

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*

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1991 Northern Virginia Telescope Meet Program

Friday, October 4 and Saturday October 5 at C.M. Crockett Park, Midland, VA. - (Saturday - rain or shine!)

Friday Night - Astronomer's Night

No official program planned for Friday night. Meet begins at dusk. Swap tables will be open and door prizes will be given away. Bring your telescope and have fun observing with fellow astronomers!

Saturday Night - Public Night

Events start at 3 PM. Come early and let the public view your telescope rig in the daylight. Concessions will be available. Jim Schaeffer will be giving guided tours of his Solar System Model, swap tables will be open, and talks will begin at 6:30 at the amphitheatre. This year's guest speaker will be Dr. Bradley Schaefer of NASA. Talks will end around 8PM followed by all-night observing. Door prizes will be given away. Let the public see the wonders of the universe through your telescope!

Telescope Meet Details

by George Uhl

This year's Telescope Meet promises to be bigger and better than ever! Building on last year's success, NVTM'91 will begin earlier in the day on Saturday, and have more activities than ever before.

Merchandise will be sold by NOVAC, other clubs and individuals in and around the Concessions area in a swap meet setting. The park will provide a concession stand for refreshments on Saturday night only. So bring your own food if you plan to be out on Friday. Camping will be permitted at the Park, but only R.V.s, Vans, etc. will be allowed in the parking and telescope areas, i.e., no tents. Tent camping will be permitted by the Dam, about 200 yards away. There will be no electrical or water hook-ups.

If you get there early, or plan to stay the weekend, Crockett Park has lots of fishing and some nature trails for hiking. You can rent a canoe and paddle around Germantown Lake.

The talks and slide shows will take place on Saturday night at the Amphitheatre (or in case of bad weather, Panorama Shelter) starting at 6:30 PM. Remember, Friday night is As-

tronomer's Night and begins at dusk, Saturday night is Public Night and begins at 3 PM in the afternoon. Lets hope for clear skys!

Programs At NOVAC Meetings

by Brent Archinal

Topics: "The Big One" on TV, Stellafane, NVTM'91

For those of you who were out of town or just couldn't make the July and August NOVAC meetings, you missed some excellent presentations. In July, I was one of the "out of town" ones, but rumor has it that John Huggins gave a very thorough presentation on the

What's Inside

Mini's Can Be Fun - Part III - The Final Frontier - page 2

Aperture Fever - page 2

Disaster at Crockett Park - page 5

Rediscovering the Moon - Part II - page 5

Sept./Oct.1991 Sky Sweep - page 4

A Solar Eclipse On The Cheap - page 6

The Solar Eclipse From Hawaii - page 7

Club Notices and Announcements - page 8

July NOVAC Meeting Minutes - page 9

August NOVAC Meeting Minutes - page 9

The President's Column - page 10

Stellafane '91 - page 10

USNO/NRL Optical Interferometer. Our August meeting was a very special one, with several interesting reports on the July 11 total solar eclipse and on Stellafane. But more importantly, NOVAC took the big plunge at the August meeting and decided to reorganize itself as a non-profit corporation (more below).

To some extent, our **September 18** meeting promises more of the same excitement. The big show for the night will be videos of **both** "The Big One", the July 11 total eclipse, and of activities at Stellafane as well. The eclipse footage will be a few minutes from each of two and possibly three tapes of totality from the Baha area, while the Stellafane coverage will be compliments of our illustrious President Blaine Korcel (and his new video camera!). Some other reports, slides, etc. may also follow, completing our coverage of Stellafane, the granddaddy of all amateur astronomy conventions. Finally, as Blaine describes elsewhere in the newsletter, we now have about half of the signatures we need on our new Articles of Incorporation in order to ratify it and put it into effect, so we'll certainly be collecting more. Whether you are a member currently, or are just interested in joining NOVAC soon, you may certainly sign the Articles. So let's see you there taking part in ratifying this historic document.

NVTM'91 announcements will also take up a few minutes of the September meeting, but our **October 15** will have as its main topic a wrap-up of the Northern Virginia Telescope Meet '91. This will include a general discussion of the meet, and probably some slides and other information. There will also be some discussion on how to make next year's meet even better (assuming we still want to do one by then!). So especially if you can't make it to the Meet itself, try to make our regular meeting - it'll be almost as good as being there!

Anyway, make sure you've got these two Wednesday nights open. We're continuing to try to have some great programs lined up that we hope are of interest to members and the public in general - as long as you've got any interest in amateur astronomy at all! See you at the 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. Call the NOVAC hotline (703-256-8359) to check for schedule changes, cancelation, or to leave a message to obtain further information.

Minis Can Be Fun, Part 3: The Final Frontier

by Al Schumann

The weather was forecast to worsen as the weekend progressed. And so it was that a small, intimate group of amateur astronomers braved rush hour traffic on Friday, June 14 and assembled on the grass at Crockett Park. It was a beautiful night, made all the more so because of the conjunction of Venus, Jupiter, Mars and a thin crescent moon.

The Messier chase was about to continue. There was no race against the clock this time around. In fact, there was ample time to enjoy the rest of the sky while waiting for the needed constellations to rise above the low lying haze.

