Exploring the Final Frontier….

January-February 2000
Volume 9, Issue 1

"A Newsletter for the Truly Outbound!"

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Skywatch
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U.S.A.

Skywatch

"Visit to a Dark Place": November MOSP

Rod Mollise

The November 1999 Mobile Astronomical Society Members Only Star Party (MOSP) was to be special. We'd finally have a chance to escape the light polluted (though undeniably pleasant) confines of the Environmental Studies Center for some real dark sky observing. Eastern shore resident Tom Papa, a recent convert to this craziness we call "amateur astronomy," had arranged for us to use his employer's leased tract of land on the Alabama-Florida border for the November edition of our club star party, which was to be held on Saturday the 6th. We were all really looking forward to this outing since most of us hadn't been able to do a lick of real deep sky scanning lately due to the storms that infested the 1999 Deep South Regional Star Gaze.

On Tom and club President Pat Rochford's advice (Pat had previously surveyed the star party location with Tom), we made plans for all attending MAS members to meet at the gas station at the first I-10 exit over the Florida state line and form a caravan to travel to the somewhat hard to find site. As we waited in parking lot under beautifully clear and unseasonably warm November skies, it was hard to contain our excitement. Real deep sky! Within an hour's drive of the city! With sundown approaching, we formed our "convoy" and headed for Amsouth's hunting preserve. Just as we were pulling out, we were joined by another Eastern Shore resident, Tom Williams, who as most of you know is the president of Pensacola's astronomy club, the EAAA.

How did we get to the site and exactly where is it? Beats me! I'm not overly familiar with the area, and just followed Pat Rochford's able lead. I was *vaguely* aware that just before reaching our destination we zig-zagged back across the state line into Alabama. After entering the fenced preserve, it didn't take us too long (despite a wrong turn or two in the maze of dirt roads crossing the site) to reach the area's single open space that

would serve as our observing field.

Have you ever been to the Texas Star Party? If you have, you'd have been right at home on this field! Dust, and red dirt—lots of it—were the order of the day. I'd brought along a plastic tarp to spread on the ground, just as I've done at TSP in the past, so the dirt wasn't a problem once I found a good spot on the field. It was finding a spot that was a little *scary.* As you know, we went weeks and weeks without rain late last year. At the time of the MOSP, the dust in this clearing was deep and not tightly packed at all. A time or two I almost thought my front wheel drive car was on the verge of sinking out of sight in this mini-Sahara!

I occupied myself for the next half-hour with unloading and setup. Since this promised to be a substantially dark site, I'd chosen to haul my C8 out and try some astrophotography, hoping to get some of the shots the thunderstorms had stolen from me at Deep South. I'd also brought along my little 80mm Celestron "Short Tube" refractor for scanning the heavens at low power.

Just when you really need everything to work right, the Gremlins always strike! I was made all too aware of this when, in the process of getting my scope polar aligned, the wedge's altitude adjuster came unscrewed and fell to the ground in a clatter of nuts and bolts! Thank goodness I was set up on a plastic tarp. The small parts would have disappeared forever in a sea of dust if I hadn't been. With the welcome aid of Pat Rochford, I was able to get things back together and the scope decently (if maybe not perfectly) polar aligned just as darkness fell. When I was finally able to look up from my labors for a moment and gaze around the field, I was astonished. Why, there were scopes everywhere! At least 10 instruments ranging in size from Pat's 24" Dob to my 3 inch refractor graced the landscape. It looked like we had a real star party going!

Setup completed, camera mounted on scope, and darkness at hand, I prepared for several hours of astrophotography. Before I began I made a critical assessment of the sky from this site: "Hmmmm…not bad, not bad at all." The sky was for the most part quite dark from this location, with the Summer Milky Way--now plunging into the west--quite apparent despite its low altitude. The relatively dim stars of the "great Autumn void" sparkled with unaccustomed brilliance. Looking west, I didn't see much evidence of Mobile's light-dome at all. Oh, it wasn't perfect, mind you. Pensacola, to the east, provided a glaring blob of light that pretty much eradicated the eastern horizon to an altitude of about 25-30 degrees. Quality in general? If you're an MAS old timer, think "Hurley." This location is similar to our old Mississippi state line site.

