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:
<RMOLLISE@AOL.COM>

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Skywatch
1207 Selma Street
Mobile, AL 36604
U.S.A.

Uncle Rod Mollise's

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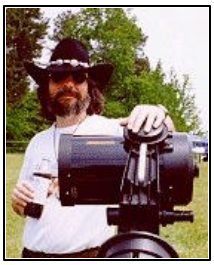


The Night EverythinG Changed

Uncle Rod Mollise

"Let's go sell our Naglers on Astromart before anybody else finds out about the UWANs" – Chiefland Star Party observer after trying the 28mm UWAN eyepiece.

Used to be that amateur astronomy was comfortingly changeless. When I got started in this wonderful avocation way back in the early 1960s, very little changed from year to year—when it came to equipment, anyway. Page through *Sky and Telescope* magazine (the only major amateur astronomy publication at the time), and you saw the same old ads month after month, year after year. Heck, Jaegers and Unitron (I know you old timers remember them) ran the exact same ads for at *least* a decade.

But that was then and this is now. Today, amateur astronomy changes at a dizzying pace not only year to year but month to month. Not just equipment-wise, but that's a big part of the changes that keep coming thick and fast. This change is being driven by two things: advances in technology, and the availability of inexpensive but relatively high quality gear from the Far East. And by the Far East, as you've probably guessed, I'm talking about Taiwan and Mainland China. The Chinese optics factories have been pumping out shovel-fulls of astro-gear: scopes, mounts, and, maybe most of all *eyepieces* for about a decade.

Yep, Chinese eyepieces. Which means cheap Chinese plossls, right? Well, it used to mean that, and nothing wrong with that. The influx of Chinese oculars has meant that Joe and Jane Novice-Amateur can now expect to receive two or three decent quality plossls with their new scopes rather than the one (usually crappy) Kellner that was *de rigueur* in the 80s and early 90s.

"Well," you say, "that's fine for the newbies, but the last thing I need is another 50 degree apparent field plossl. I'm in the TeleVue and Pentax league now. Wake me up when the Chinese factories star turning out eyepieces like Naglers and XLs." OK, well, WAKE UP. In one sense, this has already happened. The guts for most of the TeleVue eyepieces have been coming from Taiwan for some years. But I know what you mean: When will Mainland or Taiwanese factories bring forth something to rival a Nagler or a Panoptic *at a bargain price*?

The last time I reported on "import" eyepieces here, about a year and a half ago, I said:

> Chinese eyepieces with spaceship-porthole fields are popping up everywhere, with several U.S. vendors offering 65° and, more recently, 80° apparent field oculars. Are they competitive with Naglers? No. Not right now. Not even close.

And, truthfully, if I'd been asked to guess when we'd see ultra-wide type eyepieces with the quality of TV and Pentax and Meade flowing from Taiwan and Mainland China and into our hot and eager little hands, I would have guessed "five years." Sure, Chinese firms had been producing significant numbers of

80-degree apparent field range eyepieces for a while, but a glance at the field edge of one of these oculars, even in my beloved f/10 SCTs, showed that their designers had a long, long way to go before they could hope to challenge TeleVue or Pentax. Or so I thought, anyway. On one recent night, you see, *everything changed*: the UWANs are here.

What the aitch-E-double-L is a "UWAN"? How do you even pronounce it? Well, I 'speck you'll be hearing a lot about this new series of William Optics eyepieces in the coming months, and will get used to chattering about them on the Internet and with your astronomy club buddies. U-W-A-N will roll off your tongue just like N-A-G-L-E-R (which, incidentally, some folks *still* don't know how to pronounce). Anyhoo, "UWAN" ain't a town in Taiwan, it's an acronym for "Ultra Wide Angle."

"OK. Whatever. Another wide-field from the East that makes an open cluster look like a flock of seagulls." I must admit that was what I thought when I first heard about the UWANs. But my opinion began to change as soon as I plucked the first eyepiece out of its TV-like cardboard box. Actually, my opinion changed a wee bit as soon as I laid eyes on the eyepiece's box. Even the packaging for the UWANs spells quality. It's about as far from plastic baggies and proletarian plastic "bolt cases" as you can get. Not that I spent much time thinking about the UWANs' *boxes*.

No, once I'd retrieved the three boxes containing 7mm, 16mm and 28mm eyepieces from the shipping container Daniel and the gang at William Optics had sent me, I didn't waste any time. In fact, I tore at the 28mm UWAN's box like a madman. I focused on the 28 first solely because its box was *big*. *35 Pan big or 31 Nagler big*. When I came to my senses, what I found myself holding was the Big Dog our lovely model, Teresa, is showing off in the photo.

The 28mm UWAN was an incredibly impressive eyepiece at first sight, and not just because of its size (this is a 2-inch only eyepiece) or its weight (2.2 pounds, same as the 31 Nagler), but because, without even looking through it, I knew this was the highest quality Chinese eyepiece I'd ever run across. If you'll look back at my earlier review, "A Bird's Eye View of Chinese Eyepieces," you'll find that I was fairly impressed with the 80-degree apparent field Bird's Eye 30mm, which was the first ultra-wide import eyepiece I'd tried. One look at the 28 UWAN, however, and I knew the eyepiece business had suddenly become a whole new ballgame.

The other UWANs, the 7 and the 16 (WO also makes a 4mm, which I didn't evaluate), are almost identical to the 28 except for size, weight, and barrel format (they are both 1.25 inchers). That is, they're smaller, but obviously also made to the same high standards (see Table I for their vital statistics).

Pretty, yes, but *pretty is as pretty does*. When would I get to try these things? A peep through one of Chaos Manor South's windows revealed that it would be a beautifully clear—if substantially light polluted--winter's evening. Apparently the New Telescope Curse only applies to telescopes, not eyepieces. It's not an exaggeration to say that I was like a little kid on the night before Christmas as I waited for darkness.

Act I: Chaos Manor South Backyard

When the Sun finally dipped beneath the horizon and darkness deepened across The Swamp, I gathered up the William Optics 80mm Fluorite refractor and the brace of UWANs and headed for the backyard. This would be a preliminary sort of test, just enough to let me know if I needed to *bother* with further testing to include taking these eyepieces to a dark site. While my expectations were fairly high, I'll also admit that there was a bit of prejudice lurking in the back of my mind: "These eyepieces will probably be alright, but they will *not* be as good as TeleVues. My job will be to see how close they come to the Naglers, even if they do fall short."

