

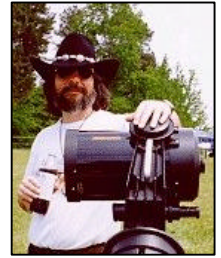
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Rod Mollise's

Skywatch



The Christmas Eclipse

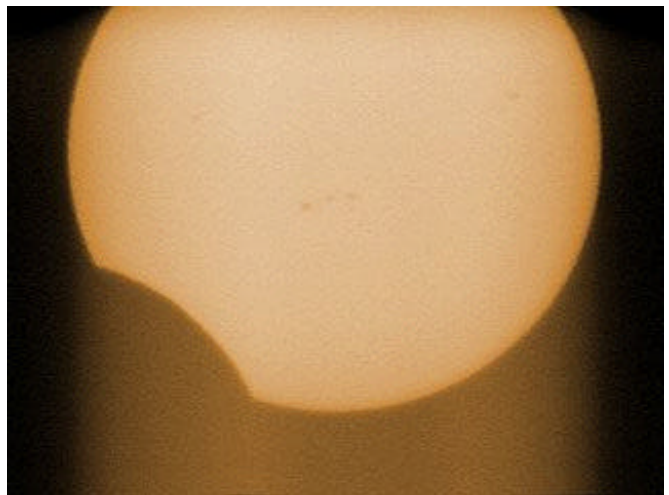
Rod Mollise

No, it wasn't an unbelievably spectacular total eclipse of the Sun, but the partial eclipse that visited us on Christmas Morning was beautiful and provided the perfect coda for the year—and the millennium. While the Sun was only approximately 40% obscured from my Gulf Coast observing site, it was made more interesting than many a partial eclipse by the Sunspot groups that peppered Sol's face on eclipse morning. One particularly impressive group of “measles” was located near the center of the disk. Watching Sunspot become obscured added to the interest in this normally fairly tame sort of event.

In making preparations for the eclipse, I was fortunate that I don't have any up-before-Christmas-dawn little ones in my house. I was able to trot downstairs and get the equipment set-up in the backyard long before it was time for gift opening rituals to begin. And I did have a fair amount of equipment to set-up. I had decided that I'd not only view, but *image* the eclipse.

Though I can choose from both conventional film cameras and an integrating CCD camera for imaging purposes, I settled on video. Why? Simplicity. No PC to fiddle with on an early Christmas morn, just a plain, old VHS VCR and a 12" black and white TV (my “monitor”). The moving picture nature of videotape also seemed perfect for a dynamic event like an eclipse.

The telescope I used was my Celestron 80mm f/5 refractor, one of the popular “Short Tube 80s”. This provided a shorter focal length than any of my other instruments, which would be vital in trying to get as much of the Sun's disk in the frame as possible. This was because the video camera I'd be using, a Supercircuits PC-23C CCD video camera, has a very small CCD chip, meaning that you need short focal length, even at prime focus, for a “big” object like the Moon or Sun. The 80 f/5, equipped with a Thousand Oaks Type II Solar filter, would ride piggyback on my Celestron Ultima C8 using a set of Ken Dauzat's mounting rings—one of the best values out there. I had previously marked the azimuth



angle of Polaris in the backyard, allowing me to achieve a relatively accurate polar alignment without being able to see Polaris. When using small CCD chips, decent polar alignment is a requisite, since drift will show up right away due to the large “magnification factor.”

With everything setup and ready to go in the backyard of Chaos Manor South, I fired up the camera and the old Panasonic VHS recorder I use in the field, pointed the scope at the Sun using its shadow (to safely point a telescope at the Sun, just move it until the shadow it casts on the ground is as *small* as possible), and took a look at the monitor. Nothing. Nada. Zip. Zilch. I fooled around with camera, cables and recorder for about 15 minutes, beginning to sweat despite the cold air—eclipse time was only about 20 minutes away. Finally, inspiration: I took a look at the back of the VCR and noticed I had the output from the camera plugged into the OUTPUT jack on the recorder. DOH! Moving the cable to the input jack delivered a nice image of the Sun on my old TV. A little focusing and I was ready to go!