As the night wore on and the stars wheeled overhead, Autumn constellations giving way to the rich Winter Milky Way, we were treated to some wonderful views. I spent the majority of my time looking at **guidestars** through the OAG on my Schmidt-CAT, but I certainly took time to do some good old-fashioned visual observing, both in my C8 and my 80mm refracto. I also had some wonderful peeps through Tom Williams' 18 inch Sky Designs Dobsonian (some of the little clusters Tom was running down in the Cassiopeia area were simply magnificent) and Pat's main scope, his magnum opus 24" truss tube.

Truthfully, though, my most memorable views came from my little wide-field refractor. After guiding photo after photo, there's really something to be said for the freedom offered by a small scope like this. The memory I'll most cherish from this outing is the view my 80 f5 gave me of the legendary North America Nebula (NGC 7000). While I've seen this a fair number of times with naked eye and binoculars from dark sites, I'd never had a good look at this wondrous cloud through a telescope. The problem is that it's just too big. At 2 degrees plus across, you just can't fit it into the field of your average 8 or 12 inch telescope. The result is that you're reduced to looking at small, dim patches of the nebula rather than its whole magnificent shape. But it was just right for my small refractor. With an OIII filter in place, the nebula, and particularly the "Mexico-Central America" region, stood out amazingly well. I'd almost describe it as "bright!"

All too soon, the night was growing old. Due to the fairly long drive home and other factors, we'd agreed to shut down around midnight. One last glance at the now risen M42, and

it was time to pack up. Will we visit this site again? Hard to say. After a few weeks of our area's normal ration of rain, the red dirt of the observing field would likely become a muddy lake. Whether we make it back or not, though, I want to acknowledge the kindness of Tom Papa in providing the MAS with a truly unforgettable experience! One which was almost good enough to make us stop mourning over the "loss" of this year's DSRSG. Thanks, Tom!

Nightsky:

Orion the Hunter

Pat Rochford

The most prominent constellation of the January sky is without a doubt Orion the Hunter. Visible from every part of the globe, it has been known as *Uru-Anna to* the Babylonians, *Orwandil* to the Norsemen, *Caomai* to the Irish, *Al Jabbar to* the Arabs and *Menelvagor to* the Hobbits of Tolkien's Middle-earth.

On the next clear night, step out and take a good look at Orion. Within the confines of this constellation are some fine and varied examples of celestial objects visible to us from our corner of the galaxy.

Start with Betelgeuse, an irregularly pulsating, red super-giant. It is the bright orange (magnitude 0.7) star we see as Orion's right hand. One of the largest stars known, Betelgeuse has a minimum diameter equivalent in size to the orbit of Mars. As mentioned, it is a variable star and it is believed that it grows in size as much as 60%. This would make it roughly the size of Jupiter's orbit (506.8 million miles) when at maximum.

Looking down at Orion's left foot we see Rigel, the brightest star in the constellation. It appears to us as blueish-white, a definite contrast to Betelgeuse. Rigel is approximately 900 light years distant and is a true super giant. With its companion star, it is 57,000 times brighter than our sun.

Perhaps the most intriguing object in this constellation is M42, the Great Orion Nebula. This is the finest example of diffuse nebula in the sky. It is here that star formation is taking place as we watch. Deep within M-42 (and visible in small telescopes) is a quadruple star known as the Trapezium. Strong ultraviolet radiation from this and other young stars in the nebula give it the eerie, green glow we see in our telescopes. The entire nebula is 20,000 times the size of our own solar system.

North of Orion's belt we find M-78, another nebula. Unlike M-42, this object *reflects* the light of two nearby stars and is thus known as a reflection nebula. M-78 is about 1600 light years from us.

