Amateur Astronomy *from Chaos Manor South!*

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"A Newsletter for the Truly Outbound!"

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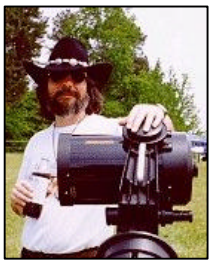
Skywatch
1207 Selma Street
Mobile, AL 36604
U.S.A.

Rod Mollise's

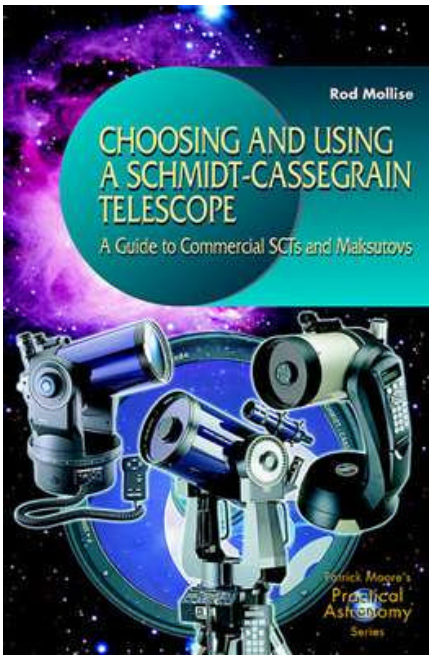
Skywatch



The CAT Project

Rod Mollise

While writing my recent book on SCTs, *Choosing and Using a Schmidt Cassegrain Telescope* (Springer Verlag), I became aware of a distressing lack of information about older Schmidt Cassegrain and Maksutov Cassegrain telescopes. People are buying 10 or 15 or 20 year old SCTs—or older ones, the mass produced Schmidt Cassegrain



has been around for over 30 years now--and finding there is very little, if any, data available about them. Often the scope had had three or four owners and the manual has long since been lost. Not only is it sometimes unclear what the features of a particular scope are, it's often hard to figure out the operation of a telescope without instructions once you get beyond the simple AC synchro motor equipped SCTs of the 1970s and early 1980s. Information about a scope is also critical when and if it breaks down. And even a simple Orange Tube C8 can suffer failures after 20 or 30 years of use. What to do? Call the manufacturer? Unfortunately, neither Meade nor Celestron has much data to offer about early scopes. Both scope-makers are, quite understandably, focused on their current lines of telescopes and on the future. They don't even have many *pictures* of their older SCTs, much less **detailed info**.

Who'd do something about these old CATs ("CAT" is short for "catadioptric," a telescope that contains both lenses and mirrors)? It didn't look like *anyone* would. Despite being quite arguably the most popular amateur telescope ever, there's not much written about SCTs other than the occasional telescope review in a magazine. There *are* a few good web pages, but these tend to come and go as their webmasters lose interest or turn to other astronomy subjects. Books? My own *Choosing and Using* and Peter Manley's *The 20 Centimeter Schmidt Cassegrain Telescope* are *it*—there are many more books available, for example, on the subjects of meteor watching and mirror grinding, amateur astronomy interests with far smaller adherents than the ubiquitous SCT. I don't know why this is the case. But it became apparent that if anybody were to do something about the old CAT information shortage, it would have to be *me*.

My CAT Project actually consists of two endeavors: ***Uncle Rod's Guide to Used SCTs (and MCTs)***, and the CAT Manual Archive. The *Guide* is a booklet (at 40+ pages currently, it threatens to become a full fledged book-length work) examining *all* no-longer produced SCTs and MCTs in detail. It's still a work in progress. I've "done" most of the 8 inch Meade and Celestron SCTs at this point, am working on smaller telescopes at present, and plan to move on to the Big CATs next. If you'd like a copy, it's available from my ftp site for download for **free**. Just go to my website at http://members.aol.com/RMOLLISE/index.html and click on *Uncle Rod's* from the menu of choices you'll find there.

The other half of the CAT project is the **Manual Archive**. I'm trying to collect copies of the manuals for all older SCTs and MCTs. I currently have a good selection of Celestron and Meade manuals on file. Some are original copies. Some are Xeroxes and some are in electronic form as scanned documents. My eventual goal is to have a copy of a manual on hand for *every* "obsolete"—that is, "not sold anymore"—SCT and MCT. I hope to be able to make this resource available to used telescope owners, or, at least, to be able to use it to answer the questions of that proud owner of a "new" Meade LX-3.

This has, obviously, turned into a much more massive undertaking than I at first imagined. There are now 30 years of SCTs behind us (more than that if you count the early "Celestron Pacifics"), and since I intend to include MCTs as well, there are an awful lot of scopes I need to cover. And how about accessories? That needs to be addressed too. So I need your help.

What can *you* do? The first thing is to download my used scope guide and read it. If you see errors that need to be corrected, let me know. If I've left something out, let me know. How about pictures? If you have a photograph of a scope that's better than the one in the Guide, scan it and send it to me (or, if you don't mind parting with it, an original print

would be great). What else? I need manuals. *All of them*. I've got quite a few already, but multiple copies would be great. Catalogs and advertising fliers and price lists are also a *tremendous* help. If you think you can do anything to assist in the CAT Project, or just want to offer comments, or encouragement, or criticism, please email me at: RMOLLISE@aol.com.

