Skywatch

'Serving Mobile's Amateur Astronomy Community'
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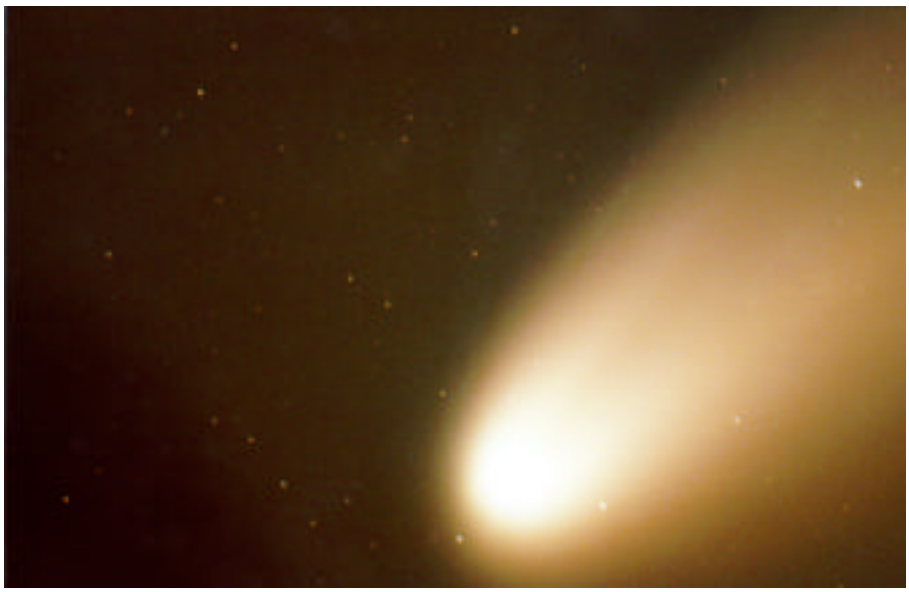
HALE-BOPP REIGNS SUPREME!!

Comet of the Century? --You Decide

Was Comet Hale-Bopp the 'Comet of the Century?' We're still too close, I think, to the remarkable events of the past couple of months to make an *unemotional* judgment. But Hale-Bopp was *certainly* bright and spectacular, easily reaching almost magnitude -1! And the contrast between the bright yellow dust tail and the dim and ghostly-blue ion tail made for an undeniably beautiful vision. This was also one of the few comets in modern times to be REALLY easily visible from the cities. While we (amateur and professional astronomers) loved Hyakutake and hailed its 'brightness,' the public had a HARD time finding Hyakutake unless it was pointed out. But nobody from the tiniest tot to the most nearsighted adult had any trouble with Hale-Bopp! At least not once it hit the evening sky. *As usual*, Joe Sixpack couldn't be persuaded to get out of bed before sunrise to see a 'mere' comet, once-in-a-lifetime opportunity or not!

Looking at Hale-Bopp unemotionally (trying to, at least), I'd have to say that, while it does definitely fit into the somewhat vague category of 'Great Comet,' it is *most certainly* not going to be remembered as *the* Comet of the Century. *That* title is likely to remain with **Halley** for its 1910 apparition--Halley came *very* close that time--when the Earth passed *through* the comet's tail! A close second is probably the **Great Daylight Comet of 1910,** which may have been even 'greater' than Halley. When closely questioned, the few women and men still alive who 'remember' Halley are often actually recalling the Daylight Comet! When all is said and done, I expect that Hale-Bopp will be rated *worse* than the 1910 comets, 'as good/almost as good' as **West**, and 'better than **Ikeya-Seki**.' If the geometry of this apparition hadn't resulted in a foreshortened tail for Hale-Bopp, I don't think that there would have been any doubt that HB was 'greater' than West.

No matter how you 'rate' the Visitor, though, there's no chance that those of us who watched (and photographed) Hale-Bopp's long slide from the outer darkness to the inner fires will ever forget the experience. Some of my most wonderful memories are from the comet's 'pre-dawn phase.' Something about the comet hanging in the quiet before-dawn twilight, slowly dimming to the



Comet of the Century? If not, darn close! Prime focus photo by Rod Mollise. F10 with Celestron Ultima C8 on Fuji Super G 800, 10 minute exposure.

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accompaniment of Sun-greeting birds, is etched in my memory. Not that the comet wasn't spectacular in the evenings! It was nice to see a comet in the sky that really *'looked like a comet!'* I recorded my memories of Hale-Bopp and posted the entries of this 'journal' on the Mobile Astronomical Society World Wide Web Site. The first half of this journal appeared in the last issue of *Skywatch.* Here is the second and concluding part of my 'Adventures with a Great Comet' (slightly edited from the web version)!

February 22, Saturday Morning:

Torrential rains all day Friday. But by Friday evening, the sky showed definite signs of clearing, so I set the alarm clock for 5am. While the backyard was still awash from the previous day's rains, I went ahead and set up the 12.5" f4.8 Newtonian--and I'm glad I did. In binoculars and with the naked eye, Hale-Bopp is more astounding than ever! It was very easy to see that the comet has reached 1st magnitude, being obviously slightly brighter than Deneb! How much brighter will it get?! In the 12", the comet was a feast for the eye, with more details visible around the pseudo nucleus than I could hope to draw! Most notable were several dramatic condensations in the coma, numerous 'dark lanes,' his amazing south-facing jet, and much micro-fine detail! I continued to observe until 'Mr. Comet' was pretty much obliterated by the dawn; by doing this, I was able to glimpse some details which had been obscured by the comet's incredible brightness! When Hale-Bopp finally disappeared into the morning, I just sat astounded for a while contemplating what I'd seen and listening to the birds awake and greet the Sun...