For those of you who have been following this epic, the last chapter ended with the conquest of the galaxies in Virgo and Coma Berenices. However, there were two gaps in the sequence, M-68, a Globular cluster, and M-83, a spiral galaxy, both in Hydra. They were first on the agenda

and were added to the collection shortly after 10:00pm. By the way, in the last issue the optical scanner misread a few objects. Those of you who are sharp of eye probably wondered how M-65 moved from Leo to the Coma and M-66 to Hydra. It was supposed to read M-85 and M-68 respectively. Also, M-56 was listed in two places at the same time. It belongs in Lyra. The Virgo entry should have read M-58. Be that as it may, now it was fun time, rambling through that wonderful stretch of sky running up and down the Milky Way, an area I had traveled many times before.

This is where I made a big departure from Brent Archinal's sequence. Generally, his plan works from north to south. Out of habit, I go from south to north. A few years ago, as a newcomer to the game, I found that the nice bright stars in the Sagittarius "teapot" provided ideal jumping off points to quite a few celestial objects. Also, I noticed that a polar aligned, fork mounted telescope really came into its own in this part of the sky. If you take a real good look at your sky charts in the teapot area you'll see why.

The bottom star of the teapot spout, Xi Sagittarii, is almost on the same line of declination as M-7. Center Xi in your finderscope, sweep a few degrees to the right, and you've got it. Next, pick a spot halfway up the spout and sweep right, and M-6 will appear. With M-6 centered, sweep back to the left, through the spout, and you will run right into M-69 and M-70, two globular clusters.

Under decent sky conditions the Lagoon and Trifid nebulae are generally naked eye objects. If it's too hazy to spot them, Gamma Sagittarii, the upper right star of the spout, will lead you to them with a sweep to the north. M-21, an open cluster, is in the vicinity as well. By the way, sweeping east from Gamma is also the route to M-54, the third globular cluster in the teapot.

While you're there, lower the telescope 1/2 degree from M-54 and continue to sweep left to another globular, M-55.

One of the handiest alignments starts with Delta Sagittarii, the upper left star of the spout. Sweeping north in declination from Delta is the way to locate M-24, M-18, M-17 and M-16. Just a degree or so below M-24 puts you on a pretty good line with M-23 to the west and M-25 to the east. And so it goes. If you study your charts, you will find many other alignments that can make life easier. Just make sure you use your lowest power eyepiece and take some time to align the telescope.

The rest of the show went along without drama or excitement. M-30 was tucked away at 2:03am, and the three stage marathon was history. So, it must be time for a retrospective analysis.

The whole shebang took a total of just over 12 hours; three nightly observing sessions of roughly four hours each, or about the same amount of time it would take to hit them all in one night. There was a three month break between the start and part two, and that kept the observing sessions from going much past 2am.

The Coma/Virgo area makes an ideal break point for anyone wanting to cut the marathon into segments. The realm of the galaxies takes time; you just can't seem to hurry it along. The lack of obvious guide stars make it the most painstaking part of the project; inevitably there are false starts which have you going back to square one repeatedly. The rest goes rather quickly, and there are many side trips one can take to find and enjoy deep sky stuff outside the Messier list.

At some point in the search you're gonna get stuck. When that happens, it seems the harder you look the less

you see. It becomes terribly frustrating, and you figure your whole plan is going to unravel. That's the time to get up from the telescope, walk around a bit, have a cup of coffee and visit with someone else. The break gives your brain a chance to clear, and you will rejoin the fray refreshed. It can also help to bypass the offending object for a while and go for it later. Just make sure you don't forget to come back to it.

Brent's sequence is a great timesaver. It also helps ensure that one does not look for an object that has already set! I made some modifications from time to time (like dealing with Sagittarius), but that was based on personal preference. If I were to rig up my own sequence, I'd move M-33 up a few spaces. Also, I would pop up the two objects in Hydra so as not to get caught short on them while fumbling through Virgo. For more experienced observers, Brent's sequence is top notch. As a note in passing, I have updated the sequential list to include magnitudes and epoch 2000 coordinates. Also, the three objects mentioned above have been advanced a bit. When George Uhl has some extra space in an upcoming newsletter, perhaps he'll be able to stick in the revision as an attachment.

Overall, it was good experience, and sometime I'd like to run the whole program in one night. Around here we have some built in problems to contend with, and they complicate the project considerably. First, we're only a few feet above sea level, so there is a whole lot of atmosphere to look through. Even more significant is the amount of glow in almost all directions. If we could observe from a mountaintop sky in west Texas there would be a great number of extra guide stars to help to lead the way. Also, many more of the Messier objects would be visible to the naked eye. Problems notwithstanding, I gotta say it again, "Minis Can Be Fun".

Aperture Fever

by George Uhl

I guess it eventually happens to most of us. You're out at Crockett Park, Sky Meadows, or some other dark observing site, and you look through somebody else's light bucket. There, through the 2-inch, 12mm Nagler, lies M-13 with myriads of stars filling the eyepiece. You shuffle back to your 8-inch SCT, point it at M-13, and you're a little disappointed. Nothing wrong with an 8-inch SCT, except that the mirror is only 8 inches in diameter (less the central obstruction, of course). In the beginning, you shrug it off. Hey, you can see a lot with the telescope you've got. However as the years pass by, you begin to realize that you've gotten the most out of your telescope as you're gonna get - and you want more!