Finally, just beneath the eastern most star of Orion's belt, we find the Horse Head Nebula. This is the best known example of a dark nebula. Comprised of dust and dark matter, it is seen only as a silhouette against the brighter region of nebulosity behind it. It is unfortunate that this object is almost completely invisible to the eye at the telescope. Capturing it requires long exposures on film.

Now go out and take advantage of winter's cold, clear nights. Orion is easy to find and its loaded with these and other interesting objects. Then, when your astronomical curiosity has been satisfied, return your semi-frozen body to the fireplace and develop a new appreciation of stargazing on those warm, balmy evenings last summer.

This installment of "Nightsky" originally appeared in the January 1987 (Volume I, Number 3, Old Series) issue of Skywatch….

Astrobytes

Astro-Software Year-end Roundup!

Rod Mollise

It's been an exciting year for astronomical software users! Oh, there haven't been any startlingly new introductions, but the capable programs already out there continued to get better--"better" meaning both easier to use and more feature-laden. If

anything characterizes astrosoftware development lately, it's a craze to add new features. Modern packages can do almost anything this side of slicing bread! The features race, which used to be confined to the word processors and spreadsheets produced by competing software giants like Microsoft, has finally some to astronomy programs. While this wealth of possibilities can make learning software difficult for new users (I mean menus within menus within menus), it's all to the good for the average astro computing fan. There are many, many excellent packages for the serious amateur astronomer and astronomy educator, but here are the programs that impressed me most this year:

Deepsky '99/2000

This program continues to amaze me. The author, software wizard Steve Tuma, took deep sky programs in a new direction beginning about three years ago and continues to improve his program by leaps and bounds. Deepsky is different from what you're used to, that's for sure. On starting the program you're confronted by a sql database presenting information on objects in spreadsheet format! "Hey! Where's the sky!" It *is* strange to see text instead of a computer representation of the constellations. But, believe me, you'll get used to it. This spreadsheet format, strangely enough, proves to be extremely efficient when you're planning your deep sky observing sessions. Don't get me wrong, DS will print charts as good as the best of its competitors, too. And will outdo just about all of them when it comes to observing lists and logs. Most of you know that I'm a huge Megastar fan, but I must admit that I find myself reaching for the Deepsky '99 CD more and more often these days.

The real news here, though, is Deepsky 2000. Steve released this latest upgrade to the program on the first minute of January 1, 2000, sending press releases out as the digits clicked over from 1999 to 2000. And from the sound of it, this will be a MAJOR upgrade. Wondering how much farther deep sky applications can go? Well, how does 2000's 413 THOUSAND objects grab ya?! Stay tuned. I'll get a Deepsky 2000 CD into my hot little hands and do a full fledged review ASAP.

Skymap Pro 6.0

I'd always thought of this U.K. based program as a "Megastar also ran." It was nice, but just not quite as polished and capable as Megastar. With this newest "Pro" release, that's all changed, for sure. Chris Mariott's Skymap is now as professional and bug free as it gets. Its features and capabilities now easily match those of Megastar (well, except for Megastar's MAC galaxy catalog). In fact, some users may *prefer* Skymap now. It must be admitted that it does a better job than Megastar in portraying wide angle views of the sky (horizons, etc.). Skymap is a winner no matter how you use it—in the den for printing charts or in the field controlling the scope.

Megastar

I still love Megastar, but there's not much to report on it this year. Now in version 4.x, it underwent a substantial, if not Earth-shattering, update in 1998. I'm sure the author Emil Bonano has some tricks up his sleeve to keep MS on top in the year 2000, though!

Sky Tools

Is written by a "professional amateur," Greg Crinklaw. I haven't had a chance to test this one yet, but based on what I'm hearing, this Deepsky '99-like program is one to watch.

The Sky

The Sky is as good as ever, and continues to be updated in small increments by the Bisque brothers. The big news last year for this venerable program, however, was that it has now been ported to the Apple Macintosh. The revived Apple now has a second deep sky powerhouse that can run under the Mac OS (for years all the Apple fanatics have had is Voyager).