March 6, Thursday Morning:

Finally clear skies! And no fog! Even though I was well aware of where Hale-Bopp would be in the sky I was still amazed to see how far north our visitor had traveled in the days since I'd last seen him. And I was also pleasantly surprised to see that the comet's increase in brightness has continued unabated! If my sleep-filled eyes can be trusted, I'd put HB at around 0 magnitude...how much brighter will he go? Already, my feeling is that Hale-Bopp is nearly as bright as Hyakutake was at his best, and his tail seems more prominent from the city than Hyakutake's ever was! I was running a little late for work, and didn't feel that I had time to set-up the 12", so I resorted to 'Big Red,' the 8"f7 Coulter. Conveniently, due to the northward movement of the comet, I didn't even have to trot the scope out into the back yard--all I had to do was place the Coulter on the front porch for a nice, quick look. Even though I didn't have the opportunity to allow the scope to adjust to the cool outdoor temperatures (a cold front had moved through during the night, replacing the 60-70 degree temps of the last week with high 40s), I was still presented with a magnificent image. The nucleus was blazingly bright in the midst of all the coma, and the 'hoods' of material being thrown off the nucleus were as obvious in the 8" this morning as they had been in the 12" last week! I only had a short time to view before closing down and heading for work, but I was, again, struck by the beauty of this spectacular cosmic vagabond! After waiting over a year for Hale-Bopp, something inside me warned me not to hope for too much...but I would still have wonderful memories of this comet if he disappeared from our skies today! Hope to get out and really start photographing Hale-Bopp this weekend! According to the reports I'm getting, the weather MAY cooperate! I'm also going to see if it might be possible to record the comet on video...no idea if my camera is sensitive enough, but I figure I might at least be able to record a trace of the nucleus!

Saturday Morning, March 8:

With clear skies hanging on, I was prepared for a spectacular vista this morning, and I wasn't disappointed! I've been doing a lot of video astronomy lately (Mars right now), so I wondered whether it would be possible to capture any trace of Hale-Bopp using a standard Sony Camcorder. Conventional wisdom is that a non-integrating CCD really won't capture much in the way of extended objects. I figured the nucleus might show up and that that would be about it. I resolved to try it this morning, though. Even if all I captured was a hint of the nucleus, at least the videotape would provide me with a nice souvenir of the comet's passage. The comet was beautiful at 4:45am this morning, and was framed by crystal clear skies. I didn't feel up to setting up the Ultima 8 or the 12.5" Newtonian, so I dragged Big Red (my 8" f7 'Old Coulter') out onto the front porch. The comet was so incredibly beautiful in the eyepiece (arcs/hoods of nuclear material, dust lanes, jets, etc.) that I almost forgot about the video camera. The comet was very bright with the naked eye (0 or so),and there was at least a couple of degrees of tail visible in my light-polluted surroundings, so I thought the Sony might at least show *something.* And indeed, by using the lens at max zoom, a respectable length of tail IS visible on video on the finished tape! I got a very

nice shot of the comet framed by bare branches as the sky brightened. Using the camera at the eyepiece (afocal method), I was also able to record some detail in the nucleus using a 26mm Plossl on the telescope. Some of the 'arcs' are plainly visible on tape. So, all-in-all, I was pleasantly surprised at the outcome! If you've got ANY type of video camera, drag it out and try it on Hale-Bopp! I think you'll be as pleased with the results as I was!

March 15-16, Saturday and Sunday Morning

After what seemed like days and days of clouds, I had high hopes of getting some good looks at the VISITOR and taking a large number of photographs. I had arranged with Pat Rochford to observe from the grounds of his beautiful Stargate Observatory, which is located in the still reasonably dark town of Fairhope, Alabama. Alas, it was not to be! While I dutifully headed-out to Fairhope at 3:30am on both Saturday and Sunday, those old clouds just came rolling back in! We did, though, manage to get a few nice pictures (see the MAS Astrophoto Page), but nowhere near the number I would have liked! Prime focus photography was impossible due to conditions, so all I have to show for my weekend without sleep is a stack of piggyback shots (with a normal lens). But I must admit I'm pretty pleased with some of them! The fact that I was able to get any photos at all is a testimony to Hale-Bopp's brightness (Pat compared it to Vega!)! Oh, well...time to change gears and get ready for evening Comet observing!

March 23, 1997, Sunday Evening

What a night! The Comet, a Lunar eclipse, Mars and deep sky photography--almost too MUCH of a good thing! My friend and observing companion, Pat Rochford, and I traveled to a dark site near the little town of Bay Minette, Alabama for what turned out to be a wonderful evening of observing and photography hosted by hard-core observer Tom Williams (EAAA)! I got some decent photographs of Mr. HB, and we were able to make some remarkable observations with Pat's 24", (the arcs/hoods are unbelievable in a large scope!) but, dare I say it, the comet just doesn't look as good in the evening yet as he did in the morning sky a week ago! But the show was still wonderful...HB is now at LEAST at -1, and will, I'm sure still get better! We're still finding the ion tail elusive from this southerly latitude, but I hope that will change over the next week or so!

The Great Crater Clavius, Rod Mollise. Shot on 8mm video with 12.5" Newtonian, photographed off monitor screen with Kodak Plus x, scanned into a Pentium class computer, and processed with Adobe Photoshop...