Well, I got aperture fever - and a bad case of it, too! Next thing I know, I'm driving across the country to Colorado to pick up a 14.5-inch f/4 Dobsonian. Out and back in just 4 days! You can't predict the behavior of someone with aperture fever. This is how I got infected:

After looking through some of the nicer large reflectors at last year's telescope meet, I caught the bug. Soon after the meet, Meade was offering a deal on their 10-inch Premier Series SCTs. A stripped down Meade was only \$1600. I called a few dealers and found that I could get a decent SCT, with the accessories I wanted, for about \$2000. I put in an order with one of the dealers. Then I began to have second thoughts. After all, a 10-inch is only slightly larger than an 8-inch, and furthermore, buying a commercial telescope is like buying a car - you never know if you've bought a lemon until it's too late. Fortunately, the gods smiled on me. When I called the dealer, I was told that Meade had screwed up and never took the order. I promptly cancelled it.

I still had my 8-inch and I could continue my search for that perfect telescope. Something large enough to give stunning views, but small enough for me to handle and fit in my Bronco II. A Newtonian between 12 and 15 inches would be ideal. I have just enough room to stick a tube about 60 inches long in the Bronco. That translates into a 12-inch f/5, a 15-inch f/4, or something in-between.

Since last winter, I've thumbed through many editions of the STARRY MESSENGER, ASTRONOMY and SKY AND TELESCOPE. In the August edition of the STARRY MESSENGER, I saw a couple of 12.5-inch reflectors that were appealing. I called a few people, but they were in places like NW Ohio, or California. They wouldn't guarantee to send me my money back if I didn't like the telescope, or if it was damaged in shipping. I decided to investigate closer to home. Two members of the club who work at my company (Steve Cox and Lowell Rosen) were selling a Meade DS-10. They let me take it home and try it out. It was a decent telescope, but it had an 45-inch focal length, which for me, was too short a focal length for a 10-inch telescope. Had it been an f/6, I probably would have bought it. I phoned other members of the club for advice. By providence, destiny, fate, my "stars", or whatever you want to call it, I talked to Myron Wasiuta. He told me about a telescope for sale that exactly fit my needs. Myron used the telescope at this year's Texas Star Party, and raved about it. It was the personal telescope of John Hudek, the gentleman who owns and operates Galaxy Optics. Myron also said the price tag was cheap, in the \$1200 to \$1500 range. Only one problem though, John Hudek lives in Buena Vista, Colorado.

I called John the next day, and he told me that besides Myron and myself, only two other people knew the telescope was for sale. Since no one had

offered to buy it yet, I jumped at the opportunity. The price was set at \$1400, and I immediately wrote a check for it. John was reluctant to ship the telescope, because of the damages likely to be incurred in shipping. Because Myron spoke so highly of the telescope, I thought a 4 day ordeal to Colorado and back would be worth the years of enjoyment I would get from it, and I also wanted to prevent anybody else living closer to John from snatching it. It was a Friday when I called John, so I decided to take two days leave (Monday and Tuesday) from work, and drive out there the next morning. I wasn't about to let this chance-of-a-lifetime get away.

It's one thing to fly across the U.S.A., it's another thing altogether to drive across it. This is a BIG country. I left Saturday morning at 5:30 AM, and made it to Booneville, Missouri by midnight. Booneville is 100 miles east of Kansas City. I found a flea-bag motel to rest in for a few hours before I continued on my trek. I left at 6:00 Sunday morning and made it Buena Vista at 6:30 EDT. Buena Vista is 120 miles SW of Denver, in the middle of the state. John made arrangements for me to stay at a nice little motel. After a 3 mile run and a shower to revitalize myself, I drove over to John's home. He's got a real nice setup.

At 9000 feet, Buena Vista is nestled in the Arkansas River Valley, and is surrounded by the majestic peaks of the Colorado Rockies. From John's doorstep you can see the "Collegiate Peaks", Mt. Princeton, Mt. Yale, and Mt. Harvard, which are all over 14,000 feet. A semi-arid climate, which is surprisingly temperate for its altitude, and an average yearly snowfall of 25 inches, it's no wonder they call the town Buena Vista. Galaxy Optics is a laboratory attached to John's house. As he gave me a tour, I realized that he could choose any place in the country to set up shop, and that he carefully chose his present location for its alti-

tude, climate and pitch-black skies.

We went out to dinner, and had planned to do some observing that evening. Unfortunately, there was a front moving across the region with scattered thunderstorms. Although it looked like the sky might clear up sometime in the evening, it was too humid for the clouds to disperse until after midnight. I was just too exhausted to stay up that late, and decided to pack up the telescope instead. I did get a chance to look at the sky through some temporary breaks in the clouds. It was late twilight, about 9 PM, but I could see the Milky Way from Cygnus to Sagittarius, I have never seen stars so bright, or skies so transparent. The Milky Way was "granular", like sunlight reflecting off millions of snow crystals. John kept on saying that the air was too humid, and that I ought to be there on a good night. Believe me, someday I will!

After a needed 8 hours of sleep, I was on the road at 8 AM EDT. 16 hours later I was in Evansville, IL. I found another flea-bag motel to crash in. The next morning, I was headed home by 7 AM EDT. I pulled into Manassas at 7 PM, and stowed my new treasure away.