Why save the best for last? I'd start out with the 28mm, and work my way down in focal length. What would I look at? Where better to start than with M42? With the 80mm refractor, the 28 UWAN would yield about 20x, and the rich star fields of the sword area would provide a fairly punishing first test for "Big Dog." OK, tighten those setscrews; this is one heavy mutha, move just a little south, touch up the focus a bit (is my hand trembling?)…take a look….Ahhhh…

Maybe the beauty of the view was enhanced by the fact that I really hadn't expected *too* much. But what I was seeing was pinpoint stars all across the field of the eyepiece. Tiny little stars and high contrast nebulosity. It really was that "spaceship porthole" experience that Uncle Al Nagler has preached about for so many years—this time without a TeleVue eyepiece. To say the view reminded me of what I'd seen in a comparable Nagler, a 26 or a 31, was an understatement. The field was wonderfully flat nearly to the edge, without any apparent astigmatism on view.

Yes, I was shocked. SHOCKED, I tell you. The obvious build quality had meant I'd expected "good," but not "world class." Was I crackin' up? Had the rat

race finally become too much for Unk Rod? Was his memory of what a TV eyepiece field looks like slippin'? I wasn't sure. Unfortunately, I had neither a 31 nor a 26 Nagler available for one-on-one comparison. But I do own a much-loved 35mm Panoptic. I rushed backed into the house to retrieve it. Slammed it into the diagonal. Took a look. Uh-oh. Things are gonna be different from this night forward.

While the 35 ain't exactly a Nagler, it's a *very* good performer, especially in medium focal ratio telescopes. The 68-degree field doesn't stress things out much, no matter what the f/r.

But there was no denying it: the view in the 28mm UWAN was *better*. The field looked sharper at the edge in my opinion. And…the 28 was more comfortable to use. While eye placement is a factor with the UWAN, it is less so than with the 35mm Panoptic (which can be a real pain in the you-know-what till you've used it for a few weeks). On top of that, there's that giant UWAN 82-degree big-screen-television field. No contest, really.

Back in went the UWAN. So much for the deep sky. A gibbous moon was smiling down on Chaos Manor South's hallowed halls. How would the 28 handle a bright object? Very well indeed. The Moon was satisfyingly sharp no matter where I moved it in the field. Chromatic aberration? If it was there, it was subtle. I was never quite sure whether what I was seeing along the limb was really due to chromatic aberration or due to differential refraction. A 28mm ultra-wide wouldn't normally be my choice for Lunar observing. But you could certainly do it with *this* ultra-wide. Scattered light, whether Diana was in the field or just outside it, was fairly minimal and contrast was very good as gauged by the appearance of stars nearing the Lunar limb.

Yes, I was bowled over by the 28, but I realized I shouldn't ignore the 16 and the 7. I was

particularly interested in the 16, as this is a focal length that is quite useful for me given my SCTs' normally high focal ratios. A good meat and potatoes eyepiece, whether used at f/10, reduced to f/6.3 or barlowed to f/20. The 16mm performed very similarly to the 28mm, displaying a good, flat field, a lack of astigmatism, and excellent contrast characteristics. As I played around with the Moon, moving it about in the field, I thought the color effects along the Moon's limb were slightly more noticeable than in the 28, but not more noticeable than what I saw in a comparable focal length TeleVue eyepiece, a 22 Panoptic. As with the 28, this slight color was quite likely due to atmospheric effects rather than any optical problems in the eyepiece or the APO refractor. In all respects, from field flatness to field size, the UWAN 16 was clearly superior to the 22 Panoptic.

While the 28 is an impressive eyepiece, for sure, believe it or not, the 16mm has actually seen more use in my SCTs. It's just a good general purpose ocular, and works surpassingly well in conjunction with my Denkmeier Power X Switch diagonal (which allows you to switch in an f/5 focal reducer or a barlow at will) in my C11. In fact, there've been plenty of nights where *all* I've used has been the 16. No foolin'.

The 7mm? This is a less interesting eyepiece for me, since, given that I'm an SCT/MCT *nut*, 7mm of eyepiece focal length isn't often as useful (on the deep sky) as 28 or 16 millimeters. In the little 80 APO, it did provide a comfortable magnification of 80x. In all respects, the 7's an eyepiece that's very similar to the 16, just with shorter focal length. While I'm not an eyeglasses wearer, and really not the one to judge what you spectacle users will like or not like, I'd say that the 7's 12mm of eye relief (same as the 16) will be at least *bearable*. This is, by the way, the same amount of eye relief as on the Nagler 7. On Luna, the UWAN 7 provided satisfying detail, though I did notice a bit more in the way of stray reflected light, both with the Moon in the field and just off the field edge, than I recalled with a 7 Nagler.

As I was breaking down the scope, I began ruminating on the evening's observing run. To say I was surprised would be an understatement. I was surprised, alright. Surprised that the UWANs had appeared to perform identically to comparable Naglers. But the fact was I hadn't been able to do a direct side by side comparison with TeleVue's ultra-wide wonders. The only Nagler in my eyepiece box at this time was a 12mm, which falls smack in between the 16 and the 7 focal-length-wise. What did I know for sure? It was undeniably clear that the UWANs were superior to TeleVue Panoptics, but that was all I was willing to say at this point. Were the UWANs really as good as Naglers? After a shot or two of Rebel Yell whisky, I began to doubt what I *thought* I'd seen.

Intermission

Ah, the clear light of morning. Time to reevaluate the UWANs. Or at least do further testing and checking in daylight. I also called my long-time observing companion, Pat Rochford, and made plans to give the UWANs a thorough workout from dark skies. In addition to seeing how the eyepieces would perform on a variety of deep sky objects, I'd be able to use Pat's 31 and 7 millimeter Naglers for comparison with two of the UWANs.

But what could I deduce about the UWANs in the sane light of day following my night of eyepiece debauchery? I started back at square one. Other than that the 28mm is one big, heavy eyepiece, what could I say about the *appearance* of the UWANs? Well, looking at the picture below, you can see that all three look surprisingly different from most other eyepieces on the market, ultra-wide or not. We know what an eyepiece is 'sposed to look like. Black top, chrome barrel. Not these. The whole shebang is a shiny anodized black. While this looks

"different," it's also very attractive and "professional" looking. I like this color scheme for the same reason I prefer all-black single lens reflex cameras to the chrome-top models: the black finish just looks cool.