Tuesday Night, 1 April, 1997

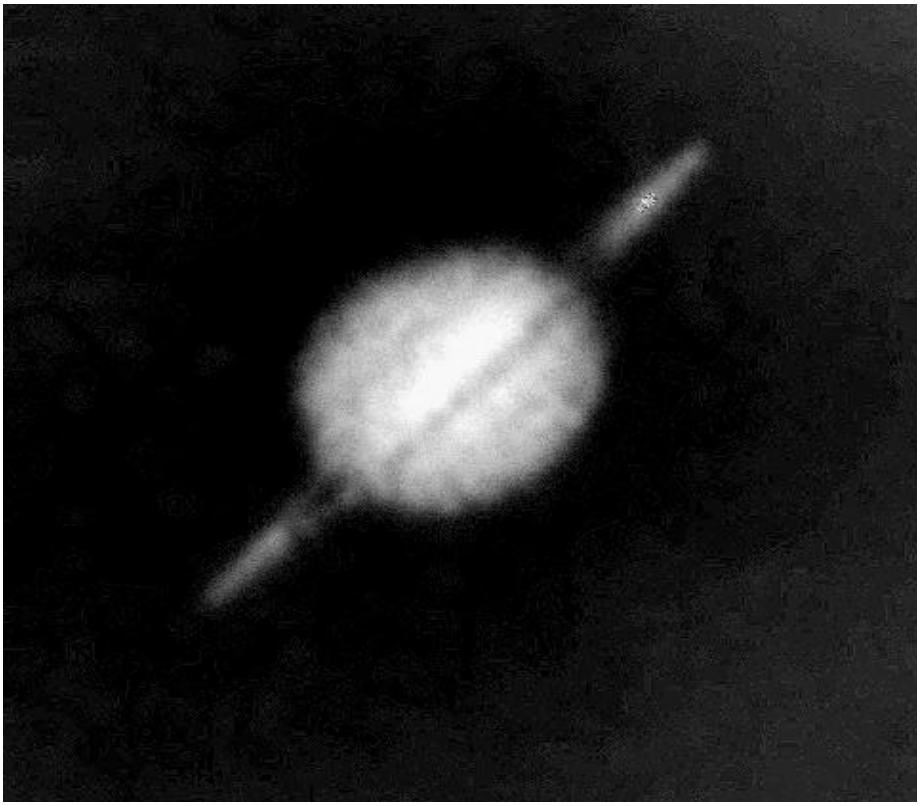
After several nights of trying to get a prime focus photo of Hale-Bopp, I had absolutely nothing to show for my efforts...clouds shut me down every time! And Tuesday didn't look much better--the sky looked distinctly unsettled all day. But then, almost miraculously, things began to get better. And by 7pm, it was obvious that we were to be blessed with one of those magical evenings for observing and photography--one of those oh-so-rare nights down here on the Gulf Coast during the Spring! I had set up in Pat and Stephanie Rochford's front yard in Fairhope, Alabama, and after a few agonizing minutes where I found it impossible to locate a guide star, I found one and my photographic run was underway! But I didn't say I found a BRIGHT guide star! The one I located was very dim; in fact I felt like the 'Tommy' of Off-axis guiders--I was guiding by the sense of smell! But I think it was worth it for the handful of nice pictures I came out with (see the MAS astrophotography page)!

--Rod

The Universe on Video

What prompted me to get started in video astrophotography? A couple of things. I had a desire to make high resolution images of the Moon and planets. And I didn't feel ready to get involved with CCD photography (CCD + software + laptop computer + etc, etc = big $). I've done lunar and planetary photography for some time, and have generally been pleased with my results, but what I wanted was something which would allow me to image small areas on the Moon and make large detailed images of the planets. What about video? Well I had an old 'surveillance' type TV camera (black and white with a VIDICON TUBE instead of a CCD). This camera had a 'C' mount type lens mount, so I was able to easily mount the unit on my SCT. While I did get some *fairly* decent images, the results just weren't what I was looking for. Part of the problem was that the camera wasn't sensitive enough to light. It also didn't seem to want to work very well in an eyepiece projection set up. And there the matter stayed for about a year.

Sitting around one afternoon last July, I started thinking about video astronomy again. I think what started me reconsidering this subject was the wonderful apparition of Jupiter. Last Summer, the planet was huge, beautiful and highly detailed in my 12.5" Dob. How could I make some images of this monster planet? Video hadn't worked very well before but... How about the camcorder? I have access to a fairly high grade camcorder, a Sony CCD F-34, which features a very sharp lens, adjustable shutter speeds (this is a good feature--instead of just having an automatic setting, the camera allows you to manually select shutter speeds from 1/30 to 1/1000 second), and a number of other 'pro' features. Of course, as is the case with most camcorders, the lens isn't removable, so there was no way to use it in an eyepiece projection setup or to readily mount the camera on the scope (it's rather heavy to mount on a scope anyway). But then I thought of the afocal method of astrophotography. In this setup, the lens stays on the camera, which take the place of your eye at the eyepiece. With this method, it's quite easy to handhold the camera and, for example, take nice, sharp Moon pictures. Unlike eyepiece projection, the film plane of the camera doesn't have to remain parallel to the image plane of the telescope during afocal astrophotography. I've used this technique to make some impressive lunar photos with Dobsonians. Since I wouldn't be mounting the camera on the telescope, I thought I'd experiment with the 12" Dobsonian to start with, since it just naturally delivers a more detailed, brighter image of Jupiter than the 8" SCT.



Saturn, Rod Mollise. Same procedure was used for this image as was used in the preceding photo of Clavius.

With Jupiter in the field of a 26mm Plossl on the 12" I started making my first videotape of the planet. One thing that I discovered right away was that the viewfinders on modern cameras are good enough to make focusing a fairly easy. Following the procedure that I use with 35mm afocal photography, I set the camera lens to its closest focus (make sure the camera you use has a means of turning off

automatic focus) and focused the image with the telescope's focuser. That first evening's session revealed that it was quite practical to use a Dob for video astrophotography--a drive really isn't needed. *It was easy to hand hold the camera and track the image of the planet as it crossed the scope's field of view*, keeping it in the center of the frame. As the image of the planet reached the edge of the eyepiece field, I would stop the camera, reposition the telescope, put the image back in the center of the camera's viewfinder and start the camera again. Since most modern camcorders have 'flying erase heads' which eliminate 'glitches' on the tape from the camera being stopped and started, you can hardly tell, looking at the finished tapes, where 'takes' end and begin--the planet just seems to stay smack in the middle of the screen. After shooting about 15 minutes of tape, I hurried inside to see what I had accomplished (while I could tell that I was in focus, the camera's small black and white viewfinder made it difficult to determine how much detail I was recording).