My polar alignment turned out to be pretty good—only occasional re-aiming of the C8 was required. This was nice, since I was able to participate in Christmas morning celebrations without worrying about the scope. Every once in a while, I’d run out back and push a declination or RA button on the C8’s handpaddle to keep Sol centered in the camera’s field of view. I also found that my family enjoyed viewing the eclipse “on TV.” I think video would be a nice way to show the Sun to the public. Many folks are understandably hesitant to look through a telescope pointed at the Sun despite your assurances about Solar filters. But in most cases members of the public instinctively realize it’s safe to view the Sun on television (there are a few exceptions—the media’s well-intentioned warnings about eclipse

viewing have so frightened some people that they’re VERY timid about looking at an eclipse, even on TV!).

Shortly before 1300 local time, the Moon had completely passed by the Sun, leaving his disk “round again.” Now it was time for me to get to work in earnest. I packed away all the equipment, brought the tapes inside, and checked them on a VCR. The little 80mm refractor had done a fine job on the eclipse despite occasional thin clouds. The image was sharp, easily showing the prominent spot group at the center of the disk.

I attached a VCR to one of our PCs via a Snappy frame grabber and started downloading eclipse images. My main goal was to create a time-lapse “eclipse movie.” To this end, I captured frames every 5 minutes from eclipse beginning to end. These were cropped with Paint Shop Pro and assembled into an animated .gif movie with Animation Shop. You can see the results at <http://members.aol.com/RMOLLISE/index.html> along with a still image or two.

All in all I was very happy with my results. Given the weather we’ve had lately, it was quite remarkable that we saw anything at all. I can live with a few cloud-obscured frames. Many areas of the country were *completely* clouded out—just to the West in Louisiana, for example, the eclipse was a “no-go”. And what a shame! If you missed the Christmas Eclipse, you’ll be waiting a *while* for



the next one. About 300 years!

SCT - User

Rod Mollise

A year and a half ago, I started thinking about *mailing lists*. You know what an Internet mailing list is, right? It works very simply. You gather a group of people sharing a common interest together to exchange email. A special server, a “listserv” computer, handles things, keeping track of “subscriptions” and distributing the email. If you want to make a post to the list, you address an email message to the listserv; the listserv then sends the post to everybody who’s currently subscribed to the list. A mailing list is quite similar to an old time computer bulletin board or to the Usenet Newsgroups found on the Internet today. But there are some differences. Mailing lists generally serve more narrow interests than venues like the famous sci.astro.amateur newsgroup. Also, mailing lists are generally much less “rowdy” than the free-wheeling newsgroups. Anything *doesn’t* go on the mailing lists; most are moderated—that is, one list member, usually the person who started the list, keeps order, prohibiting “flame wars” and other depredations that afflict the Usenet.

What I was thinking about *in particular* was a mailing list for users and fans of SCTs (Schmidt Cassegrain Telescopes) and other catadioptric—lens and mirror—telescopes scope like Maksutovs. Sure, there were mailing lists devoted to CATs, but they all were much narrower in focus than what I had in mind. MAPUG, the Meade Advanced Products Users’ Group, for example, is a wonderful resource, but it is devoted almost exclusively to the Meade LX-200 line of telescopes. Another mailing list, Celestronuser, not only restricted itself to one “brand”, it was pretty much moribund when I started thinking “general-interest CAT list”—if you got even one post a week from Celestronuser, that was a *lot* of traffic (it seems to have completely disappeared lately).

No, what I was pondering was a mailing list for *all* SCT and MCT users. Everything from 90mm ETXes to Criterion Dynascopes to Quantum fours, to Orange Tube C8s to LX90s! But how to put it on the air?

Formerly, if you wanted to establish a mailing list, access to a university email system and a knowledge of Unix were prerequisites. But that was before free enterprise came to mailing lists. Corporate America quickly figured out that lots of people were interested in lists and devised a way to make mailing lists turn a profit. Provide user friendly mailing list setup and control and make it pay by attaching small text advertisements to the email posts.

Over the last few years, several mailing list providers have grown and thrived, particularly Egroups (now owned by Yahoo). I chose Egroups, since it offers extensive web based facilities for list users and administrators. You can read mail on the egroups.com website, change your subscription parameters via web forms, post files for listmembers, and much, much more. Starting up my mailing list was a snap. Filled out a few forms at egroups.com and I was done.