I've used the telescope several times so far, and have enjoyed it thoroughly. As you know, August historically hasn't been the best of months to observe around these parts, but I did have one very good night (I could see down to 5.5 magnitude) at Crockett Park to myself. M-13 was stunning, as were the globular clusters M-5 and M-22, the Veil Nebula was gorgeous, the open cluster M-11 was breathtaking, and surprisingly Saturn was very distinct. Cassini's division was sharp, there was a large cloud belt visible, and 5 moons. It was a work night so I packed it in at midnight, which was good timing as the leading clouds of a front were moving in. I can't wait for the delightful evenings of September and October to come.

Disaster at Crockett Park

by George Uhl

As a little footnote to my previous article, I thought some of you might be interested in this follow-up story. That nice new, pristine, 14.5-inch f/4 mirror has a small but ugly blemish in it now. It doesn't affect the performance of the mirror, but it looks horrible (to me, at least). This is how it happened:

I was out at Crockett Park, Sunday night, September 1, and I was collimating the optical system of my telescope. As I was adjusting the secondary mirror, the mirror came out of its cell and tumbled into my main mirror. This happened in less than a second, but for me it seemed like an eternity. After screaming in agony and despair, I crawled into the back of my Bronco and assumed the fetal position. It took a minute for me to compose myself, after which I decided to see what I could salvage. Brent Archinal, Jim Schaeffer and Bob Bunge reassured me that a 3/4-inch x 1/16-inch scratch would not affect the mirror's performance. The dime-sized chip on the edge of the secondary wouldn't make that much difference either, I was told. Just a little water soluble, flat black paint to prevent scattered light, and I would be back in business! They told me about the 107-inch mirror with the 3 bullet holes in it at the MacDonald Observatory, which by the way, is still being used to this day. Bob helped me reassemble my secondary, I cleaned off my primary, and I put everything back together (minus the paint, of course). As it turned out they were right. I had a great night observing until the moon came up, after which I packed it in.

Rediscovering The Moon - Part II

by Bill Burton

For the lunar observer, the Moon has two faces. Under low-angle illumination, near the terminator or day-night boundary, both large and small topo-

graphic features stand out in sharp relief, as seen in this view along the terminator of the first-quarter moon (Figure 1). The craters shown are, in decreasing order of size, Stofler, Maurolycus, Aliacensus, Gemma Frisius, Licetus, and Cuvier.

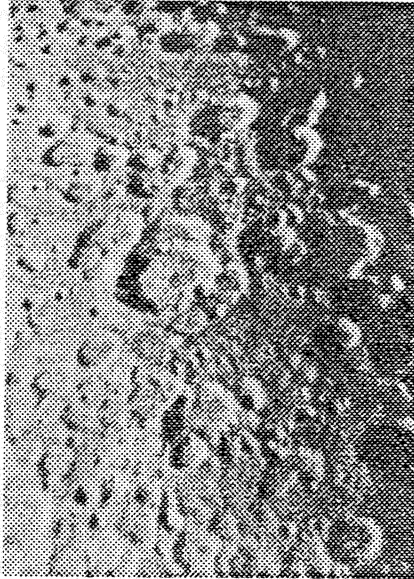


Figure 1

In contrast, (or lack of it) the Moon under high-angle illumination (Figure 2) primarily displays differences in brightness and color of the lunar surface materials, which vary (as mentioned last issue) as a function of composition, roughness, and length of time exposed on the surface. The last factor is important because it is believed that on the moon's airless surface continuous exposure to the charged particles of the solar wind darkens materials over a long period of time. Therefore the greater reflected brightness, or albedo, of some lunar materials means that they were probably deposited more recently. This particularly holds true for craters and crater ejecta, although it does not apply in a broad sense to the older but lighter-colored lunar highlands and younger but darker lunar maria. "Younger" is a relative term as used here, referring to material that is still over three billion years old! Figure 2 shows a small area west of the "very young" (less than one billion years

old?) crater Tycho, where one of its bright ejecta rays splashes across a mottled region containing both light highlands and dark mare basalts, as well as small young bright craters and crater ejecta.



Figure 2

One of the visually most striking regions on the moon in full illumination is the area around the crater Proclus, between the maria Crisium and Tranquillitatus in the northeast lunar quadrant (Figure 3). There are three distinct visual elements here: Proclus, a relatively young impact structure with conspicuous white ejecta rays; the light gray lunar highlands, Palus Somni, underlying the impact site; and the adjacent dark mare (Tranquillitatus) with its irregular margin. The obvious asymmetry of the ejecta rays suggests that the impacting object came in at a low angle, probably from the southwest (upper right).