To say that I was pleased with my efforts would be an understatement! Jupiter was fairly large on TV, (about the size of a quarter), showed some banding, some hints of color, and even a couple of moons from his retinue of satellites! Happy as I was, though, I noticed a problem: the planet was heavily **overexposed** (I had been really worried about there being *enough light* to record anything!). The next night I decided to try a range of eyepiece, zoom, and filter combinations to see what worked best.

What I discovered amazed me! By using a 7mm eyepiece and extending the zoom to its maximum focal length, I was able to obtain an image that was not only huge (about 6" across on a 25" monitor!), but one which was also highly detailed and which showed some of Jupiter's subtle colors! I also had some luck using slightly lower magnifications (12mm eyepiece) in concert with colored filters. A blue 80A filter revealed a wealth of detail!

I found-out something else rather quickly, too. By repeatedly viewing my Jupiter tapes, I was able to see more detail than I was often able to detect at the eyepiece! There are two reasons for this. First, on video the image is quite large--even at 300x or more, the image at the eyepiece is still relatively small. Second, when I find a section of tape where the seeing was unusually good, I can rewind and watch the sequence many times allowing me to see all that there is to see. Last summer, I was routinely able to see the Great Red Spot (I even detected detail *within* the red spot occasionally), details in the cloud bands, shadow transits of satellites, and more. When the seeing is steady I can even resolve the Galilean moons as disks!

I did decide to try one last modification to my 'procedure.' Perhaps I needed to mount the camera on a tripod? **Hand-holding it just seemed too easy!** I was able get some images of Jupiter with the camera mounted on a tripod, but it soon became evident that this was not the way to go when using a Dob. With the camera mounted on a tripod, I lost the ability to easily 'track' the planet--it just zipped across the frame. At high magnifications (and the final result in video astrophotography is usually an image with an equivalent magnification in the THOUSANDS) moving the SCOPE to 'track' the planet is hopeless. I went back to hand-holding the camera, and have been happy with this method ever since.

What else have I been able to Image?

The Moon: particularly impressive are some shots I have of lunar features like Copernicus, Plato, Clavius, etc. Using the 7mm eyepiece/max zoom combination I used on Jupiter, I'm able to make the larger craters literally fill the screen of a 25" monitor! I'm also able to detect color on the lunar landscape.

Venus: While Venus obviously shows no detail to speak of (occasionally I've thought I've detected some incredibly subdued dusky areas on the disk on videotapes), I have been able to obtain large, sharp images of its phases.

Saturn: Saturn is dimmer and smaller than Jupiter, and is, therefore, more difficult to image than Jupiter, but I was able to record quite a bit of cloud banding during the past apparition. I was also even able to detect Cassini's division though the rings were barely 'open' at the time!

Mars: I've been able to record not only the North Polar Icecap, but also quite a bit of the elusive and mysterious and romantic Martian surface features! I won't hesitate to say that I've seen more of Martian surface details on my monitor than I've *ever* detected at the eyepiece (I've never been a really fanatical Mars observer)!

Comet Hale-Bopp: I've been told that video cameras usually can't record much of anything at all when it comes to nebulous/extended objects (for this you usually need an integrating camera--a 'CCD camera'), but the comet was SO BRIGHT that I decided that it was worth a try after all. Surprise! I got some very pleasing footage of the comet, both at the

eyepiece and using the camera's telephoto lens only. On the 'through the eyepiece' sequences, the comet's nucleus is very bright, and it is possible to detect the 'waves,' 'hoods,' and clumps of matter coming off the comet! I got one very nice shot of the comet with the camera's lens alone. Initially, only the comet's bright nucleus and a decent extent of tail are visible. As the sky brightens with the coming of dawn, though, the comet becomes framed by bare winter branches in the foreground.

What next? I'd like to do more as far as preserving some of my images as 'hard copy.' I've had fairly good results by photographing the monitor screen with a 35mm camera, but the obvious solution is to obtain a video capture device which allows the image to be read into a computer and processed. I'm currently considering the 'Snappy' video board. The price seems fairly reasonable, and I'm hearing that the results are excellent. I'm also wondering whether a higher-resolution camera would be a help. Some modern CCD-type surveillance cameras are available at <$400.00, and most have resolutions and sensitivity far better than the average camcorder. And how about a Dob Driver or equatorial platform for the telescope? Might this make filming a little easier?

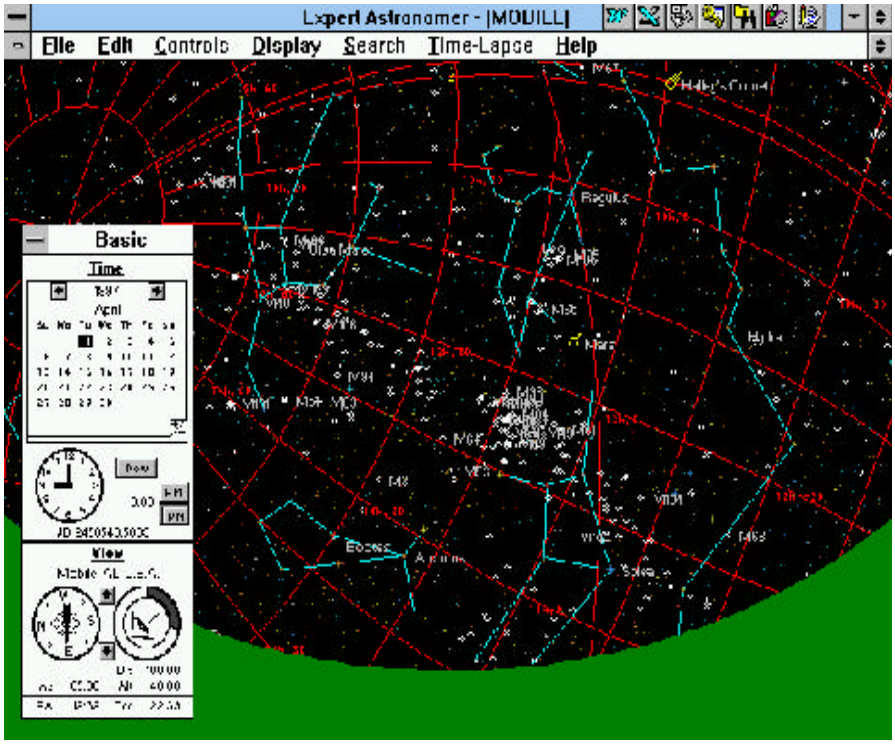
Why not give video astrophotography a try? All you need is a camcorder (any camcorder), an eyepiece, a telescope (I've had good results with scopes as small as my 6"), and a desire to record the beauty and majesty of the heavens! If you *do* attempt it, please share your results with me! If you'd like to see what I've achieved with my simple equipment, get me a blank tape and I'll make you a copy of my 'best of" film!