What else? The eye guards brought me up short for a while. When I first removed the eyepieces from their packaging the night before, I was baffled by the eyecups—or rather by the apparent lack of them. Oh, there was a rubber thingy at the top of the eyepiece, but try as he might, silly old Uncle Rod couldn't get this "eyecup" to flip up. Oh, well, I forgot about it in my rush to get the eyepieces out into the backyard on that first evening.

In the day-lit living room of Chaos Manor South, I got the UWAN eyecups figured out. Turn the rubber part counterclockwise to extend the eye guard, clockwise to return it to its "retracted" position. The tip-off was the raised arrow-like symbol on the side of the eyecup. Well, nobody ever said Uncle Rod was quick off the mark. I found that this system worked very well, and, unlike on the new Meade Ultrawide eyepieces, there is absolutely no yucky grease involved (which will get on your fingers and will inevitably be transferred to the eye lens).

Good thing these eyecups work well, 'cause you'll find you need them. Using the UWANs on terrestrial subjects showed that they are a little pickier with regards to eye placement than Naglers. Especially the 28mm. Don't hold your head right, and you'll notice some "blackout"—the field will tend to go dark, at least in places. With the eyecups extended, it's easy to place your eye so as to minimize any of this behavior. Now, don't panic. Eye placement is less critical with these eyepieces than with the renowned 35mm Panoptic, and problems in this regard only became truly notable when the UWANs were used on bright terrestrial subjects.

After looking at a few errant squirrels with the UWANs and the 80 APO, I removed the eyepieces to my sunlit deck where I examined them between draughts of Dixie Beer. Holding the eye lens up to incident light revealed flawless coatings that reflected back tones of violet and green (the UWANs are, not surprisingly, "fully multicoated"). Not the gaudy greens of the coatings of many of the inexpensive optics you see these days, but subdued reflections set against a dark background. Think of the coatings on a good SLR lens.

T'other end? Coatings on the field lenses looked just as good as those on the eye lenses. One thing I did note was that the insides of the barrels seemed to reflect more light than I'd have expected. They verge on shiny, just like the eyepiece exteriors, rather than flat black. However, the whole barrel is threaded, not just the end where you'll screw on a filter, and these threads appear to help keep unwonted reflections in check. I do think flat black like that used on the TeleVue eyepieces would probably improve the UWANs' scattered light handling, however.

Lens caps? *Who cares about lens caps?* We all do. When you spend what seems like half your life removing and replacing caps on eyepieces, they assume more prominence than you'd think. One of the few things I have never liked about TeleVue eyepieces is their semi-hard plastic lens caps. The large ones that go over the eye lenses always seem to be in the process of falling off, and god only knows how many hours I've spent searching for them with a red light on a dark observing field. All the UWANs use softer rubber lens caps for both field and eye lenses, which are easy to remove, but which also stay firmly attached. They are purty, too, with an embossed WO swan logo.

Another thing I don't like about Naglers and Panoptics? Those blasted safety "undercuts" on the barrels. I don't know what makes eyepieces with these undercut areas "safer," really, but I do know that your Uncle Rod says

lots of *bad words* when he tries to remove a TV eyepiece from a diagonal that uses a compression ring securing system rather than a set-screw. The compression ring always seem to "snag" on the undercut, and I have to spend the next several minutes loosening the securing screw and moving the eyepiece back and forth in hopes of getting it out of the danged diagonal without moving the scope off target. I've mentioned to Al and David Nagler how much I HATE these undercuts, but they seem unimpressed.

The good news? The UWANs do away with the undercut and, instead, feature a barrel that slopes-in gently just before it terminates in the upper body of the eyepiece. I really don't think even this is necessary, but if you need some kind of a safety, this is much preferable to that gull-derned undercut.

How about the eyepieces' other specs? Eye relief, field stop diameter, etc.? I don't have anything like an optical bench squirreled away in the bowels of Chaos Manor South, and my pore ol' eyes ain't what they used to be (if they ever were), but my measurements agreed pretty closely with those given by WO and shown in Table I.

Act II: Stargate Observatory

When night came on a cool—not cold—January evening, I was champing at the bit. I was eager to head away from the city and its sodium streetlight glow to the relatively dark skies of Fairhope, Alabama and my friend, Pat Rochford's, magnificent *Stargate Observatory*. I'd determined that, yes, the UWANs were seriously worthy of dark skies. But, even more than I wanted to see what they'd do on the "real" dark sky, I wanted to see, in one-on-one fashion, how they would stack up against the real deal: the 31mm and 7mm Naglers.

While Pat owns an impressive stable of scopes, I figured I'd stick with the WO 80 APO. I wanted to give it a good dark sky try-out too. Also, I figgered the 80's f/7 focal ratio was a good compromise. If the eyepieces came close to holding their own with the Naglers in a side-by-side, I'd think about torturing them in really fast telescopes.

Again, I sent the li'l 80 to The Great Orion Nebula (what else), which was blazing away in the south. In went the 28. Magnificent. Just like at home, but better, with an inky black background to set off the hordes of tiny gems and the milky nebulosity. Pat took a look, "Hmm, looks pretty good. But let me run get the 31." In went that titan of eyepieces. "Well, looks nice too. Let's have the 28 again."

"Pat, whattaya think?"

"Rod, I've got to say it's close. With the 28 being maybe just a little *better*. Hard to tell. When I've got one in, I like that best. When I've got the other in, I like *that*."

I took over and did some swapping myself. Like Pat, it was hard to tell which was the "better" ocular. I felt pretty sure the 28 UWAN was just slightly, ever so slightly, sharper. On the other hand, the 31 Nagler seemed just a smidge more comfortable to use, which I attributed to the eye placement issues I'd noted during the daytime. It wasn't a matter of eye relief, since they are very close in that regard (18mm for the UWAN, 19mm for the Nagler). Frankly, the eyepieces were so close in performance that they seemed, except for the 31's slightly longer focal length, to be twins.

Except when it comes to prices. I've been doing astronomy for a very long time, both as an avocation and as a vocation (at least in part). Almost half a century (shudder). I've reached the point where I can afford good gear, but I'm not and never have been one to spend needlessly. While the $600.00 price tag for the 31 Nagler seems "reasonable" to me (sorta, anyway), I know it will be a tough nut to crack for quite a few folks. When you've got a flock of kids in school and are wondering how you're gonna pay for Junior's

college tuition, 600 bucks for an eyepiece, no matter how surpassingly good that eyepiece is, doesn't seem "reasonable." Even *I* have to stop and think about spending 600 smackers for another play-pretty.