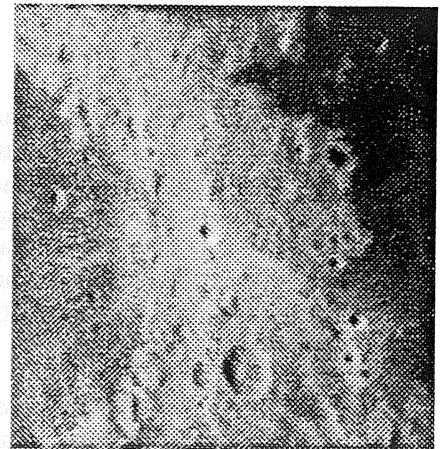


Figure 3

Some of the more subtle features to be seen on the moon through a telescope are long sinuous ridges in the maria known as wrinkle ridges (Figure 4). These are visible only under very low angle illumination, near the terminator. Wrinkle ridges, such as the one shown here in Mare Serenitatus (arrow) are a result of horizontal compressional forces that were active after the surface of the mare basalt solidified. Wrinkle ridges may have formed simply as a result of cooling and contraction of mare lava; or they may have formed due to movement on tectonic faults buried underneath the lava. In any case, they are another indication that the moon has been a more active place than is apparent at first glance.

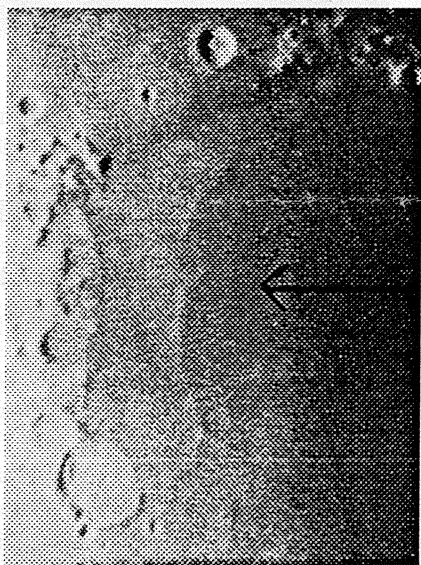


Figure 4

Sky Sweep for September/October 1991

by Kevin Jones

Late on autumn evenings, Cepheus the King graces the northern sky just above Polaris. This constellation, although rather faint and unimposing, sits along the fringe of the Milky Way and contains some absolutely fascinating objects which can be observed with binoculars or a small telescope.

Delta Cephei, the left cornerstone of the "house" asterism which makes up Cepheus, is a well known variable star.

It is the prototype of the Cepheid variable stars, which change in brightness as they pulsate. The fact that there is a set relationship between the luminosities and periods of Cepheid variables makes them an invaluable tool for determining distances to nearby galaxies. Through the telescope, however, Delta Cephei is just a plain white dot. Moving on to more visually interesting targets...

Mu Cephei, located about where the front doormat of the "house" asterism should be, is a refreshing change from the predominantly white or off-white stars which make up most of the night sky. Called the "Garnet Star" for readily apparent reasons, it shines with a golden, orange-red, or garnet hue, depending on the observer. This extremely luminous red supergiant ranges in brightness from third to fifth magnitude over a period of about two years. Cepheus is home to another star notable for its reddish color - S Cephei. This star is situated about eight degrees north of Beta Cephei ("Alfirk," if you're into "common" names of stars) and roughly midway between Gamma and Kappa Cephei. Ranging from magnitude 7.7 or so at maximum to 13th magnitude at minimum, this star can be elusive. You will know when you've come across it, however, due to its intense red glow. S Cephei is a "carbon star," a deep red star even cooler than normal M-class stars.

Switching to some more traditional deep-sky fare, the pairing of NGC 6939 and 6946 is located about two degrees southwest of Eta Cephei. NGC 6939 is a fairly impressive open cluster of about 100 stars, 12th magnitude and fainter. Only 38 arcminutes away is the almost face-on spiral galaxy NGC 6946. This galaxy is believed to be located just outside our Local Group of galaxies. At only 10th magnitude, the surface brightness of NGC 6946 is rather low, but the small and bright nucleus appears distinct. The rest of the galaxy is evident as a vague

circular haze surrounding the nucleus.

The large and faint open cluster NGC 188 is unimpressive through the telescope, but is quite interesting nonetheless. This cluster of around 150 stars is the oldest known open cluster. Its age has been estimated at about 12 billion years, even older than some ancient globular clusters.

Sweeping the area around Mu and Delta Cephei at very low power reveals several interesting clusters and chance groupings of stars, and even some occasional nebulosity. These, however, I'll let you discover for yourself.

I hope to see lots of you out under the clear (I hope), unlight-polluted (I wish) skies of NVTM'91 coming up in October!

A Solar Eclipse On The Cheap

by Al & Lynn Schumann

There was no diamond ring. No Baily's beads either. For that matter, there was no corona or totality...at least not in Springfield. However, that didn't stop us from thoroughly enjoying the 11 July 91 partial eclipse. Equally enjoyable was the price tag which came to about twenty bucks.

A few weeks before the event we called half a dozen welding supply houses in search of #14 welding filters. We struck paydirt at Potomac Air Gas in Alexandria and picked up a couple of each size. The filters one usually associates with welding are roughly 2 X 4 inches. Happily they also come in a larger format of about 4 X 5 inches. The latter was perfect as a lens filter for our camera's 280 mm lens.

The sun is nothing to fool with, so we wanted to have a fail safe set up with the camera. To make sure the filter would not fall off inadvertently, we encased the camera and filter in a box.

In fact, we cut a shoe box and shortened it so that the camera and filter could be wedged tightly in place. Next, we cut holes in the box for the viewfinder, film advance lever and the filtered lens. Another hole was cut in the bottom of the box so we could attach the whole works to a tripod. Then, we stuffed dark cloth around the point of contact between lens and filter and taped everything in place. There was no stray light seeping in, and absolutely no way the filter could become detached.

