NOVAC

The Newsletter of the Northern Virginia Astronomy Club

Issue Number 29 | Volume 10 | May/June, 1990

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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

Programs At NOVAC Meetings

by Brent Archinal

Once again our past few meetings have had some very interesting programs. On March 21, Kevin Jones presented the then current planetarium show at the Arlington Planetarium, "The Voyager Encounters". This was an excellent presentation, including many photographs taken by the Voyager spacecraft - even many not well publicized ones from the encounter last August with Neptune. This program was followed by another well done program on April 18 by Geoff Chester, about his recent observing experiences on Mauna Kea - assisting with observations to determine wind velocities in the Venusian atmosphere! Don Larson also let us in on his recent trip to the Tampa Star Party in Florida. Anyway, we again thank all the speakers, and especially thank Steve Smith and Kevin Jones not only for the presentation of their show, but in continuing to let NOVAC use the planetarium for its meetings.

Our program this month on May 16 will actually bring us two speakers on two different subjects. Bob Ridgley will be finally be giving his long delayed presentation on his computerized 10" Meade telescope. Bob will be setting up just outside the planetarium if the weather permits, and letting us in on the details of how the telescope operates. If you've been considering buying one of these Meade (or Celestron) computerized "wonder telescopes" this is the meeting to attend.

Kevin Jones will also be giving us another presentation, this time on his multi-award winning "jam-jar magnetometer" experiment. Kevin has built two of these devices, based on an article a few months back in Sky and Telescope. They are quite sensitive to minute local changes in the Earth's magnetic field,and therefore can indicate conditions such as those leading to ionospheric disturbances - like varying radio communication conditions or (of most interest to us!) aurora. Kevin has entered this in a succession of science fairs and (as I predicted in March!) won several awards. He received "First Place" and "Best of Show" at the Washington and Lee High School Fair, a "First Place" at the Northern Virginia Regional Science and Engineering Fair, and placed in the Virginia State Science and Engineering Fair, receiving certificates from the Department of the Navy, the National Space Club, and a Citation of Merit from the Patent Office Society. Anyway, you don't want to miss his demonstration - at the very least maybe we'll learn how to predict when an aurora is about to occur or occurring - so we'll know what's going on behind all those clouds!

For our June 20 meeting, our illustrious president Blaine Korcel will be giving a presentation on the NOVAC computer Bulletin Board System. Blaine has been single handedly operating this large astronomy oriented BBS from his home for over 3 years now and it continues to be one of the largest such systems in the country.

What's Inside

He will be demonstrating the board live over a dial in line (as it would be accessed by any user) and showing us some of its capabilities such as several local and national "conferences" used for general communication on various astronomical (and NOVAC related) topics. He also will be mentioning the extensive numbers of astronomy related program and data files available for downloading by users, and particularly his recent work on providing direct access by users (through a "door") to a general astronomy database program called NGP (for "New General Program"). Anyway, if you have a computer, or are considering getting one, or just want to know more about this aspect of amateur astronomy, make sure you attend this "summer solstice" meeting.

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 (703-256-8395) for schedule changes, cancelation, or leave a message to obtain further information.

The President's Column

by Blaine Korcel

Comet Austin has pretty much taken this Spring's observing interests. Although not as bright as originally predicted, the comet should appear pretty spectacular for our May observing window. Let's see some good pictures from all this!

The NOVAC computer BBS will be undergoing some major enhancements over the next month. The system is heading towards a multi-processor system which should speed things up quite a bit.

Additional disk storage and dial-in lines are strong possibilities as well. Hardware failures during this past month have set back some of these enhancements.

If anyone would like to donate a tape drive, one is needed. Our old one fried with the bad power supply. Backups now are a real chore! Time to get out all those floppy disks!

Along these lines, I will be giving a real time demonstration of the NOVAC RBBS at the June meeting. At that time, I will be announcing the public access of the first of a series of database systems which users will be able to access to plan their observing programs. This database, the NGP database by Gary Williams, is the first to be implemented for remote access. We are all pretty excited about it.