On July 8, 1999, "sct-user" was born with a grand total of one member (me). It didn't stay that way for long, though. It was soon obvious that I'd stumbled onto something that had been sorely needed. In the 17 months since sct-user first went on the air, membership has grown from that loneliest number "one" to over a thousand subscribers. The list now has its own logo (T-shirts and ball caps are next), extensive file areas and server space, and has passed nearly 20,000 pieces of mail. Most of all, the list has helped many SCT owners, both novice and advanced.

This is entirely due to the large group of wonderful, talented and knowledgeable CAT fanatics who form the core of sct-user, rather than

anything I've done single-handedly. A mailing list is only as good as its subscribers, and I like to think that the sct-user members are the very best!

If you think you might be interested in subscribing to sct-user, visit the list home page at <http://members.aol.com/RMOLLISE/index4.html> if you like SCTs and MCTs, I can guarantee you'll be glad you did!

Beacons in the Night : Internet Equipment Reviews

Pat Rochford

One of the most frightening aspects of entering into this hobby of ours is the eventual acquisition of a telescope. It is a step often taken with a lot of uncertainty. *"Is this the best choice in design for my area of interest? Is the quality of the scope in line with the amount of money I'm spending? Will I be able to transport it to a dark site as well as out into my backyard?"*

I recently mentioned in this newsletter what a wonderful time it is to be an amateur astronomer. The proliferation of telescopes and accessories currently available (in all price ranges) is at an all time high. The problem is not finding a telescope to suit your interest and pocketbook, but rather *just which one* - there really are that many. So many in fact, that the problem of choosing is further compounded by these numbers.

In years past, about the only way to get first-hand information about a particular telescope, was to use one

that belonged to someone else. If you were lucky enough, you belonged to a fairly large astronomy club where there was a chance that someone in the club might own the model you were interested in. Or perhaps you traveled once or twice a year to a major stargaze and found the scope there. But more than likely, you experienced neither of these situations. The best you could do was to trust the slick colored ad in *Sky and Telescope* or *Astronomy*. Sometimes you got just what you wanted, but more than likely it wasn't exactly what you had in mind.

A few years ago, help came along in the form of a book called Starware, by Phil Harrington. This book was revolutionary in that it gave mostly honest and unbiased information on just about all commercially available telescopes. Their strong points, weak points, supplied accessories ... you name it. Unfortunately, the information quickly became dated as new models replaced old ones. Phil came out with a second addition recently, but as with the first, information just can't stay current for long.

Enter the internet, the perfect vehicle for fast and current information. A bit of a late comer to the net myself, it didn't take me long to see the justification for shelling out \$22 a month to AOL. The first telescope review site I came across was that of Todd Gross <<http://www.weatherman.com>>, a television weatherman in Boston. Todd seems to be living the dream I can't - to buy and test every telescope I can get my hands on. He doesn't keep all of them, but uses them long enough to come up with a fair assessment of their optics and mechanics. His *mini-reviews* as he calls them, now number sixty-eight. Refractors, reflectors and catadioptrics in all price ranges are summed up in a few paragraphs, that have enough information to give

you a good idea whether or not the telescope you *think* you are interested in might be right for you. Todd also covers accessories as well, particularly eyepieces. His thoughts on the TeleVue Binoviewer were instrumental in my decision to spend a thousand dollars on one.

Ed Ting also has a review site (easily linked from Todd's page) that currently covers eighty-one different telescopes and dozens of eyepieces. Many of these are the same scopes reviewed by Todd Gross, so you get another person's perspective as well. A third site, Cloudy Nights <<http://www.cloudynights.com>>, now numbers 90 scopes. This site posts reviews from several different authors and grows noticeably from week to week.

Add to these review sites, a number of user groups, which now exist as forums for specific scopes by their design or manufacturer. Our own Rod Mollise has developed a user group for SCT's. The dialog found at these sites covers everything from discovering bugs in new models to coaxing the most out of older scopes. And the ability to ask a question specific to your needs and get an answer is something that would have been nearly impossible just a few years ago. Keep in mind that information found on these Internet sites can be somewhat subjective at times. Opinions on telescopes are as varied as automobiles or CD players, but the amateur community as a whole will not steer you wrong. We all pretty much depend on each other for a reliable exchange of information.