To our knowledge, no one has ever come up with exposure figures for shooting pictures through a #14 welding filter. Therefore, a week before the eclipse, experimentation began in earnest to determine the right mix of ISO film speed, f-stop and shutter speeds. Cutting right to the chase, ISO 1,000 gave us nearly ideal "snap shot" conditions of 1/250 second at f-8. The light meter was right on the button. No guiding, no nothin'. Just aim to center the image and shoot. To put the icing on the cake, we already had a half used roll of Kodacolor 1,000 in one of our camera bodies. At E minus five days, we were ready.

Photo results were extremely gratifying. Our photos were crisp, and the 7% bite the moon took out of the sun was sharp and clear. The pictures were only for the record. The real fun was viewing through the filter with the naked eye. What a treat it was to peer at the sun safely and watch the whole show unfold. It was also a treat to bring a young neighbor in on the act and to enjoy his reaction. It was exciting to watch the shadow of the moon work its way around the perimeter of the sun, from about the five o'clock position to around eight o'clock or so when the moon's shadow finally broke away.

Another nice thing about this eclipse was the time it took. It was no "now you see it, now you don't" affair. There was a full hour of viewing; cer-

tainly enough time looking up to give us sore necks for the rest of the day. There was ample time to take pictures of the sun, to take pictures of US taking pictures of the sun and do other things like conduct the old binocular-image-projected-on-a-sheet-of-white-paper routine.

It seemed to take forever for the last bit of shadow to clear the sun's limb, but finally it was over. We checked the time, but neither of us even bothered to jot it down. We just popped a cool drink and felt very satisfied.

What's next? Well, that large filter just happens to cover the objective lens of our copy scope. Might have to devise a holder of some sort and do a bit of sunspot monitoring now and then. After all, there's no point in blowing twenty bucks just for one lousy eclipse.

The July 11th Solar Eclipse from Hawaii

by Kevin Jones

Yes, the Jones family made the hard, ship-laden trek to the Hawaiian Islands this July to experience the total solar eclipse of the 11th. Unfortunately, as I'm sure most of you have heard by now, skies were not as clear as expected over most of Hawaii.

We were a part of the 1200 member Bishop Museum eclipse-viewing expedition, which flew everyone over to the Big Island in the middle of the night before the eclipse. They dumped us in the middle of a big field at Waikoloa (or something equally Polynesian-sounding) Stables on the Big Island of Hawaii, right smack in the middle of the much-touted "zone of clearest weather." All these people in this one little field gave rise to many allusions to an "astronomical Woodstock." As fate would have it, as we were discussing this Woodstock angle, a Volkswagen van full of drunk, guitar-toting, aging-hippie musicians pulled up nearby and began playing. To the expedition's relief, the police showed

up shortly and transported the group elsewhere.

Anyway, when the star attraction finally rose, it was apparent that the weather wasn't cooperating fully. Clouds were everywhere. "Gee, THIS hasn't happened in a while," I heard one native remark. Fortunately, when the partial phases of the eclipse began in earnest, the sun did decide to peek out through holes in the clouds occasionally. About 15 minutes before totality, the skies were starting to look pretty good. "We're actually gonna see it!" was the mood of the nervous crowd of spectators. Unfortunately, the cloudiness was notoriously fickle, and during that fateful five minutes before second contact, the sun became socked in. The moon's approaching shadow was impressive, as was the darkness. It didn't become as dark as I'd expected, however. That same sentiment seemed to be expressed by many of the ecliptophiles present. After waiting through the five minutes of totality for the hole which never came, it cleared off beautifully for the remaining partial phases and for the rest of the day. Oh well.

Although the crowd was disappointed, in general no one was militant or violently upset. I don't think anyone tried to get a refund. And hey, afterwards those who wanted to go to watch a local TV personality try to express to his viewers that the eclipse was clouded out and that was about the worst thing that had ever happened since the dawn of time. And as an extra bonus, Jack Horkheimer, the "Star Hustler" himself was there! (I, of course, suavely approached him and got him to autograph my Bishop Museum "Sun Peep" eclipse viewer...)

Contrary to what you may have heard though, there were spots on the Big Island where totality was visible, and many people saw it fine. Even at our unfortunate site, we did get to see the partial phases and "experience" totality. And, of course, if you have to be

clouded out somewhere, Hawaii's a perfectly nice place to do it!

One final anecdote - while being bussed back to the airport for our flight back to Maui, we passed through a large area of black lava floes. Creative locals, not wanting to resort to spray cans, have gathered white limestones and arranged them against the black lava to spell out messages ("I luv Susan" and "U of Hawaii #1" and the like). Well, someone must have worked fast that morning of the 11th, because some large white stones arranged on a black lava hillside spelled out "Eclipse Fiasco 1991!"

NOVAC NOTICES

Observing at Outdoor Lab

NOVAC members have been invited to observe at the Arlington Outdoor Lab located near Warrenton on Friday, October 11. (This is a change from the previously announced date.) Come out and see what the Lab has to offer.