--Rod

Astrobytes

I've been looking for a planetarium program which is both cheap and simple and which is also capable enough to be used by beginners as their only astronomy program. I'm also interested in finding a program of this type suitable for use by more advanced workers wanting a **quick look** at 'what's up in the sky.' For the last several years, the wonderful DOS program *Skyglobe* has served these needs admirably. HOWEVER...*Skyglobe* is just naturally starting to show its age, since its author hasn't updated it recently (v3.6, which is a couple of years old now, is the current version). Also, let's face it: it's a Windows world. Many computer users understandably prefer programs that feature the Windows interface (Skyglobe does run admirably well under Windows 95, but its controls naturally don't follow the Windows standard). Yes, I know there is a version of *Skyglobe* for Windows, and I'm going to try to track down this program, which has apparently never been widely distributed, and give it a whirl. For now though, let's take a look at *Expert Astronomer for Windows*, a 'cheap' but reasonably full-featured planetarium.

The first thing I noticed about *Expert Astronomer* was the fact that, for what I thought would be a small, simple program, it took a fairly good while to load and initialize on my 'antique' 486 computer! A closer look revealed that, while *Expert Astronomer* is 'cheap,' it's not necessarily that **simple**, having an executable file about 1 megabyte in size (versus 150k for Skyglobe). I will admit that once the program loaded, it



Expert Astronomer with the Basic Tools Menu open....

did run fairly well on my machine. For most of you this probably isn't a problem anyway, since it seems that just about everybody is upgrading to 150mhz+ Pentiums (it's become a matter of pride for me to keep my 4 year old IBM working as long as I can)!

The next (irritating) feature of *Expert Astronomer* that I made note of is the fact that it is one of the family of planetarium programs which initially come up with a BLANK SCREEN. Instead of defaulting to your location, time, etc. and immediately showing the sky (like *Megastar*, *Distant Suns*, and the majority of modern planetariums), *Expert Astronomer*, like *RedShift*, requires you to load a file containing your defaults before it displays the sky. RedShift at least shows you the sky on boot up--even if it isn't 'right' for your location. This isn't that big a deal, but it does detract from *Expert Astronomer*'s usefulness as a 'quick-look' tool. With *Skyglobe*, I can have the program up and displaying the sky outside in literally seconds. With this program, I must first wait for it to load, then open the file menu and select the proper file, and finally maximize the sky display which comes up at a size less than full screen. I tried to speed things up in starting the program by 'associating' the default files (.svw) with the program. Clicking on one of these files in File Manager would then bring the program up, but the screen would *still* be blank, and I would *still* have to load the 'defaults' file. Dragging and dropping one of the files onto the program's executable file produced the same results.

Once I had the 'skyview' on the display, I found *Expert Astronomer* quite easy to work with. Basically, three sets of controls are available for use: '**Basic Controls**,' '**Expert Controls**,' and '**Tools**.' The Basic Controls were, I thought, rather cleverly done. This menu allows you to set the date, time, direction, and 'zoom factor' through the use of icons which resemble a calendar, a clock, a compass, and an eyeball, respectively. After fooling around for a few minutes, I found that it became very easy to use this menu to set the display up. The 'Expert' controls allow you to vary the same factors as the Basic Controls, but require you to type-in numeric values instead of manipulate icons. I preferred the Basic Controls. Finally, the tools menu consists of a small 'floating' control panel with pushbuttons which allow you to zoom in and out, identify objects, set-up new labels, and determine distances between objects on the screen.

What does *Expert Astronomer* offer in its database as far as stars and deep sky objects? It offers about the same stellar database as *Skyglobe*, the SAO (or portions thereof) down to about magnitude 8 or so. All the Messier Objects are there, as is most (if not all) of the RNGC. I'm **unsure** whether the entire RNGC is included because of a curious feature of this program. All of the Messier Objects can be labeled, but *none* of the NGC objects can be (at least I haven't found a way to make them show labels). The catch 22 is this: *only objects with labels will be found by the program's search function*. This made it difficult to decide whether the program's database included all NGC objects or not. NGC objects can, however, be identified by clicking on them with the 'ID' tool. A cursory sampling revealed that all the NGCs seem to be in place. Additionally, you can manually create labels for objects. You obviously wouldn't want to label all the 7000 plus entries in the NGC database, but it would be fairly easy to apply your own labels to your favorite objects. Use of the ID tool also revealed that the program provides fairly complete information on most objects, going beyond position and magnitude to include an 'English translation' of the Dreyer comments. *Expert Astronomer* also offers a fairly good selection of comets and minor planets. Unfortunately there was no obvious way to add new comets to the library (I haven't looked into the possibility of manually editing the comet file). *Expert Astronomer*'s MUCH larger deep sky database puts it ahead of *Skyglobe* in this race, since Skyglobe is handicapped by only having a hundred or so 'best of' NGC objects.