The "admission price" for the UWANs, as Pat and I discussed, is one of the things that makes them so consarned cool. The 28mm is $398.00, the 16mm is $238.00, and the 7mm is $198.00. Significant savings over comparable TeleVues, and, as we were discovering, you do not have to give up optical quality to save some significant sawbucks.

The 7mm? I haven't forgotten the little guy. Pat and I played around with it, swapping it in and out for the 7 Nagler. It acquitted itself well on the deep sky; seeming easily the equal of the TeleVue on the objects we tried it on. Is there anything bad I can say about it? Only that, again, that 12mm of eye relief is a little tight for everybody and really tight for eyeglass wearers. On the other hand, the 7mm "offers" the same 12mm, and costs nearly $100.00 more.

ACT III: The Chiefland Shootout

With the "dark sky hurdle" passed by the UWANs, Pat and I felt it was time to subject them to the ultimate test: A fast scope comparo in the hands of the Big Dob types who swarm into the Chiefland Astronomy Village in Chiefland, Florida for twice-annual deep sky pow-wows. We're talking people who *eat and breathe* Naglers, XLs, and Ultra-wides.

I had prepared a little speech to recite to prospective "subjects" for the testing we proposed to do, explaining what a "UWAN" was, and that we wanted to get their opinions on the eyepieces in their scopes. It turned out that my little spiel wasn't needed. In these days of Internet newsgroups, Yahoo Groups, and Astromart, news about new astronomy equipment travels fast. In no time we'd not only assembled several experienced observers, we'd also been able to find somebody with a 26mm Nagler, which we felt would be a good "opponent" for the 28 in the "Shootout at the Chiefland" Corral."

Telescopes? It wasn't difficult to find several "test beds" in a field overflowing with dobsonian reflectors of every size and focal ratio. We settled on three. An f/5, an f/4.5, and, the ultimate punishment for any eyepiece, an f/3.26. What did I do? I basically just stepped back and let Pat direct the testing. He's more familiar with the ins-and-outs of dobs than I am. I also felt I was becoming a little less than unbiased. Yes, I was rooting for the UWANs. They were the underdog, and I always find myself taking the side of that puppy, sometimes against my better judgment.

I needn't have worried about the 28mm holding its own. There was general agreement that the 28 was "as good or a little better" than the 26 Nagler in the areas of field flatness, sharpness, and edge-quality. This was on a variety of objects, including monstrous Omega Centauri with its countless tiny, tiny stars. In fact, the only time our informal panel of testers felt that the 26 Nagler pulled ahead was in the f/3.26 scope, and everybody agreed that its advantage, even there, was relatively slight.

The quote at the beginning of this review is genuine. The testing over, I was confronted by the sight of my group of eyepiece evaluators walking back to my observing spot on the field like Olympic victors, with one worthy hefting the 28 UWAN like a trophy while chirping: "Let's get on Astromart and sell our Naglers before anybody else finds out about the UWANs!"

Denouement

The UWAN eyepieces, those I've tested, the 28, the 16, and the 7, are clearly the equal of the

Specification	UWAN 28	UWAN 16	UWAN 7
Focal Length (mm)	28	16	7
Eye Relief (mm)	18	12	12
AFOV (degrees)	82	82	82
Lens	6 lements in 4 groups	7 elements in 4 groups	7 elements in 4 groups
Field Stop (mm)	43.5	28.6	25.8
Barrel Diameter	2-inch	1.25-inch	1.25-inch
Weight	1000 grams/2.2 pounds	200 grams/.44 pounds	200 grams/.44 pounds

Table 1

TeleVue Naglers (and, in my opinion, any other premium eyepieces currently being marketed by anybody). What does that mean for amateur astronomers and amateur astronomy? For the average amateur, this is a boon. It means those of us who thought premium ultra-wide eyepieces were out of reach can do a little re-thinking and re-budgeting.

What will happen to TeleVue (or Pentax or Meade)? They aren't going anywhere, I hope. If they can continue to innovate and if (and this is a big if) they can hold the line on or even roll back prices, I think they will be fine.

For William Optics, this is a significant breakthrough. Look for them to assume the role of major player in the astro-equipment biz *if* they can capitalize on the UWANs. That means continuing to add focal lengths and improve the product. It also means a sustained advertising campaign to get the word out on their eyepieces and other gear (which they seem to be beginning to do). Will they do all these things? I don't know, but if they do, they will be *huge*.

For us hard-core equipment-crazy galoots the arrival of the UWANs is really all *gravy*. Nagler quality at Panoptic (or lower) prices. Whoo-hoo!

Yes, one night everything did change. And it feels good, pardners. Real good. Pass me that 16 UWAN, wouldya?

Uncle Rod's Cracker Barrel

Rod Mollise

What's wrong with Meade? Why can't they produce equipment with world-class quality?

Undoubtedly they can when they want to. Meade's 12-inch Schmidt cameras, for example, are impressive. This was a brave undertaking by the company—to produce at least a few telescopes of such high quality for such a limited audience.

On the other hand...

Sadly, what used to be their top-of-the-line production (or is that "semi-production"?) telescope, the 16-inch LX200/LX200 GPS SCT, has been hit or miss over the years, with some examples being great, some not so hot, and some downright rotten. I've always thought the company could have sold quite a few more if they'd really taken pains to see that they got it right. Even if they'd had to charge more...heck...people spend huge amounts on bass boats and jet skis without a second thought. Unfortunately, this model, the 16, developed a poor reputation, people became afraid to order 'em, and that probably discouraged Meade from devoting adequate care and resources to the telescope's manufacture, etc., etc.

On the other-other hand...

Meade also realized ('pears to me) that they couldn't just scale up the LX200 GPS "one more time" for the 14-inch model, and they made some noteworthy improvements to the mount (though they could have gone a bit further with the RA gearing system, if you ask me).

What's the current story? The problem isn't optics for Meade...but electronics, computers, and mechanics. The problems they've had with the RCX are witness to this. When the scopes work right, they are fantastic. However, at this time, you're not assured of getting one that works exactly right or continues to work exactly right. QA in both hardware and software is apparently lacking. At this point. Historically, Meade eventually gets things worked-out as time passes. Eventually, that is.

Personal example of the current state of Meade equipment? I love my little ETX125PE. Despite a fairly large secondary obstruction, it shows why amateurs have held the MCT in such high regard over the years. It is sharp. It is contrasty. The views are wonderful. But a telescope is more than just optics. While the 125 has been improved over the years, with more metal, less plastic, and better firmware, frankly, I hold my breath every time I turn the power switch to "on." This little scope definitely gives me a "flying by the seat of the pants" feelin'.