Not much else has been happening lately. Let's hope for some clear spring time skies and good weather in the upcoming months.

Clear skies,

Blaine

Blaine Korcel
President

A New Editor

by George Uhl

I am pleased to take over as the NOVAC Newsletter Editor from Bob Ridgley. Bob has done an outstanding job as the Editor and will continue to function as the Newsletter Producer as well as Club Treasurer. I think that he deserves a lot of praise and appreciation from the rest of us. Thanks Bob.

I don't plan on changing the format of the newsletter. As far as content goes, that's up to you. If you wish to contribute an article, you can do it several ways. You can compose your article on your Personal Computer using your favorite Word Processing software, or you can type it up using a typewriter. I'll accept handwritten articles as long as they're legible. The easiest way to get your article to me is to upload it to the NOVAC Computer Bulletin Board (the number is in the upper left-hand corner of the front page) addressed to George Uhl. If you don't have a modem (or a PC) you can contact me at home (703)369-4575 on weeknights and weekends, or at work (703)883-7305 on weekdays, to make arrangements to get me your article. Another way is to bring it to the monthly NOVAC meetings held at 7:30 p.m. on the third Wednesday of every month, at the Arlington County Planetarium.

If you haven't been to a club meeting recently, you are missing out. The meetings are informative and fun. Club activities and current events are discussed, with the highlight being the monthly program. This is where a member shares his/her experience, knowledge, and ideas with you. If you can't come to a meeting, bring your scope out to C.M. Crockett Park during one of our club observing nights. May 18, 19, 25, 26 and June 15, 16, 22, 23 are the scheduled observing nights for the next two months.

Sky Sweep, for May-June

by Kevin Jones

As spring rolls on, I'm sure many of you will be trying to get in some quality galaxy observing before the wonderful clusters and nebulae of the Milky Way appear. Well, the single best part of the sky for observing galaxies just happens to be well-placed for evening observing during May and June. This area is the Virgo Supercluster of Galaxies, and is roughly contained in the "Y" asterism of Virgo. The Milky Way galaxy is contained in the cluster, and consequently it is the closest aggregation of its type to us. The Virgo Super-

cluster contains at least 3000 galaxies and is roughly 42 million lightyears distant. But, enough with the physical data, and on to the meat of observing galaxies in Virgo.

The starting point for this exploration of the "Realm of the Galaxies" is at the approximate center of the supercluster, rough position RA 12h 25m, Dec +13 degrees. This is the location of two Messier objects, M84 and M86. These two 10th magnitude elliptical galaxies are 17' apart and form a fine pair in the eyepiece. In the immediate area are two fainter galaxies. NGC4402 is an edge-on system which lies 9' to the north. The other, NGC 4388, is located 15' to the south and is another almost edge-on system. From the M84-86 area, moving two or three degrees to the northeast along a scattered chain of 7 fainter galaxies brings you across the border into Coma Berenices. Here you will encounter a bright many-armed spiral, also of 10th magnitude. This is another Messier object, M88. Try to glimpse the spiral structure of this galaxy with larger telescopes. When you have finished savoring the beauty of M88, nudge the scope about one degree eastward to M91. Well, maybe. It should be noted that M91 may not even exist, as it is one of the famous "missing Messier objects." Messier could have made a duplicate sighting of another of the objects in this galaxy-strewn region, or have found a comet and not have realized it. Still another possibility, although doubtful, is that it is NGC 4571. Sky Atlas 2000.0 plots M91 and NGC 4571 as separate objects. I don't know what is at the plotted position of M91, but beware if youuse this reference in this area. In any event, a decent galaxyis around here for observing. Next, slide the telescope 1.2 degrees south to move back into Virgo. Here lies yet another Messier galaxy, M90. M90 is a rather ordinary Sb-class spiral whose spiral arms are very difficult to glimpse. Continuing on a Messier rampage, move 1 degree SSW to the large elliptical M89. From there, continue another degree to the SSE to discover M58, a rather faint barred spiral galaxy. The bar should be discernible in most telescopes 8-inches and up. Slide one more degree to the east and view M59, a round 11th magnitude elliptical. Another half degree to the east brings you to the 10th magnitude elliptical M60. This is just a start, of course. With over 3000 galaxies, a complete tour of the Virgo Supercluster could fill volumes.