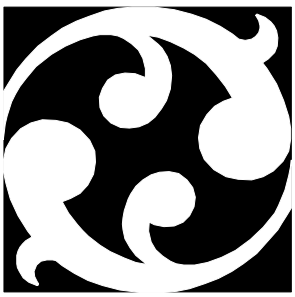
Expert Astronomer, unlike *Skyglobe*, gives you the ability to display the planets as semi-realistic disks, and lets you to move your viewing location to your planet of choice. It also enables you to move your position to an overall view of the Solar system in order to display the paths of comets. These options were very attractively rendered, and are, I suppose, somewhat useful; especially for the beginner trying to get a good handle on how the solar system works. The **CD ROM** version of *Expert Astronomer* also apparently offers many images and astronomy-related text files. Unfortunately I have been unable to find a copy of the CD yet, and can offer no opinion of the quality of this supplementary material.

In fact, the only major drawback to *Expert Astronomer* is that it can be quite difficult to find! I'm not sure why this should be, since all the other titles in the 'Expert' series seem to be readily available. One clue is that *Expert ASTROLOGER* seems to be everywhere! Can the people who order software for the chain stores be confused about the difference between *Expert Astronomer* and *Expert Astrologer*, and merely be ordering the

first one listed? Who knows. When you do locate the program, it generally costs $9.95 for the disk version and $19.95 for the elusive CD. Quite a bargain in my opinion.

This program won't take the place of *Skyglobe* on my system due to *Skyglobe*'s inherent speed advantage. *But if I had a faster computer, I'd certainly be tempted to use Expert Astronomer for my 'what's-up-tonight' planetarium.* For a beginner wanting an inexpensive but complete 'first planetarium,' *Expert Astronomer* wins hands down!

--*Rod*



My Back Pages

Stories in the Sky

A Snake, a Cup, a Crow and an Angry God

Corvus, Crater and Hydra are three subdued and often unnoticed constellations. But even they have a story to go with them!

Apollo, God of the Sun, kept a crow, Corvus, as a pet. Naturally not just any crow would serve as the pet of a Greek God, and Corvus was indeed a very special bird. While all crows are renowned for their cleverness, Corvus was the most clever--and intelligent--of all crows. But one time his legendary cleverness almost outsmarted him!

One hot Summer day on Olympus, Apollo, feeling thirsty (yes, even the gods thirst), gave his faithful pet, Corvus, his favorite drinking cup, Crater, and sent him off to dip some cool water from the heavenly river nearby. Now, Corvus had *every intention* of fulfilling his master's request...but things went awry. First Corvus was understandably distracted by an attractive lady crow, who he chatted with for *quite a while*. And then he just *had* to stop and gossip with the squirrels of the Olympian forest. When Corvus finally arrived at the river bank, he was further diverted by some shiny stones beneath the water, and had to spend some time collecting a few of the prettiest specimens.

But then the crow realized that it was getting late! He'd kept Apollo waiting for hours and hours for his drink! What to do? What to do? While Apollo was known to be a *just god*, he also had *quite a temper*, and nobody wants an angry god--any angry god--after him! Looking around, though, Corvus spied the water snake, Hydra, sunning himself on the bank--and minding his own business, I might add! An idea began to take shape in Corvus' wily mind. A very CLEVER idea, he thought! Quick as a wink, he dipped Crater into the water, filling it to the brim. Then, with his free talon, he grabbed poor Hydra (who was naturally outraged)!

When he arrived back at Apollo's digs, it was clear to see that the Sun God was angry--as angry as our heroic crow had ever seen him! The very Sun had dimmed! Wasting no time, Corvus spun his tale:

'Oh, Master, Master! So sorry to be so long, but when I arrived at the river this morning, this SNAKE kept me from filling your cup! Tried to bite me he did! Wouldn't let me have any water, oh no! But Corvus was too smart for him! I waited and waited until I was able to sneak up on him, grab him, fill your cup, and bring him back to you for your judgment!'

Hydra said not a word; he just hissed in disdain. Corvus looked hopefully at Apollo, but the god looked, if anything, ANGRIER!

'SILENCE!' Quoth the Sun God. 'One thing father Zeus did NOT give you, bird, was a silver tongue!' Corvus' discomfort was obvious: he was hopping from one foot to the other as if he were standing on a hot stone! On one foot and then the other...like he was doing a little dance! In fact, the crow's unease was *very* comical, and Apollo found it difficult to remain angry! Soon he was laughing at Corvus' antics, and soon the late afternoon Sun was shining again! The only party still put-out was Hydra, who felt that he had been sorely wronged! As a reward for his forbearance, though (by rights, Hydra should have feasted on our crow), Apollo deeded a quiet and lovely pool to the water snake and his many descendants in perpetuity.

Now, in some versions of this tale, Apollo is *so angry* that he tosses Corvus, Crater and Hydra into the heavens. But what sense would there be in that? For one thing, being placed in the heavens--granted immortality--was usually seen as a *reward*; not a punishment! For another, why would wise Apollo toss away his favorite (indeed, his *only*) pet, his best cup, and a totally innocent water snake? No! But when the snake, the cup, and the crow finished their allotted days on Earth, they *were indeed* placed in the heavens together as a token of Apollo's great esteem and his fond memory of a warm Summer afternoon on Mt. Olympus when a comical crow tried to fool the mighty God of the Sun!

You will notice that the god placed the cup, Crater, between the bird and the snake--just in case Hydra was still mad!

--Rod

Club Notes

March 1997 Regular Meeting: The Mobile Astronomical Society held its March meeting at the club's usual meeting place, the Environmental Studies Center, at 7pm on 5 March. Much of this meeting was devoted to discussions concerning our search for a regular club dark site. Several promising ideas were put forward. Members' experiences with the rapidly brightening Comet Hale-Bopp also made for some interesting conversation. Finally, the upcoming Mid-South Stargaze was outlined for the membership.