So, if you're new to the hobby or just want to get information on the latest models from California to China, get on line now and find out if the ad you're drooling over is the real deal and if it's right for you.

Year End Astronomy Software Wrap-up

Rod Mollise



The end of the year is upon us, and with it comes my yearly astro-software rundown. Don't see your favorites here? Let me know about 'em. Maybe even send me a review! But these are the astronomy programs that I think were noteworthy *this* year...

The Sky. Software Bisque's The Sky, one of the longest lived of Astro Programs (it's been around since the DOS days when it was called the *sky*), continues to get better and better. Now in Version 5, it's all that many amateurs will ever need or want. Tens of thousands of deep sky objects and a good interface make it a sure winner. One thing about The Sky that sets many amateurs to complaining, though--the price. Level 4, the top-of-the line version, goes for \$249.00 USD. This is not that much, really, when compared to something like Microsoft Office, but it is substantially more than most other astro software packages, and gives some observers pause.

What to do? Well, If you don't need the frills of Level 4 (the ability to interface with the Bisque brothers' other programs like **T-Point** and **CCDsoft**—something mainly of use

to CCD imagers with goto telescopes), you can save 50 bucks by opting for Level 3 (or the Macintosh version). If you don't mind giving up the ability to export object lists, you can save even more by dropping down to Level 2 at \$129.00, a price very competitive with other programs. For information on The Sky go to <http://www.bisque.com>

Starry Night. I admit I haven't shelled out for a copy of Starry Night yet, but I have been able to try it a number of times. At first I turned my nose up at it, looking at it as a **RedShift** clone—that is, a “pretty planetarium” that featured attractive graphics, but didn't offer much for the serious observer. But things are changing for the better with Starry Night.

Starry Night, which is now published by the folks that do the impressive space.com website, has recently evolved into three programs. **Starry Night Pro** (\$129.95) is a full-featured program that will satisfy many of the most demanding deep sky observers, offering the Hubble Guide Star Catalog and thousands and thousands of deep sky objects, just like The Sky or other “serious” packages. This version of SN has definitely changed by mind about the program! It also maintains the beautiful interface and graphics of the earlier versions, making it perfect for educators, or for those who just want to impress their friends!

The “second” Starry Night is **Starry Night Backyard**. This low cost basic planetarium is fine for many users, offering the Messier catalog and a decently deep catalog of 1,000,000 stars. Backyard would be great for Middle or high school teachers, and its \$49.95 price tag won't strain budgets.

The “littlest” Starry Night, **Beginner**, is very similar to Backyard, but with some of Backyard's more specialized features missing and

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with a smaller catalog of 100,000 stars. Beginner is still beautiful, though, and at \$29.95, this would be a reasonable investment for a casual user or a primary grades educator. Read all about SN in all its mutations at <http://www.space.com>

Megastar. Megastar, by Emil Bonano and published by Willman-Bell (\$129.95), remains my favorite deep sky program. But...there's not a lot to say about it this year. It remains in version 4 where it has been for a couple of years now and there's no doubt that it's beginning to show its age (the interface could stand some updating, as could the "DOS with Win interface code."). For information about Megastar, go to <http://www.willbell.com>

Skymap. Unlike Emil, Chris Mariott continues to fine-tune and improve his program, Skymap Pro. Now up to Version 7, Skymap has added a host of new features this year, including colors for stars, more support for goto scope/DSC users, and much more. You definitely can't go wrong with Skymap. <http://www.skymap.com>

Guide. Project Pluto's Guide is hardly an "also ran". Offering all the features any deep sky maven could want, this program, now in Version 7, has developed an almost fanatically loyal cadre of users. For info see <http://www.projectpluto.com>

Deepsky 2000. Steve Tuma's Deepsky 2000 is one of the programs I use the most these days. In fact, it's *all* I use when I'm planning deep sky expeditions in detail. And it also serves as my logbook. What is DS2000? Take an innovative format (a sql database presented in spreadsheet form), couple that with a database of **420,000** deep sky objects, slap an "under 50 dollars" price tag on the whole thing, and you have a real winner. New this year was an extensive rework of the user interface, the program code and, most recently, the added ability to

interface with another astro program, **Cartes du Ciel**.