Directions to the Lab: I-66 to the Haymarket/Leesburg Exit. Go south 1 block on Rt. 15 to Rt. 55. Turn right on Rt. 55 and go west 4 miles to Rt. 600. Turn left on Rt. 600 and go 2 1/4 miles to Rt. 792 (just past a board fence - route sign is on left). Turn right on Rt. 792 and go to end of road and through gate.

Please Call Brenda Jones (703-527-7963) If you will be coming!!!

September/October Calendar

Fr/Sa, Sep 7/8, Dark - Club Observing Nights at Crockett Park

Tu Sep 10, 7:30 - Executive Meeting at Al Schumann's house

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

Planetarium

Fr/Sa, Oct 4/5 - 9th Annual Telescope Meet - Crockett Park, Friday - Astronomer's Night begins at Dusk. Saturday - Public Night begins at 3 PM

Fr/Sa, Oct 11/12, Dark - Club Observing Nights at Crockett Park

We, Oct 16, 7:30 - NOVAC General Membership Meeting at Arlington Planetarium

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, relock the gate, 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.

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

66 -> 29, S ~ 7 mi to Rt. 600, R, ~ 2 1/2 mi to 792, L, past a cottage

members only, and your Observing Pass must be available upon request. 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.

July NOVAC Meeting Minutes

The meeting was called to order on Wednesday, July 17, 1991, at 7:40PM with Blaine Korcel presiding. Sixteen members and guests were present. The minutes of the previous meeting were accepted as printed in the last newsletter.

OLD BUSINESS:

1. Blaine Korcel reminded the membership that we would be voting on the proposed Articles of Incorporation and NOVAC By-Laws at the August meeting.

2. Al Schumann gave a re-cap of his presentation to the Montgomery Village Foundation. The new NOVAC slide show and briefing was very well received. Cloud cover disrupted the viewing session.

NEW BUSINESS:

1. Al Schumann announced that the new combination has been set in the lock at Crockett Park. He also noted that the NVTM has been listed in Astronomy magazine's Meetings and Events column.

2. Jerry Wolczanski updated the pol-

ishing and figuring process on the new club mirror. He and Herschel Payne will set up the test equipment and check out the mirror at a subsequent meeting.

3. It was noted that several NOVAC members will be making the trip to Stellafane in August.

4. Al Schumann showed a number of partial eclipse photos as taken through a #14 welder's filter.

5. Blaine advised the membership of the eclipse extravaganza coming up at the August meeting when the Archinals and Joneses show their stuff.

The meeting was adjourned at 8:00pm at which time John Huggins gave a talk on the USNO/NRL Optical Interferometer.

Respectfully submitted,
Al Schumann, Secretary

August NOVAC Meeting Minutes

The meeting was called to order on Wednesday, August 21, 1991, at 7:35PM with Blaine Korcel presiding. Nineteen members and guests were present. The minutes of the previous meeting were read and accepted.

OLD BUSINESS:

1. George Uhl gave an update on the NVTM. He announced that Bradley Schaefer would be the Guest speaker. Also, George circulated a request for assistance during the meet.

NEW BUSINESS:

1. Brent Archinal moved that the proposed Articles of Incorporation for non-profit status be brought to a vote. The motion was seconded, there was no discussion and the motion to approve the articles was passed unanimously. Brent was given a hearty round of applause for his work in spearheading the historic effort. Thirty signatures are now required for

ratification.

2. Al Schumann gave a recap of a recent Fauquier County Day Camp outing at Crockett Park. Approximately 200 girl scouts and their families attended and viewed the moon and Saturn. It was very hectic with only two telescopes, but successful.

3. Blaine Korcel mentioned an upcoming program at Burke Lake Park on Aug. 23. The program will feature a lecture on astronomy from space. Blaine requested assistance with extra telescopes.

4. Brenda Jones mentioned an open house at the Arlington Outdoor Lab over the last weekend in September. Contact Brenda at (703) 527-7963 for details.

5. George Uhl reminded the club that August 30 was the deadline for the next newsletter.

6. Blaine Korcel noted that the September meeting program would consist of videos of the July 11 eclipse and activities at Stellafane.

The meeting was adjourned at 8:00pm, and the membership was treated to an aclipse orgy. Bob Hammedien recounted his observations and impressions of the eclipse from the tip of the Baja Peninsula. Brent Archinal followed with a stunning audio / visual eclipse program as recorded from a cruise ship at sea. Finally, the Joneses showed slides and told of their eclipse experiences from Hawaii.

Respectfully submitted,

Al Schumann, Secretary

The President's Column

Greetings once again. I hope everyone's summer has been as good as mine. I've actually managed to get out observing once or twice since the last issue. I missed the eclipse out west however but managed to make it to Stellafane last month. See my article in this issue.

The club is now officially committed to becoming incorporated. As of this writing we have half of the signatures required for adoption of our articles of incorporation. We hope by the next meeting, we will have at least 30 signatures. If you wish to go down in history, please come to the September meeting and sign them. This is probably the MOST IMPORTANT piece of business that NOVAC will ever encounter.

We will also be showing some exciting video footage of the July eclipse as well as our trip to Stellafane in Springfield, Vermont this past August. Please bring your own popcorn and candy bars. Refreshments will not be provided!