Finally, it seems a bit ridiculous to me that Meade has engendered a whole "fix" industry, with various folks selling "dec fix," "clutch fix," "gear fix,"
etc. kits for brand-new instruments. Most of the things these fix kits implement would be trivial for Meade to do on their assembly line, both in terms of cost and man-power. But they won't. Not usually, anyway. They have upgraded to metal transfer gears on the LX200 and R scopes in recognition, I guess, of folks' strongly expressed desire for metal rather than plastic gears, and the popularity of the (metal) Buck's Gears set from Peterson Engineering. But in typical Meade fashion, they did not include the other--and possibly more important--improvements that are part of the Buck's Gears kit. The scopes work better, I'm told, but with just a few more cheap changes (e.g. the addition of a stronger spring to the RA gear assembly) they could be danged wonderful, especially for the price.

Why won't Meade clean up these rough edges? Beats the tar outta me. Long time back, 'bout '94, I had the need of a large aperture inexpensive scope, and the Meade StarFinder dobsonians filled the bill (this story has to do with me needing a decent "temporary" scope following a divorce). The Meade 12-inch, despite its low cost, was possessed of a truly excellent primary mirror. Even the plastic focuser, cheap as it was, was functional. But...but...Meade used Nylon bearing pads rather than Teflon on both axes. This made the scope so stiff as to be nearly unusable. It was so bad that moving the scope in altitude made the rocker box flex in and out (and <CREAK> embarrassingly on a star party observing field!) due to the sticktion. A set of $1.98 Teflon pads made the StarFinder dobsonian a *joy*. Why wouldn't Meade spend a few extra pennies to make the scope right? Hell, they could have charged 20 dollars more a scope for Teflon (and maybe a simple bean-bag and Velcro balance weight system like Orion used to sell) and no-one would have noticed. In fact, I sent them a letter on this very subject. It was not, of course, acted upon--or even acknowledged. Go figure...

Lest you think I've joined the ranks of the Meade Bashers, think again. Celestron is certainly not perfect, either. A good example is the Nexstar 11 GPS. While this is looked upon as a true "classic," the company had to go through umpteen firmware fixes to get the bugs out. Who beta tested these things? Combine a need for fixes with a

non-user-upgradeable hand controller (you could upgrade the motor control firmware on all but the initial scopes, thank goodness), and you have a recipe for P.O.ed users. They finally issued a programmable controller, but it took 'em how many years? Oh, by the way, Celestron ain't gonna replace your non-upgradeable HC for free, either. They want 75 bucks and your old hand paddle. Sigh.

So, what's the answer? Ain't one. If you want an SCT, you don't have any choices other than Meade and Celestron. But If you continue to buy from these companies, expect to continue to play the role of unpaid beta tester. I wish that 'tweren't so, but, frankly, as long as we expect rock bottom prices, we can expect plenty of telescope troubles and more of the same-old-same old from both M and C.

The silver lining? You do get (far) more than you pay for usually, even if getting the scope up and working they way it should requires blood, sweat, tears, and bad words.

Midwifery

Martin R. Howell

For a few months, one of my neighbors had been showing up more frequently than others while I was out observing. His name is Scott and, not like some, he was content to take a peek at whatever I was viewing. The thirty year old seemed to be just as moved by anonymous faint fuzzies as he was by the celestial showpieces and I must say it was not the least bit inconvenient or distracting to have him present. Seeing his interest in the night sky, a well-intentioned Scott's wife gave him an abomination of a telescope for Christmas. This potentially amateur-astronomy-interest-killing weapon bore the name Meade and should serve as an insult to anybody working there or owning stock in the company. I don't know what model number it is but here's a brief description of the lousy instrument: ALL plastic construction from the approximately 18 inch long tube to the tripod's very short legs and an objective which appeared to be somewhat shy of 50mm in diameter. Making matters even worse, the telescope was equipped with a finderscope (I don't recall it having crosshairs) that was not much bigger than a middle finger. Scott brought the scope over and, at my suggestion, placed it on the hood of my car for fight light, a glimpse of the moon. Calling me over to take a look, he seemed quite excited. I was too when I gazed through the thing but probably not for the same reasons that he was. There were three "split" images present which could have resulted from the cheap diagonal. The scope was completely unusable. Something had to be done

Waking up the next morning, I had a cup of coffee and immediately went into labor. The storage shed that is adjacent to my home seems to serve as a place of transition between the "observatory" (my driveway) and the grave (the garbage dumpster) for my unused astro equipment. I went out, took the lock of the hasp, entered and looked around. In one corner I spied an old, red Tasco 60mm refractor OTA from the days when Tasco wasn't a name to be ashamed of. I don't know just how old it is since it was acquired used from eBay, but it's my guess that it dates from the middle of the 1960's. A few feet away was located an old wooden tripod which originally held a Jason 60mm that I now employ on a better tripod and equatorial mount. With these two components in hand, the project took shape. After cleaning the OTA inside and out and replacing missing and necessary hardware on the scope and tripod from a bin of screws, nuts, bolts, and etc., I put my eye to the eyepiece and discovered the Heinz 57 performed just fine. I went back into the house and with very little effort located two more .965-inch eyepieces (they gather up like dust bunnies) and quickly finished putting together a completely usable telescope.