As for those of you not so galaxy-inclined, several globular clusters are visible. M3 in Bootes is a real showpiece, and M13 and M92 in Hercules are also beautiful. And there's M5 inSerpens, and M4 and M80 in Scorpius. For variety, the open cluster Melotte 111 (the Coma Cluster) is very well placed high in the sky for naked eye, binocular, and finderscope viewing.

Well, that should give you several good objects to sharpen up your observing skills for the next two months. Happy observing!

Star Party in Florida

by Don Larson

On March 18th, my wife and I got into my car and started on our adventure of looking for a retirement community to move to after I retire from Booze Allen next year. The reason that we went now was so we could attend the Third Annual Chiefland, Florida Star Party over the March 22 - 25 weekend. On Friday and Saturday, we were in Ocala visiting a very nice retirement community. Then on Saturday afternoon we went to the Star Party at Chiefland, located in north central Florida, one the darkest areas in the Southeast.

The Tampa Area Astronomical Society hosted the Star Party, and we met many nice astronomers from all over the state. We saw many scopes of all sizes. Most were 10-20" reflectors and 6-8" refractors. There were two buildings with sliding roofs which housed the 20" reflectors. During the day we observed the Sun with an 6" f/15 scope using a hydrogen-alpha filter and saw a spectacular solar flare churning in slow motion across the field-of-view. As night crept in, the sky was very dark and clear. We were able to observe Jupiter and many other interesting objects.

Many of the telescopes were quality home-built instruments. Most of the astronomers, like myself, were into astrophotgraphy. I asked a lot of questions, received some pointers, and got some good ideas. It was a fun afternoon and evening for the both of us. I look forward to joining them next year.

Oh yes, we are still looking at retirement communities in Florida.

Smoking Out Austin

by Bill Burton

It was April 24, the Hubble Space Telescope had finally made it into orbit, and I decided to celebrate by pulling an all-nighter. My location was Cades Cove, in Great Smoky Mountains National Park, Tennessee. Laurel Wanrow and I were there to visit her parents, who live in the cove. Laurel's dad is an interpretative naturalist and historian for the Park Service there.

Cades Cove is an idyllic spot; an elevated basin about 1800 feet above sea level which holds rolling pastureland and restored 19th-century farm buildings and rural churches, surrounded by scenic mountains. Herds of deer graze placidly in the meadows while black bear and wild turkey are sometimes spotted ambling through the fringing woods. An 11-mile winding, paved country lane circumscribes the cove, which is gated shut at dusk. As darkness fell I set up my telescope in

the parking lot next to the gate, near the campground at the east end of the cove.

It being spring, Leo and Coma Berenices were near zenith (at least at this latitude), and that meant galaxies. I aimed my trusty Newtonian straight up, opened up **Uranometria 2000.0** and the **Peterson Field Guide to the Stars and Planets** to the appropriate pages, and went to work. I have found that the deep sky objects in the Field Guide (star charts by Tirion) are nearly all obtainableby my 8-inch reflector, and I compare these with the ones shown in Uranometria, which lists many more that are too faint to determine which ones are feasible. I prefer to work with Uranometria not only because of the greater stellar detail but because it shows clusters of galaxies, to one of which the target object may belong. Yes, most of the members of these clusters are too faint to be seen, but sometimes the "Tirion barrier" is broken, which can be exciting (like Stephan's Quintet). Also, the members of each cluster tend to share common properties such as distance (as shown by size and brightness) and sometimes structure (predominantly spiral vs. elliptical). All of this information enriches the context of one's deep-sky observing.