In August, several of us helped out with two organized gatherings of potential astronomers. Al Schumann, his father, and I played hosts for what was supposed to be a small group of girl scouts at Crockett Park. Instead, it turned out to be this huge organized gathering of about 180 or so day care and girl scout troops. We were pleasantly surprised at how well the whole group behaved throughout the evening. Al, his dad, and I were even serenaded for a while with a chorus of 180 kids singing Twinkle, Twinkle, Little Star. It was a lot of fun even though we were short on scopes.

The following week, Bill Burton and Al Schumann, possibly others as well, played hosts for a slide presentation at Burke Lake Park given by a gentleman from the Naval Research Lab on Astronomy from Space. Wish I could have been there to tape it for you!

We'll hear more about that, I'm sure, at the September meeting.

Once again, Crockett Park will be sponsoring the annual Children's Festival on Saturday, September 14. The festival runs from 2 to 7 pm. We've been asked to come and set up a scope or two at a booth and hand out information about the club. The best case is we can use the exposure to publicize our NVTM the following month by handing out flyers.

I cannot commit myself to the event although I may go out if my plans fall through the cracks. If anyone is interested in helping out at the festival, they should call me and let me know. I've got a permit to get us into the booth area. If want more information about what all this entitles, call Jim Schaefer. He volunteered last year and knows the ropes. You can also call the park at 703-788-4867.

The last item I wish to mention is our Northern Virginia Telescope Meet (NVTM) which will be held on October 4th and 5th. Flyers are available for distribution. I won't go into the details here as they were mentioned in the last issue of the newsletter and can be obtained by calling our NOVAC Hotline. Any new developments I'm sure will be mentioned by George Uhl, our NVTM coordinator this year, in this issue. Also, George needs your help with the NVTM set up and operation. Please call him and volunteer your services. Tasks which have not been filled, will be assigned to people as they are needed.

That's about it for now. See you all at the September meeting and don't forget the popcorn!

Clear skies,



Blaine Korcel, President,
NOVAC

Stellafane '91

by Blaine Korcel

What is all this Stellafane fuss? For those who don't know what Stellafane is, it is an annual telescope makers convention held in Springfield, Vermont by the Springfield Telescope Makers. Stellafane is a derivative of the original Stellar Fane which interprets to "Shrine of the Stars." The event has been going on for 56 years and many call it the grand-daddy of all telescope conventions. Telescope makers from all over the world come to see what works of art other telescope makers have constructed.

Along with general observing, there are a myriad of talks, swap tables, raffles, and telescope competitions to mention just a few events. It is a weekend where sleep is an unspoken word unless it's cloudy and the mere mention of rain is enough to uphold the death penalty!

This year, Stellafane was held on August 9th and 10th. Brent and I decided to once again make the ten and a half hour drive to Vermont. We left early Thursday morning and arrived at the motel early that evening. The plan of attack was to rest up before spending the weekend out camping on the convention grounds.

Friday morning, we found our camp site and proceeded to set up camp under cloudy skies. By about 1 or 2 pm it had begun to rain and it didn't let up for 15 hours straight. Outside of the tent leaking and having a muddy mess around, we did manage to have good time in spite of the weather.

Bill and Laurel Burton had arrived early that evening. Bill had scheduled a surprise astronomer's birthday party for Laurel which we held under a canopy on our site.

That evening, a series of talks were held, mostly on the solar eclipse in July. There were plenty of colorful

slides shown and a few interesting talks about the clouds which were prevalent around some of the areas of totality.

Saturday morning I was woken by not the soggy sleeping bag but by someone yelling, "Let's check out the swap tables!" A quick look at the watch told me it was only 5:30 in the morning. What die hard!

The swap tables continued all day in what we liked to call the pig pen or hog wallow. This was because they set the tables up under the tent which had about 2 to 3 inches of mud under it.

One of the saving graces was the fact that the weather front had pushed through much quicker than most anticipated. By about 3pm the skies had begun to clear and by the start of the evening talks and raffle, it was perfectly clear.

We were pleased to discover that two of our own members were entered in the competition, (Bob L'Hommedieu) and (Byron Wasiuta). Bob took third place for craftsmanship with his 4.5" portable dobsonian, NOVAC's first member ever to win an award at Stellafane! Although Byron did not win an award, he should have received some form of honors for the outstanding work he did on his telescope, an equatorial mounted 10" F/8 newtonian which moved as smooth as a baby's bottom. Congratulations guys for sticking it out to the end!

Once the hoopla and evening talks were finished, everyone set out for some SERIOUS deep sky observing. Yes, once again the 30" telescope was fixed to a swirling image of Saturn all night and had line of about 100 people trailing from it to the north.

While the lines at the scopes wound down and my feet were resting, Brent and I spent about an hour talking with Richard Berry, Editor in Chief of Astronomy Magazine up in front of the

club house. During that time, we watched some auroral activity in the north, mainly in the form of streamers. A slight color difference was also noticeable when scanning between the North-East and North-West.

Once the crowds dwindled, we observed till two or three AM through some of the hundreds of scopes around the convention site. At which time, we decided that we were getting rather exhausted and packed it in.

After running around Vermont on Sunday, we made the ten and a half hour drive back which ended a soggy but great weekend.

All this and more will be shown in full color at our September meeting.

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NOVAC

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