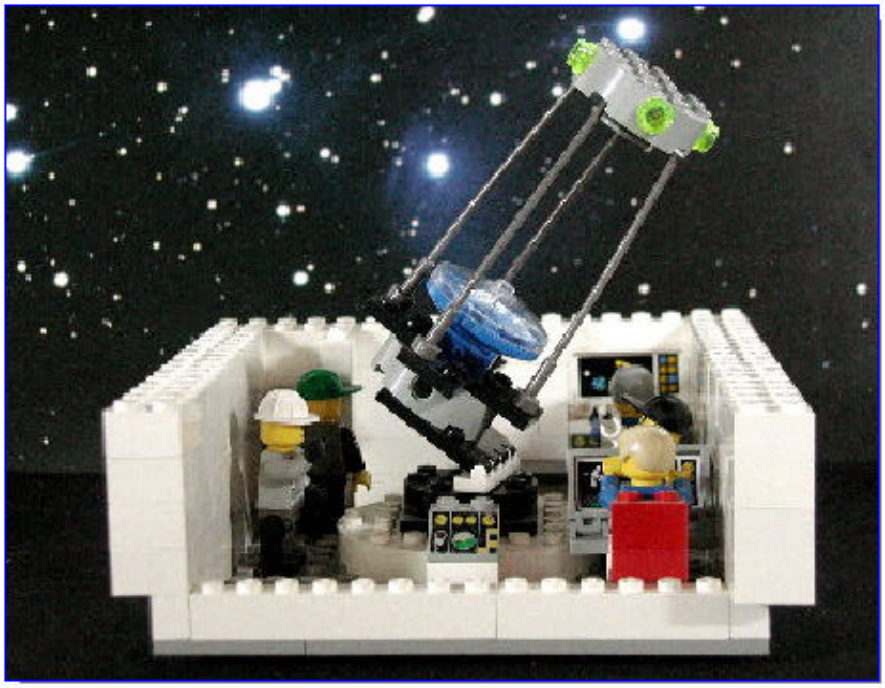
Soon after, I walked next door and gave it to Scott

Nightfall could not have come quickly enough. There I was with my 12.5-inch dob, "Seymour," and next to me was Scott with his new companion. Saturn and the moon, two of the best recruiters this hobby has to offer, were nearing the meridian. Scott was transfixed on both. Not once did he want to look through Seymour. It was approximately 05:00 UT when I realized it: I had just given birth to an amateur astronomer.

The Lego Observatory

Scott Smith

My son Tyler was cleaning out his room a few weeks back and found a project we constructed about five years ago which we called the Lego Observatory. He asked if I remembered building it



and of course I remembered it! However, I was amazed that five years had slipped in between that time when I sat in the floor with my then ten year old son on a cold and rainy fall evening to "play" with Legos. I remember vividly the quality time we spent on the design and finding just the right pieces from the box full of Legos. Now Tyler is almost sixteen and of course doesn't play with Legos any longer but it was nice that he stored this treasure away, protecting it from assimilation back into the box of pieces. I guess we will maintain this observatory a little while longer until we can pass it along with the box of pieces to the future builders of the family.

Whatever Happened to sci.astro.amateur?

Rod Mollise

"What happened to it? Heck, what *is* 'sci.astro.amateur,'" you ask? If you're new to amateur astronomy and/or new to the Internet side of amateur astronomy, there's really no reason you should know. Let me take you back a few years, though, to the mid 1990s. The Internet, if you were an amateur astronomer at the time, basically consisted of two things: web pages (mainly skypub.com) and sci.astro.amateur. "s.a.a." as the initiates called it, was a "Usenet newsgroup," a super-mailing list/bulletin board kind of thing that operated on a part of the Internet separate from the WWW and email, a part that once was vital, but now is in decline.

What was s.a.a. like in those days? Well, the group, which was devoted to those things we hold most dear, equipment and observing, was, for those of us used to astronomy "bulletin boards" like Fidonet Astronomy, a revelation. It was the biggest BBS (you newbies can read that as "mailing list" or "Yahoo Group" if you want) we'd ever seen. Everybody who was anybody in amateur astronomy was there, from David Levy on

down. And anything worthy of notice in the world of amateur astronomy appeared on s.a.a. FIRST. It looked for a while like s.a.a. would quickly obsolete the astronomy magazines, just as it had killed Fidonet Astronomy and the other pre-Internet online amateur forums.

Not that s.a.a. was perfect. One of its weaknesses was that it was not moderated. Want to post your latest theories about Planet X and the little gray men from Zeta Reticuli II? No problem. There was no joining s.a.a, no banning from s.a.a; nothing to decide what was appropriate for s.a.a. Oh, like the other Usenet newsgroups, s.a.a. had a charter, spelling out what was appropriate for the group, but this obscure and unenforceable document meant nothing to the waves of trolls and loons that periodically infected the group. Does anybody still remember Nancy Lieder? She of the ZetaTalk foolishness, who, like the Heaven's Gate cultists, was SURE Hale-Bopp was an alien spaceship and not <u>really</u> a comet? She was all over s.a.a. for months. As is usually the case on any group, the denizens of s.a.a. (me included) had a hard time not challenging The Nance's idiocy. So, the off-topic threads grew and grew.

Of course, it's also true that s.a.a.'s unmoderated character was one of its strengths. There being nothing to tell you what to post or not to post—other than the peer pressure from your fellow s.a.a.ers—we had one heck of a free exchange of ideas. Lots of silliness, sure, but an almost overwhelming number of golden nuggets sluiced by during the group's glory years (which I put at from about 1995 – 2000).

So, it was trolls that killed s.a.a.? Yes and no. "No," really. What <u>really</u> killed s.a.a. was the explosion of amateur astronomy venues on the Internet. We went from web pages and a few Majordomo mailing lists in addition to s.a.a. to a literal explosion of gathering places. The Yahoo Groups, especially, have drawn off a lot of s.a.a.'s membership. After all, they're clean troll/loon-wise due to the fact that most are moderated. They are also <u>numerous</u>. I wouldn't be surprised to find that there's now a Yahoo Group for eyepiece lens caps. Add Astromart Forums, Cloudynights, and more, and it's easy to see that the strictly limited amateur astronomy audience is spread much more thinly across the 'Net that it used to be.

Does s.a.a.'s precipitous decline bother me? In a way, yes. Even though there are plenty of fine places for the Internet amateur to spend time now, I don't think there's <u>ever</u> been a better amateur astronomy group than sci.astro.amateur when it was in its heyday. Some of us even wondered if it might make the non-virtual astronomy club obsolete. It was a 24 hour a day club meeting - cum star party. Couldn't sleep at 3am? Log onto the Usenet, and you'd find somebody posting from their observatory, regaling you with tales of conquered PGC galaxies. Magazine reviews? Who needed 'em? Folks like Todd Gross and Ed Ting were posting regularly about equipment. Yes, those were the days, and—hell, yes—I <u>do</u> miss 'em.

"But," you say, "I don't get it. Just opened my newsreader and s.a.a. is still listed." Indeed it is. But it ain't the s.a.a. I remember. Most of the old timers are gone now. And there are fewer new folks to crowd out the trolls and loons. The atmosphere is different. While there are still some good posts, the feel is not like the virtual club of old. Many of the new s.a.a.ers tend to post under pseudonyms. Back in the day, it was usually Rod and Rich and Chris and David, and Ed and John and Mike and Roland and (even) Shawn and…well you get the picture. We had our rows, but it was mostly a friendly, club-like place. These days, you're likely to be conversing with someone "named" Titandestroyer56. Sigh. It just ain't the same.

