlights when you stop at the gate.

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

If you decide to go there when its not an official club observing night, you must call the Park [(703)788-4867] ahead of time to let them know you're coming.

ADVERTISEMENTS

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

For Sale, Coulter Odyssey II, 17.5-inch reflecting telescope. Very good mirror. Unbelievable views. No wait. \$950. Carl Adams (703)391-8836.

For Sale, Celestron Super Polaris C-8, \$600 includes telescope, GE mount and tripod, 1.25" star diagonal, 1.25"

porro prism, 26mm Plossl eyepiece; \$1000 includes above plus dual-axis drive, Sky Sensor Computer with drives, 2 x 1.25" eyepieces (Celestron 12mm Orthoscopic, and University Optics 9mm Konig), Orion dewshield, 6 color filters, tele-extender, T-adaptor, piggyback camera mount, no finderscope though. Telescope 6.5 years old, excellent optics. TeleVue 2" star diagonal (only used twice) includes adapter for C-8, \$120. George Uhl - home:(703)369-4575, work: (703)883-7305.

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