Starry Night Pro

This is the "pretty planetarium" that wants to be a deep sky program. As most of you are aware, astronomy software can be roughly divided into two camps: realistic planetariums and deep sky programs. The planetariums strive to portray the night sky as accurately and beautifully as possible, while the deep sky programs cater to the working observer more interested in legible charts and big object databases. Starry Night tries to do both, offering the most photo realistic depiction of the night sky in the business

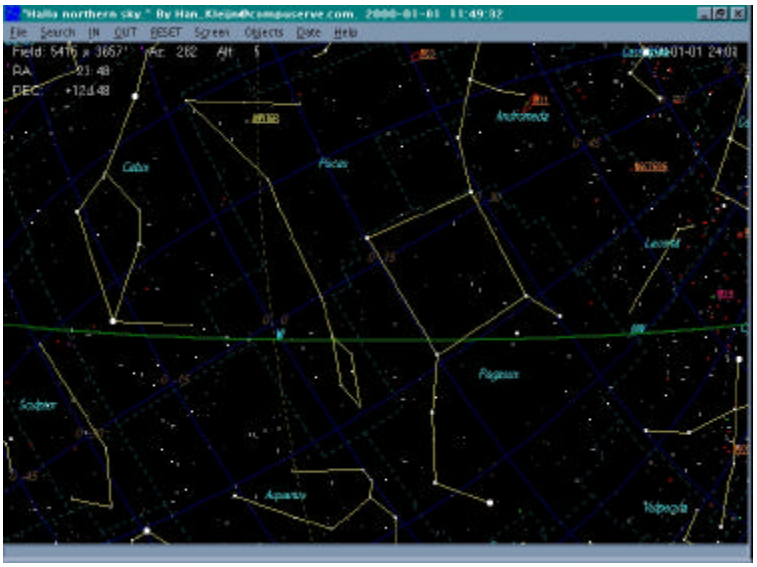
while at the same time including the Hubble Guide Star Catalog and an impressive number of non-stellar objects. Does it succeed? In part. You could certainly use this for charting or even controlling your LX-200 or Ultima 2K, but it still wouldn't be my choice for tasks of this type. If, on the other hand, you want to impress novices with the power and beauty of professional astronomy software, this is the package to choose!

RedShift 3

It looked as if RedShift had finally got it right. After a disastrous release of the bug-ridden RedShift 2 some years ago, the program was completely rewritten. It is now very pretty, very user friendly and very accurate as regards Solar System events. It is now my choice for tasks involving the Sun's family. Sadly, though, the U.S. distributor of the program, Piranha, has run into financial difficulty and 3 is no longer getting the distribution and promotion it deserves.

Xephem

Are you a real computer weenie? Have you deserted Windows for Linux? If so, your astronomical software ship has come in. Xephem is a full featured observer's program. And it's free! In addition to this allure, it also features the ability to import practically any astronomical object catalog or database, making the number of objects it can include virtually open-ended. Xephem, like most Linux applications is not exactly user friendly as far as installation goes, but if you're comfortable with Linux/Unix/X-Windows, you should be able to get this fine program up and going without much nail biting. In addition to the free download version, it can also be bought on a CD for a very reasonably price. This is recommended, since the CD includes the Hubble Guidestar Catalog, which you'll have to purchase separately if you download the free Xephem (and you'll have to figure out how to import the GSC too, if you go this route).



Free for Windows Users

No, freeware astronomy software is not dead! If you'd like a nice Windows planetarium on approximately the same level as that hoary old DOS app Skyglobe, search out and download the nice freeware planetarium "Hallo Northern Sky" (that's right, "hallo," not "hello"). The young programmer of HNS has done a fine job and has chosen to share his work with his fellow amateurs (http://ourworld.compuserve.com/homepages/han_kleijn/software.htm)

That's all for this year's bunch. If you didn't see your favorite astro program here, why not consider writing a review of it for Skywatch? If you need further details on any of the applications mentioned here, just email me at RMOLLISE@aol.com….