Which is not to say s.a.a. might not make a comeback. But I don't believe it. For one thing, the entire Usenet seems to be decrepit now, with major ISPs declining to carry a Usenet feed anymore. Too expensive—and too legally dangerous--for a conservative age, perhaps (the Usenet was the Internet's last Wild West frontier)? I think s.a.a.'s years of glory are one of those things that come around once, never to return.

Flower Power, The Beatles, and s.a.a. are things of a special time and place, and cannot ever be resurrected. I'll hang on for a while longer; though seeing my wonderful s.a.a. in its steep decline is painful. Be that as it may, I raise a toast to the sci.astro.amateur of yore AND ALL THE FUN WE HAD!

An Open Letter to Astro E-mailers

Lee Paul

This from our buddy Lee Paul (after minor editing by Rod)

Dear Astronomy E-mailers,

"OH NO, not another e-mail from 'WhatsHisName' !" They could be saying that about YOU too!.

I've loved Astronomy all of my life, and have felt most of that time that it takes a pretty sentient person to recognize the value of this avocation and pursue it eagerly.

So, if you're reading this note, I already think you're special,,, BUT...

My agonizing problem is: why don't most of You proof-read your letters?

Always keep in mind that written communication is different from oral communication.

Get used to the mindset that the person is not there, he can't see you, so there are NO visual clues or cues at all. Since we Humans are creatures of habit, these deficiencies MUST be made up for in another ways.

When you send an email, you want to convey an idea, you want to ask or answer a question or comment on a concept. Oftentimes, you are in a hurry to get your message off to the world. Understandable. Not So Fast! SLOW DOWN,,, take the time to make your comments concise, clear, well thought out, and reasonably grammatically and correct and properly punctuated. Watch your shpelling. If you don't do this, the recipient of your note may not completely understand the idea you're trying to convey or the specific question you're trying to ask.

So often I get lost in the disconnected logic, the fuzzy syntax, and the crappy grammar, that I miss the point you're trying to make, and I know others do too.

Remember, you don't have the luxury of having that e-mail recipient in front of you to see your grimaces and body language, or to hear your vocal inflections that in face-to-face communication help get the message across. As well, you have no chance for any immediate feedback to know if you've made your point correctly or not.

Let your Written words represent You, and your ideas, well.

Clear Skies, Lee Paul

Don't Buy Trouble

Rod Mollise

Security at observing sites is a subject that comes up once in a while, usually amongst amateur astronomers living in cities and thick suburbs. These days, however, it's becoming an important topic for all observers,

even those living way out in the boonies. Is it safe to observe from public or semi-public areas? Do you have to be a prisoner of your backyard?

I don't think you should be or need be…

HOWEVER, it makes sense to use common sense. Observe from your Auntie May's fenced pasture, not from the spot off the road by the holler where the drug deals are made.

One of my maxims? "Be Prepared, But Don't BUY Trouble."

In astronomy we often operate alone, sometimes away from home, and always in the dark (unless you're a Solar observing freak). Security is a very real concern that needs to be addressed again and again. The following short list of rules is based on 41 years of observing all over the country.

- Don't observe alone except in very secure areas (backyard, etc.).
- Carry a cell phone.
- Let someone know where you are and when you'll be back.
- Don't observe from spur-of-the moment public areas like rest stops, road turnouts, etc.
- Survey public parks by day and talk to the folks in the neighborhood before using one for observing (I'm talking about city/suburban parks, not National/state parks).
- Can I say it again? Don't observe alone, if at all possible.
- If you're confronted by the "good guys" (police) as opposed to the bad guys, be polite and follow their instructions to the letter (but don't allow yourself to be chased off from your observing site if you're not violating any laws).
- Consider your choice of site carefully. If something about a location makes you nervous, don't use it. You'll be unable to concentrate on observing and won't get much done.
- Firearms? Your choice. I don't carry 'em when I'm going observing anymore. Again, if you're nervous about a site—to the point where you're armed—you won't do much fruitful observing.
- Be careful about public areas in the country. With the growth of the meth trade in the hinterlands, they may be far more dangerous than the worst urban spots.

Not a Moment Wasted

Tony Phillips

The Ring Nebula. Check. M13. Check. Next up: The Whirlpool galaxy.

You punch in the coordinates and your telescope takes off, slewing across the sky. You tap your feet and stare at the stars. These Messier marathons would go much faster if the telescope didn't take so long to slew. What a waste of time!

Don't tell that to the x-ray astronomers.

"We're putting our slew time to good use," explains Norbert Schartel, project scientist for the European Space Agency's XMM-Newton x-ray telescope. The telescope, named for Sir Isaac Newton, was launched into Earth orbit in 1999. It's now midway through an 11-year

mission to study black holes, neutron stars, active galaxies and other violent denizens of the Universe that show up particularly well at x-ray wavelengths.

For the past four years, whenever XMM-Newton slewed from one object to another, astronomers kept the telescope's cameras running, recording whatever might drift through the field of view. The result is a stunning survey of the heavens covering 15% of the entire sky.

Sifting through the data, ESA astronomers have found entire clusters of galaxies unknown before anyone started paying attention to "slew time." Some already-known galaxies have been caught in the act of flaring—a sign, researchers believe, of a central black hole gobbling matter from nearby stars and interstellar clouds. Here in our own galaxy, the 20,000 year old Vela supernova remnant has been expanding. XMM-Newton has slewed across it many times, tracing its changing contours in exquisite detail.

The slew technique works because of XMM-Newton's great sensitivity. It has more collecting area than any other x-ray telescope in the history of astronomy. Sources flit through the field of view in only 10 seconds, but that's plenty of time in most cases to gather valuable data.

The work is just beginning. Astronomers plan to continue the slew survey, eventually mapping as much as 80% of the entire sky. No one knows how many new clusters will be found or how many black holes might be caught gobbling their neighbors. One thing's for sure: "There *will* be new discoveries," says Schartel.

Tap, tap, tap. The next time you're in the backyard with your telescope, and it takes off for the Whirlpool galaxy, don't just stand there. Try to keep up with the moving eyepiece. Look, you never know what might drift by.

See some of the other XMM-Newton images at http://sci.esa.int . For more about XMM-Newton's Education and Public Outreach program, including downloadable classroom materials, go to http://xmm.sonoma.edu. Kids can learn about black holes and play "Black Hole Rescue" at The Space Place, http://spaceplace.nasa.gov/, under "Games."