The April 1997 Regular Meeting of the Mobile Astronomical Society was held on Wednesday, 2 April at the MAS' regular meeting place, the Mobile Public Schools' Environmental Studies Center on Girby Rd. With the wonderful Comet Hale-Bopp riding high in the clear sky, there was no way we were going to hold an indoor meeting! Instead, we devoted the entire evening to viewing and photographing the comet from the grounds of the ESC. Ginny and Tony Kramer had invited a group of German

exchange students and their host families to the meeting to view the comet, and we had a wonderful time showing them Hale-Bopp through a variety of scopes and answering their excited questions! Several members were preparing to depart for the Mid South Regional Star Gaze, and those of us who couldn't make it this year sent them off with wishes of 'clear skies!'

--Rod

Editor's Musings--Once Upon a Midnight Dreary...

Hate to start this off on a sad note, but the Mobile Astronomical Society lost a long-time member last month. Howard Bectheim, a familiar face at MAS meetings for many years passed away in April. Howard was both knowledgeable and friendly, and will be greatly missed by the membership.

National Astronomy Day was on Saturday, April 12, and the Mobile Astronomical Society opened a booth in Bel-Air Mall as this year's Astronomy Day project. While this was, to some extent, a 'last minute,' affair, I think things came together well. We distributed hundreds of brochures describing the MAS, showed many eager 'patrons' photographs of Comet Hale Bopp taken in the local area, and allowed a large number of children to look through the telescopes we had on display (at objects in the Mall, natch--the weather was much too bad for even Solar observing)! **Ginny Kramer George Byron and I** manned the exhibit from 10 in the morning until 6 in the evening (George also handled arrangements with Bel-Air Mall). If nothing else, a large number of Mobilians now know that their city has, of all things, an active astronomy club! We hope to make this a yearly tradition and solicit your help for next year's exhibit (we'd like to put-together a 'fancier' booth for next year; one incorporating a backdrop, etc.).

The spectacular flight of **Comet Hale-Bopp** through the inner Solar System has left us all breathless! The only 'downer' concerning this wondrous event was the '**Heaven's Gate**' suicide. Like me, you were probably unsure *how* to react to this event and how to answer the public's questions about it--which inevitably came up at each public stargaze, and which will probably continue to be asked for some time. My feelings about Heaven's Gate are composed of equal parts pity, sadness and contempt. While I feel mainly pity for the misguided victims, I must admit that I'm also resentful of the fact that they appropriated 'our' Comet. As can be expected, **our wonderful media focused mainly on the Heaven's Gate aspect of Comet Hale-Bopp**. One anchorperson was even heard to introduce one of the rare scientific pieces on Hale-Bopp with the following: *'And now a story on the Hale-Bopp Comet, which, you remember, caused the Heaven's Gate suicides.'* CAUSED?! Oh, well...

That's all for this issue. A little short this time because I'm in the midst of travel preparations. I'm off to the **Texas Star Party** on 4 May, and will have a complete report on this **'star party to end all star parties'** in the Next Issue of *Skywatch*!

--Rod

April is the cruellest month, breeding
Lilacs out of the dead land, mixing
Memory and desire, stirring
Dull roots with spring rain.

Cruel is right...I was made a believer in Mr. Eliot's sentiments when, out of the blue early one April morning, a hermetically sealed mayonnaise jar came flying through the air, bounced off a tree and impacted right on my noggin! I had been out observing the comet at an early hour, and was too bleary-eyed to see where said mayo jar had come from. But one thing I did know: it would contain the latest installment of....

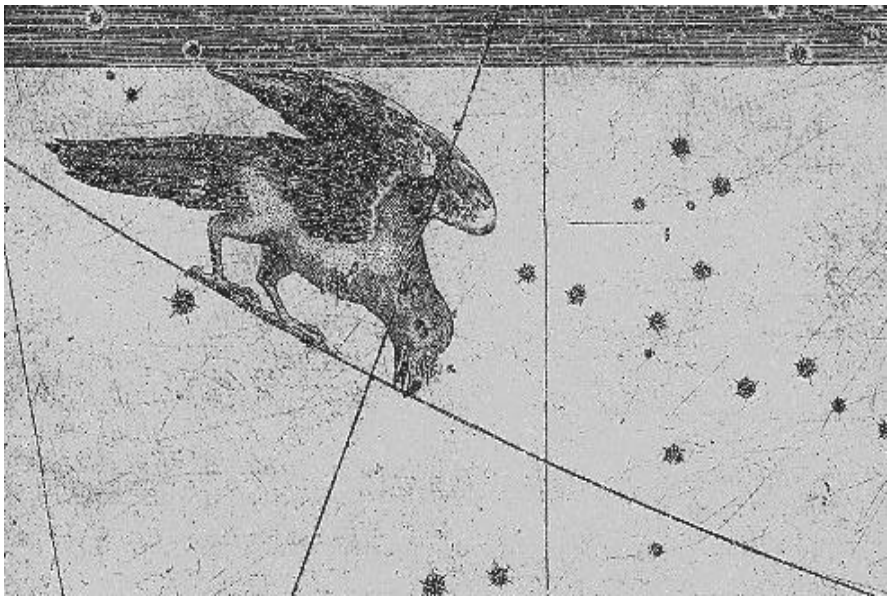
RUMOURS

***I wonder how Chuck Shramek*--he of the elusive Saturn-like Object (SLO) 'following' Hale-Bopp--is sleeping these nights?** While no one is suggesting that Shramek and others of his ilk (the Usenet's infamous NANCY, for example) are directly responsible for what happened to the Heaven's Gate 'cultists,' I think that some small measure of blame is due to those who--even unknowingly--encouraged these poor, misguided people and others like them. **Presenting obviously unproven and extremely foolish beliefs as FACT (aided and abetted by a sensation-hungry and ignorant media) often leads to disaster of some kind**. What can we (the astronomical community) do? Continue doing what we've always done, presenting the TRUTH about what goes on in the sky and giving the public some sense of how the Scientific Method works....