Which program takes my yearly award for most innovative, most improved, and best value? **Cartes du Ciel** ("Sky Charts"). Cartes du Ciel, by Switzerland's Patrick Chevalley, is noteworthy on several counts. What amazes most folks, once they see this program in action, is that it is *freeware*. Yes, FREEware. It costs you nothing. Download it and it's yours. Over the years, a number of freeware and shareware offerings have bubbled up; some have even gone on to fame as "commercial software," but this is the first really surpassingly good program that appears likely to remain free.

And it is not just exemplary because of its price. It is attractive, responsive, and features a highly user-friendly interface. It also has some functions, like its ability to superimpose POSS plates downloaded off the net (for free) over its charts, that few other programs currently offer. For more information, read my review in the last issue of Skywatch, and visit the Cartes website at <http://www.astrosurf.org/astropc> (you'll find a link to the last issue of Skywatch on the Cartes page).

And that's about it for 2000, gang. What do I look forward to *next* year? The first full-featured astro program *that resides in ROM chips inside an SCT drivebase or hand controller*. That's my prediction, anyway. Check back in 12 months to see how accurate it was!

Skywatch® is published bi-monthly as a service to amateur astronomers by Rod Mollise and Skywatch Publications. Submissions are always welcome. Address correspondence to:

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**January-February 2001 Volume
10 Issue Number 1
Whole Number: 54
New Series**

MY BACK PAGES



Club Notes

MAS

The Mobile Astronomical Society held its annual New Year's banquet on Wednesday, 3 January at the Cock of the Walk Restaurant in Mobile.

SCT-USER

As noted elsewhere in this issue, sct-user subscriptions topped 1000 in December. With a big subscriber base, Rod has suggested that the list look into having some "frills" produced—T-shirts, bumper stickers, patches, pins, etc.

YUCK! Beavis and Butthead in diapers dressed as New Years Baby's! What could be worse? Listening to their whining about the cold as they delivered that hermetically sealed Mayo Jar (kept on Funk and Wagnal's porch for a fortnight) containing the new year's first....

Rumours

We begin the years with two notes on famous astronomy personalities, the first sorrowful and the second joyful.

Well known amateur astronomer, astronomy entrepreneur and all-around good guy **Roger Tuthill** passed away in December. Roger will be known to many of you both from his frequent appearances at national star parties and from his long-time astronomy business. Roger made his mark selling his Solar Skreen Solar Filters (he basically *invented* the mylar Solar filter for telescopes), his "isostatic" tripods for SCTs, and his polar alignment telescopes. Word gets around about good dealers, though, and Roger quickly became a major source of Meade equipment (though he always operated out of his home). He was particularly noted for offering his "certified" telescope packages, checking scopes for proper operation before shipping them—a good thing in this day of mass-produced electronics-heavy SCTs. Mr. Tuthill was also a kind and amiable friend to many an amateur and will be sorely missed.

A happier item concerns astronomy writer/television personality/amateur astronomer **Patrick Moore** whose name appears on the Queen's Honours List this year. The host of the

BBC's *The Sky at Night* is to be **knighted!** Many of us are saying, "about time, too." Good show, Sir Patrick!

What's Celestron up to? A little bird told the Anonymous One that they are set to introduce a new high-tech SCT early this year. One that includes, among other marvels, an **onboard GPS** receiver to aid alignments!

And Meade? I'm still looking for the LX-300, but one thing's definite—they sold a lot of telescopes this Christmas. Mainly small and cute ETXes. I mean, how the **H-E double L** can you pass up an ETX 60 complete with Autostar computer and *two* usable eyepieces for \$199.00 bucks? I mean, when it's staring right at you from the shelf at your local Wal-Mart?!

What effect will an economic downturn have on the scope sellers? Expect the big two to ice new product introductions and to reduce prices where they can. Meade can do this, no doubt, due to their new Mexican factory. Celestron? Look for more imported components, I'd say. How far will this go? Well, Synta in China is now known to be capable of producing SCTs... As above, I still expect the LX-200 to go extinct soon. This *old* design is no doubt expensive and time-consuming to produce compared to the Autostar scopes. Look for a "Super Autostar" LX-??? soon!

Now pardon the Anonymous One—after New Years he, like Eric Clapton, "has an aching head!"

The Anonymous Astronomer