On this evening, after warming up on a few Messier objects (M65, M66, M104) I went mostly for the doubly-safe objects; ones that were both in the Field Guide and were shown as extended objects (greater than 5 arcmin.) in Uranometria -- the larger and generally brighter members of the sub-Messier, NGC class. For these objects Uranometria shows their true shapes instead of the standard ellipse symbol, which eliminates the sometimes enjoyable element of surprise, such as might come upon discovering that the anonymous galactic object you've trained your telescope on isactually a breathtaking edge-on spiral. But this night I was having trouble with anything smaller or fainter, for some reason. Although Cades Cove was reasonably far away from any serious-light pollution (the moderate-sized city of Knoxville was 25 miles distant), the sky was not as dark and clear as I expected. And then I realized: I was in the Smokies!

The trademark bluish haze of these mountains in daytime, a resultof the evapotranspiration of water vapor and minor assortedhydrocarbons by millions of trees, was also producingless-than-perfect observing conditions at night. Ronald Reagan was right! Cursing the fact that he could not be elected for a third term, I grimly continued my galactic searches deep into the night.

Around 4:30 A.M. it was time to change venue, for Comet Austin was due up soon and I did not have a good vantage to the northeast, where it would be rising. I packed up the scope and drove out of the cove and down a mile to Crib Gap, which had a pulloff and a good view in the desired direction. I was soon joined by Laurel's father (Laurel, as she explained later, was detained by important business in her dreams), and we set back up the reflector and my 11x80 binoculars. By 5:00 the great Square of Pegasus had risen above the horizon and we set about locating the comet, to the left in Andromeda. M31 was the next locator object, which I had initially proclaimed to be the comet uponsighting its oblong fuzziness the weekend before in my comet-class observing session (soon to be corrected). Finally, to the right and slightly below the galaxy, Comet Austin emerged from the murk, almost within the same binocular field of view. It was just above and slightly to the left of a magnitude 5.5 star in Andromeda, and appeared to my untrained eyes to be exactly the same magnitude. The central condensation of the coma was relatively diffuse compared to Halley's, and there was just the barest hint of a tail. The tail was generally unresolvable into its dust and gas components, but with some imagination I saw a very short dust tail fanning out (30 degrees?) and, along one edge of the fan, a longer thin plasma tail. Using averted vision, the plasma tail appeared to stretch about one degree. Not exactly a Great Comet! Furthermore, the biogenic haze made the viewing conditions little better than those in sodium-vapor-riddled Loudoun County. Those dang trees! "Ah well, can't have your cake and eat it too," I thought the nextday, as I set off down a sun-dappled trail in search of woodwarblers and wildflowers.

Postscript

The second viewing session of the NOVA Community College Comet Austin class will be held on Friday, May 18 at Crockett Park -- a regular club viewing night (cloud date the next night). My next astronomy class will feature an overnight viewing session at Big Meadows Campground in Shenandoah National Park on Saturday, June 23. Club members are welcome to join us.

Hitting the Wall

by George Uhl

Brent and Joanne Archinal and myself were up at Big Meadows in the Shenandoah National Park over the 23-24 March weekend to try a Messier Marathon and to catch a glimpse of Comet Austin. With the sky growing ominously cloudy on Friday afternoon, we wondered if our trip was in vain, especially with snow forecasted for Saturday. To make things worse, I lost my car keys as I rambled through the woods. Luckily I had a spare ignition key in my Ford Bronco and a friendly ranger was able to unlock one of the doors. After that scare, I was psyched to take on the marathon. At sunset, Brent and I drove to the first overlook south of Big Meadows to see if a break in the clouds would give us a glimpse of Austin. Using binoculars,

we had no luck. Brent was heard to mutter something about that darned Virginia weather. The clouds seemed to hang above the Shenandoah Valley moving northeast at an incredibly slow pace, except for the one directly overhead. It seemed to be raising itself higher, riding the thermals that blow up from the sides of the mountains. As we watched the cloud rise, we noticed it dissipating, and then to our satisfaction, Orion, Canis Major and the other constellations to our south broke through and shone brilliantly in the early night sky. With the wind blowing and the temperature dropping Brent and I decided to move to the Waste Treatment Facility parking lot in Big-Meadows proper, which was more sheltered and gave a decent view of the sky.