My Back Pages

Astropoem

Into the Void

In the Darkness
A light.
A hope of eternal journeying.
If not for us, then
For our children.
Or our children's children.
We'll tell 'em:
"Granpa and Granma
Were there before you!"

--Rod

Editor's Musings: Once Upon a Midnight Dreary

We've apparently made it through the dreaded Y2K rollover with nary a glitch. Was this "disaster" merely in the minds of the news media? Or was there something to it after all? Apparently a little of both. In our area of concern, I am hearing reports of problems with the Celestron Ultima 2000 goto scope. Problems concerning planet location following Y2K. It might not be a bad idea to thoroughly test robotic scopes like the U2K, the LX-200, the ETXes and the Nexstar as well as any astro software you use.

Mostly, though, I expect another outstanding year for area amateurs. The new year starts off with a bang with a beautiful Lunar eclipse, and I think it'll just to get better after that! The MAS is in excellent health in my opinion, and 2000 will no doubt offer many wonderful group observing opportunities, comradeship, and, as always, the opportunity to give something back to the "greatest hobby in the world" through public star parties and service projects like Astronomy Day!

Oh the popping champagne corks! Oh the booming fireworks! Oh the bangs of mayonnaise jars hitting the front porch of Chaos Manor South! Mayo jars hurled by those execrable youths, Beavis and Butthead. Mayo jars containing the new year's first…

Rumours

What in the heck's going on at Celestron? We're hearing numerous tales of quality problems from new SCT owners. Most of these concern accessories, and particularly the junky, toy-like prism diagonals that are being shipped with new telescopes! I understand the need to economize when you have to hold that dratted 1000 buck price line on introductory SCTs…but there is such a thing as QA. That is, at least opening a few of the boxes that arrive from the far east and checking to see if those star diagonals, finders, and Kellner eyepieces are usable!

A more sinister problem is being reported by astrophotographers owning Celestron's Celestar 8 Deluxe. Apparently the PEC circuit doesn't work at all. This appears to be a firmware problem, and should, therfore, be easy enough to cure, but for now, making a PEC recording with your C8D accomplishes exactly nothing—zero, zip, zilch!

Not that Meade is immune to the QA woes, either. They've done a lot, apparently, to try to tune up the problematical ETX 5", which descended on an eagerly waiting market last year with a resounding THUD! The telescope is supposedly better now, but the fact remains that many ETX owners report problems with this and little sister 90mm ETX. Problems like mechanical failures, software glitches with the Autostar computer and somewhat inconsistent pointing accuracy. The ETX is an important scope for Meade, maybe much more important in the long run than the old-fashioned LX-200, so the Anonymous One has no doubt that they'll go to great lengths to resolve whatever problems they can while still holding the price point. But be forewarned, these little scopes (which are really quite nice mostly) can still be extremely aggravating, especially for the novices at whom they're ostensibly targeted.

Out takes:

What's on the horizon? Nexstar 11. Remember, kids, you heard it here first!

Long time telescope drive wizard Byers is closing shop as its founder retires.

Ditto for longtime astro parts vendor Ken Novak (though he's keeping his business going at a low level for now).

Edmund, realizing that the Astroscan is being bested by ST 80 refractors and the Bushnell A-scan clone, is preparing to update this old warhorse.

Russia, seeing the success that the Chinese have had with good quality but inexpensive refractors, is getting ready to open the flood gates themselves, releasing a variety of popularly priced refractors of their own.

Orion will be offering a bigger selection of Vixen equipment before long.

In addition to fixing the Astroscan, Edmund Scientific is showing other signs that they wish to reenter the astro biz in a big way.

Toodaloo for now!

--The Anonymous Astronomer

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 2000 Volume 9 Issue Number 1
Whole Number: 48
New Series