The Texas Star Party is upon us. **We'll see how it goes at the new location, Alto Frio Baptist Encampment**, near Leakey, Texas. What this location will be like is still unclear to me. But one thing is clear from reports your anonymous correspondent is receiving: **the little town of Leakey is solidly behind the star party**. I think that this might make a difference for the future of TSP. If this year's event comes off well, there may be no return to the Prude Ranch. Having the local community behind the TSP, especially, may help make this a viable long-term location. **If, however, the weather or other factors make for a so-so star party, and if WESTEX isn't a big success, I believe that TSP may return to Prude**. Many people, at this point, would certainly prefer that TSP return to the Davis Mountains....

I see that Celestron's latest catalog features the new Fastar SCT prominently! At just over 2 grand, it's a fairly good bargain, I think. It's essentially a Celestar Deluxe--same drive base, but with longer and beefed-up fork arms. The fork arms on the Fastar, in fact, look long enough to allow the OTA to pass through the arms with a CCD camera attached--a good thing, since you don't want the telescope to accidentally swing free and bash an expensive CCD camera on the drive base (and possibly break the corrector plate!). What really makes a Fastar a Fastar, though, is the special removable secondary, which can be replaced by a CCD camera, yielding a speed of about f1.95! Some people had wondered what would be done about the CCD camera's cord. In the illustration in the Celestron catalog, the cord is allowed to just lay across the corrector! But don't get too excited yet! The few CCD pictures taken in this mode that I've seen don't seem overly impressive, but it's hard to really tell much from these postage-stamp sized images (in Celestron's new catalog). As I keep saying, Celestron had better learn from Meade when it comes to catalogs and advertising or they'll eventually be left in the dust! Pictures of this new telescope next time (since Celestron doesn't seem to want to advertise it)...

And have you seen Meade's new field derotator, the model 1220, for the 8-12" LX-200 SCTs? It was pretty hard to miss, being prominently featured in the catalog Meade had mailed with the last issues of *Sky & 'Scope* and *Astronomy* (**this mailing caused some grousing** from those who felt that Meade was going a bit far in the direction of co-opting the glossy mags)! This field derotator, which is usable with all past and present models of the LX-200, allows guided long-exposure photography to be done in the alt-az mode (**a much steadier arrangement for an**



A wily crow! Corvus...

SCT than being tilted on a wedge)...

And I keep hearing rumors about an LX-400! Anybody else hearing this?

That's all for this issue...be back in July, but until then color the anonymous one **GONE TO TEXAS!**

--the anonymous astronomer

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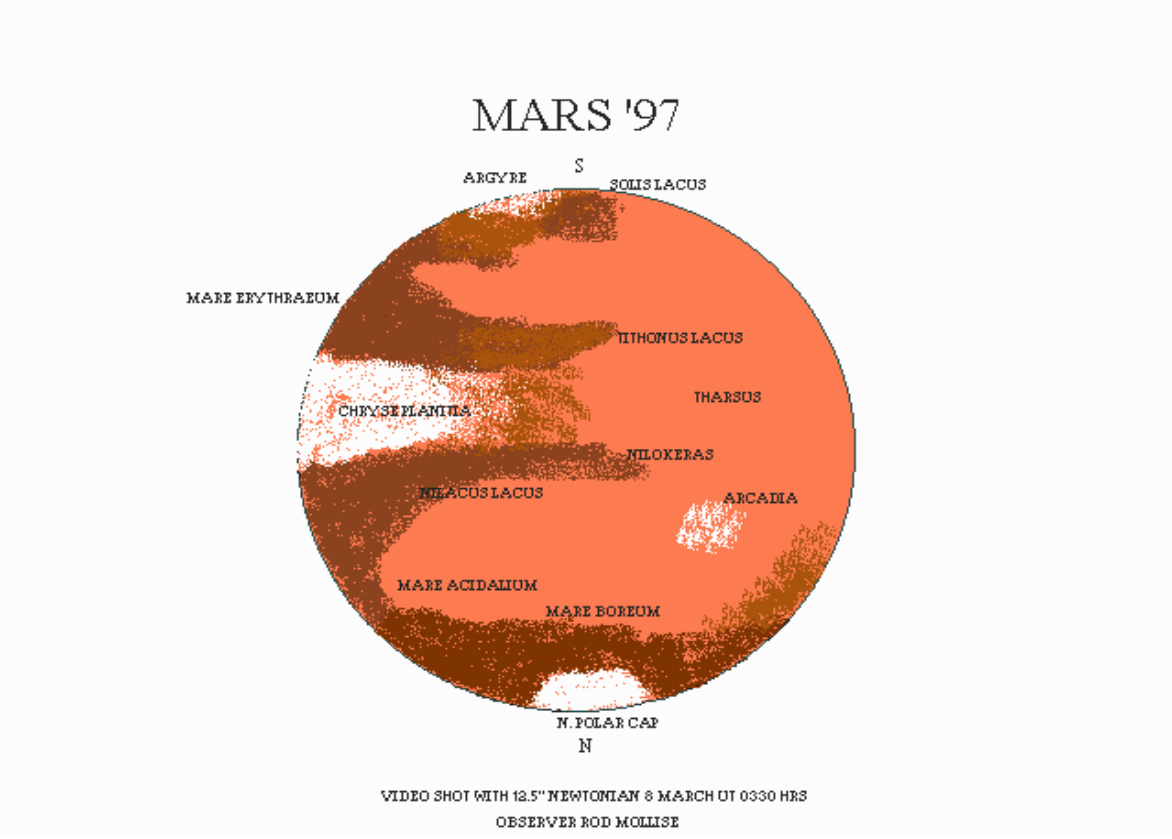
Well, the Great Comet's come and gone. I know that Hale-Bopp's passing has left us all feeling a bit down. So get back out there with that telescope; there's a great big beautiful night sky waiting for you...comet or no comet!

Peace,

Rod & Dorothy



Drawing of Mars made using a videotape shot with a CCD video camera for reference. Modern technologies can also supplement, rather than replace, old techniques!