Brent set up his six-inch dobsonian in a matter of minutes, referred to his Messier Marathon Observing Strategy Table, and picked up M2, M15 and other objects low on the western horizon. Unfortunately, I took too long to set up my Celestron SP-C8 with all my electronic gadgetry to catch any of these early setters. I missed the first 5 objects on the list. Undaunted, I proceeded to attack the remaining 105 objects (or 104, depending on your Messier Catalog). Every now and then a cloud would come up out of the southwest and blot out part of the sky before moving on. Brent decided to take a break at 11 PM and warm himself up in the cab of his truck. I continued for another half hour before taking a short nap in the back of my truck. Brent woke me up at midnight and said he was too tired from hiking to observe anymore and was going back to the cabin where Joanne was alreadysleeping (a saner endeavor). I got up at half-past midnight and started backto work. By 2 AM, the front came in and this time there would be no break in the clouds. Having hit the proverbial marathon wall, I crawled into the back of the truck and slept for 2 hours. At 4, I got up and packed my telescope since the clouds were too thick for anything to shine through. I left the boxes outside and I went back in the Bronco to sleep some more. I woke up at 6:30 and in the early morning light saw that a light snow was falling. I rushed out, loaded the telescope into the back of the truck and took a little ride to see what wildlife was out and about. I spotted a few deer herds, then I went back to the cabin and woke up the Archinals. By this time, the snow was becoming heavyand intense. That was it for us, we decided to go home.

Brent and I each had independently observed a mere 30 objects. A poor showing for a first time marathoner, yet I must claim that the elements defeated me and not my skill at the eyepiece. Just wait till next year!

Recent Views of Austin

by George Uhl

Despite the rather disappointing display that Comet Austin has shown so far, several members of the club have been keeping watch on Comet Austin since February. Brent Archinal and Geoff Chester spotted the comet back in late February at Rixeyville, Va. when it was in Cetus. At that time, it was about magnitude 7. Jim Schaeffer and myself spotted it in Pisces at Crockett Park on March 26 when it shone at about 5th magnitude low on the western horizon. A small tail was visible during both sightings. Several other members saw it before it passed into the morning sky.

On the morning of April 22, Bill Burton and members of his Comet Class at the NOVAC 's Loudon County campus. A weather front was moving through at the time and impeded the observation, but the comet seemed to be getting brighter (4.5 magnitude) and showing more of a tail. On the morning of April 26, Al Schumann, Jim Schaeffer and myself spotted the comet east of Rho Andromedi. Unfortunately, a week of 90-degree heat, made the seeing conditions similar to late July - early August. This made the comet tough to find as it rose through the haze and Manassas light-glow. Taking W.A.G. I would say the comet shone between 4.5 - 5 magnitude. A fan-shaped tail could barely be made out through the eyepiece against a bright sky background. I concur with Bill Burton's observation of the comet earlier in the week (see the article, **"Smoking Out Austin"**, on page 3).

The last observation I could get before the newsletter went out was from Jim Schaeffer. He braved both Moon and wind on the morning of May 6 to catch the comet before the Moonlight begins to overwhelm it. Jim described it as very blue with a fan-shaped tail, and brighter than nearby M31 (which is 5th mag.). He said it was much higher in the sky than it was on the previous week! Maybe towards the end of May, Austin will give us a decent show after all!