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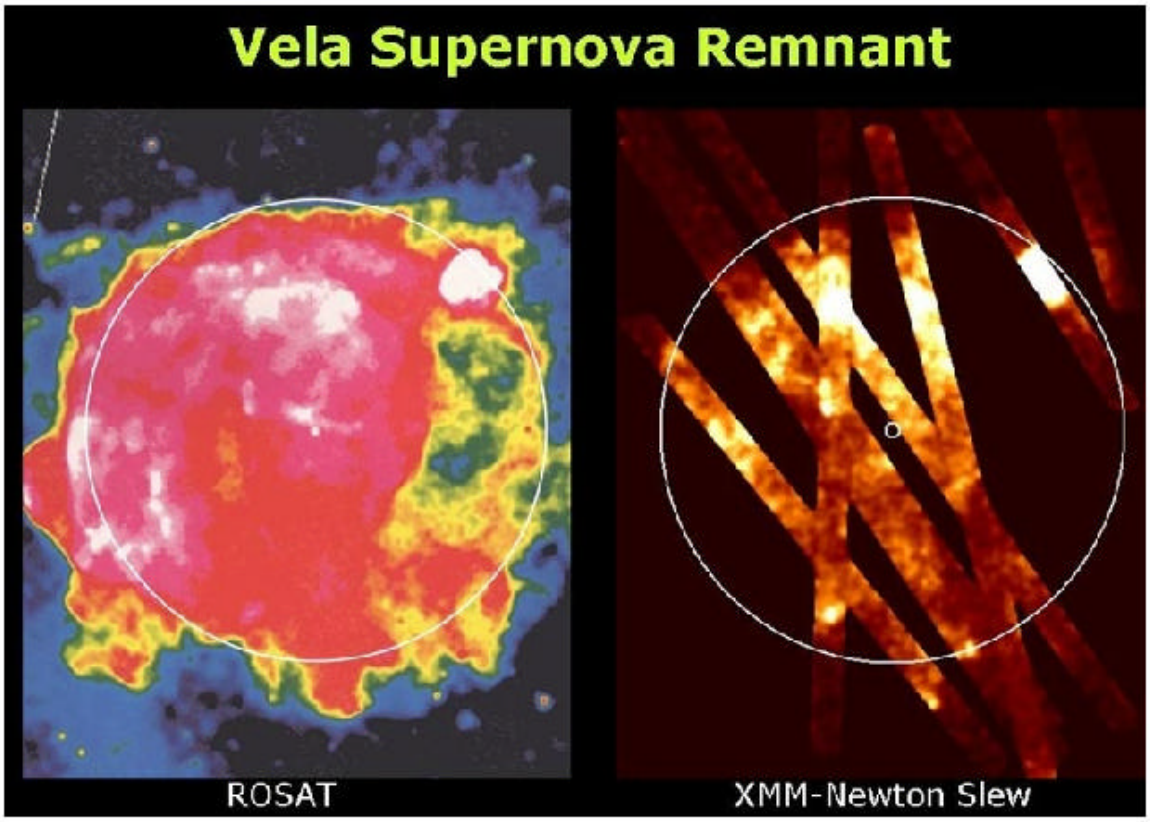

My Back Pages

"Crimson flames tied through my ears
Rollin' high and mighty traps
Pounced with fire on flaming roads
Using ideas as my maps
"We'll meet on edges, soon," said I
Proud 'neath heated brow.
Ah, but I was so much older then,
I'm younger than that now."

Beavis and Butthead are on vacation this month, but if you want some abuse, just stop on by Chaos Manor South while Uncle Rod is battling the skeeters as he tries to image Jupiter. You'll hear some bad words, anyway and that ain't no…

RUMOURS

Sometimes you have to take a second look… A couple of years ago I took a first look at a program called "AstroPlanner." Oh, it was OK, but its main claim to fame was that it was available for Macintosh as well as Windows. Other than that? It had *possibilities*, but they weren't quite realized.

Imagine my surprise, then, to take a look at its current incarnation, version 1.5., and find that it is now one of the most accomplished and useful (and inexpensive) astronomy programs available. In fact, it's now become the program used in the field by the denizens of Chaos Manor South. Expect a full report by Uncle Rod next time, but if you can't wait, see:

http://www.ilangainc.com/astroplanner/index.html

"The Return of the Orange Tubes." Have y'all seen the new Celestron SEs?

These include:

A 4-inch MCT (the OTA is from a different source than the previous—and not so hot--Nexstar 4 GT.).

A 5-inch SCT (guess the C5 AIN'T dead...wonder where it was made?).

A 6-inch SCT.

An 8-inch SCT.

All these scopes are produced in China INCLUDING THE C8.

Other than the 4, 8, and 6-inch apertures, these look very much like the current 8-inch SE. Nice orangish-like tubes (*not* as nice at THE ORIGINAL), and a Nexstar computer. I suspect you'll be hearing a lot about these in coming weeks…

Yes, you read that right. Celestron (Synta) is now producing 8-inch and 5-inch SCT OTAs in China. The standalone (OTA only) tubes and the OTAs for the CPCs are still made in California. Wonder how long that will last? Talk about the end of an era. I'd been expecting this for a while, but…

I would be remiss in my duties if I didn't mention the ENTIRELY UNSUBSTANTIATED RUMOR that Synta would like to sell Celestron. No, that *doesn't* make much sense. All I can say is, "I report, you decide…"

How about The Sky 7? Yeah, I know you were just getting used to *The Sky 6*, but I'm told that Software Bisque was showing a partially completed version of "7" at NEAF. Here's hoping it's more extensively beta-tested than 6 was. *The Sky 6* has turned out to be an incredible program, but it didn't start out that way.

--The Anonymous Astronomer

The Wrap Up

After months of being relegated to secondary priority around here, I feel like *Skywatch* is at the top of the to-do list again and is receiving the attention it deserves. I hope you'll agree this issue looks a little better than the last couple.

I'd still like to find some brave and generous individual who'd set up a format for Skywatch in Microsoft Publisher (if you can help, please shoot me an email), but failing that, I hope this one was at least marginally readable.

Our new addition this issue, which you'll find below, is *Scott Smith's Astro-toons*. I've hoped for a feature like this for a long time, and hope you enjoy 'em as much as I do. If so, be sure an' let ol' Scott know!

--Rod Mollise