NOVAC Tidbits

by Bob Ridgley

NOVAC membership is now 123, of which 13 are complementary, and 25 are past due. The amount of your dues and the membership expiration date is printed in the upper left hand corner of the mailing label. So please take a minute to check the status of your dues. If this information is highlighted in red this will be your last issue. If you wish to remain in NOVAC you must send a check to me now. My address is:

N.O.V.A.C.
c/o Bob Ridgley (Treasurer)
1316 S. Buchanan Street
Arlington, Virginia 22202-3410

To those of you who's membership expires before the end of the year please consider paying the amount shown before you become"past due." This will help the bookkeeping and

with planning the club expenditures thru this remainder of the year. As of May 1st. the NOVAC treasury contained $1,266.10.

We would like to welcome the following people who joined the clubsince the last newsletter:

Jerry Williams
Roger Burgess, Jr
Issam Attari
Robert Neff
Bob Thompson
James Olszewski
James Milburn
Mouncey Ferguson

The following activities are scheduled in May and June:

Board of Directors Meeting:

May 10
June 14

General Membership Meetings:

May 16
June 20

Observations at Crockett Park:

May 18, 19, 25, 26
June 15, 16, 22, 23

NASM Special Events

by Bob Ridgley

May and June will bring several interesting events to the Smithsonian's National Air & Space Museum (NASM). Plan a trip to the Mall to see them!

The Monthly Sky Lecture for May will be a discussion of the Search for Extraterrestrial Intelligence (SETI). The lecture will be given by NASM staff member Ellen Sprouls on Saturday, May 5, at 9:30 a.m., in the Albert Einstein Planetarium.

The Monthly Sky Lecture for June will be "Space, Time and Gravity: The Fabric of the Universe." The lecture will offer a layman's view of general relativity, touching upon diverse topics such as black holes and cosmology. It will be given by Jeff Goldstein, a NASM astrophysicist, on June 2, at 9:30 a.m., in the Albert Einstein Planetarium.

The Exploring Space Lecture Series selection for May will be "Millisecond Pulsar Searches," by Dr. Ramesh Narayan, associate professor and astronomer at the University of Arizona, Tucson. It will be held in the Albert Einstein Planetarium on Wednesday, May 9, at 7:30 p.m.

The Exploring Space Lecture Series selection for June will be "The Center of Our Galaxy", by Dr. K. Y. Lo, professor of astronomy with the University of Illinois at Urbana-Champaign. It will be held in the Albert Einstein Planetarium on Thursday, June 21, at 7:30 p.m.

The National Air & Space Museum is located at Independence Avenue and Sixth Street, S.W., is open seven days a week. Normal hours are 10:00 a.m. to 5:30 p.m. Admission is free.

For additional information about Smithsonian public programs, please call (202)-357-2700 or 357-1729 (non-voice TDD). For prerecorded information about events in a specific museum (Dial-A-Museum) call (202)-357-2020. For prerecorded information about the night sky (Dial-A-Phenomena) call (202)-357-2000.

Advertisements

For Sale, contact Jim Schaeffer at 476-5624 (home) or 281-6363 (office): 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; TELRAD finders, $38.00.

For Sale, contact Bob Ridgley at 681-0286 (home) or 287-3441 (work): offical NOVAC logo tee shirts. Available in black or white, sizes: S, M, XL, price $9.95. All profit goes to NOVAC.

For Sale, contact Bob Ridgley at 681-0286 (home) or 287-3441 (work): deluxe padded field tripod carrying bag. Holds Celestron or Meade 8" or 10" telescope tripods with the wedge attached. Constructed from heavy Condura nylon with a padded insert to separate the tripod and wedge if you desire. All seams are reinforced. This is the original Meade product -- not a cheap imitation. It's only been used a few times, so it's in like-new condition. The price is $50.00.

The NOVAC NEWSLETTER is published six times a year. Subscriptions are available through membership in NOVAC. Dues are $18.00 per year. For club membership information contact Al Schumann, Secretary, 6121 Rivanna Drive, Springfield, Virginia.

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