TSP Diary

Richard Harshaw

After an 8-hour drive across mostly flat and barren west Texas, we ("we" being defined as Chuck Shinn, his son Matthew, and me) arrived at Fort Davis, home of the Texas Star Party (or TSP) about 2:00 pm. It took another 40 minutes to drive to the cabin we had rented high in the Davis Mountains over some very primitive roads! (Ah, those switchbacks!) The cabin site sits 6,400 feet above MSL and is located abou6 6 miles (10 km) due south of the McDonald Observatory (which is clearly visible from our cabin's back yard). A herd of 12 mule deer are regular visitors to our cabin as our hosts feed them daily. They eat less than 30 feet (10 m) away from us!

After checking out the cabin and making a mental list of what we would need by way of supplies, we drove back to Fort Davis for dinner and supplies, running into a furious west Texas thunderstorm along the way. (As it turned out, it rained lightly at our cabin; most of the heavy rains fell in the valleys below.)

About 8:00 pm, with an hour of daylight left, we set up our scopes, thinking we'd just get the hardware set up and covered, then retire for the night as both of us were tired (I had only 12 hours of sleep in the last 48 hours).

But once the stars began coming out, adrenaline did what the mind could not and we began to polar align and chase down a few favorites even without good polar alignment set. The limiting magnitude was at least 6.5 (perhaps 7.0) and the transparency was about a 9 out of 10. We both got lost in the blazing star fields of Bootes (which from Kansas City and Dallas only shows about a dozen stars)! M13 was overwhelming and M51 and its companion were clearly visible in Chuck's son's 80mm Nexstar GOTO scope. I could even clearly see M51 (but not the companion) in my 14x70 bino's!

We were going nuts when high clouds rolled in and chased us inside (after we covered the scopes, of course). We slept like fossils for nearly 12 hours!

Monday, May 14

After a wonderful night's sleep, we awoke (at 10:00 am) to an ominous sign—high stratus clouds and puffy cumulus and strato-cumulus on the southern horizon (with southerly winds).

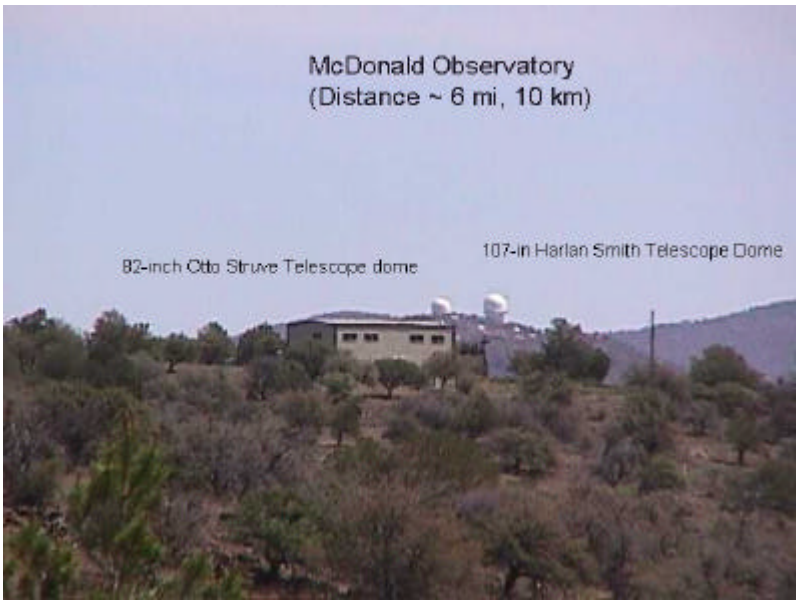
We spent the day resting, hoping in vain for an observing run this night,

but as the day progressed, the clouds only thickened and all hopes of seeing stars tonight faded. At sunset, I checked the domes of McDonald Observatory and saw that the shutters on both the 82-inch Otto Struve and 107-inch Harlan Smith telescopes were still closed

Tuesday, May 15, 2001

Finally, a morning that opened with clear, cobalt skies! And a busy day— after a late breakfast, into nearby Fort Davis for gasoline. Then over to the Prude Ranch to walk through the telescope fields and visit with the TSPers and vendors. Then into town for lunch, then a drive to McDonald Observatory for a self-guided tour and purchase of souvenirs.

Here one of those serendipitous strokes of luck befell us. Chuck has a friend (named Walter Wykes) who invited Chuck and me to join him one night this week on the 36-inch Cassegrain at McDonald. We were to call Walter to confirm this. As we were walking out of the visitor's center, who rode by on his motorcycle and recognized Chuck? Walter! We visited for several minutes in the parking lot and then he led us up the mountain road and showed us where to meet him tomorrow (Wednesday) at 8:30 pm for a night on the 36-inch scope! That report will be written tomorrow, though.



Then back to the Prude Ranch to register, order our souvenir T-shirts (they had sold out) and back through town for dinner as we drove back to our cabin in the Davis Mountains.

As this is being written (7:10 pm CDT, 1210 UT), we are getting ready for a "Harshaw Marathon". I has a list of 65 galaxies he wants to knock off with his C-8 while Shinn wants to see about 30 of the sky's best doubles and deep sky objects through his 105mm Williams fluorite.

It is now time for observations, and I uncover my C-8 only to discover that during the last 42 hours or so, it went out of collimation again. I spent an hour trying to collimate, and it only got worse. I finally said some very un-astronomical things and took the POJ (piece of junk) inside the cabin where I would work on it the next day, then went back out to share Chuck's telescope.

Wednesday, May 16, 2001

After waking at 10:00 am, I took the corrector plate off the C-8 (a task not meant for the weak of heart) and removed the collimation screws from the secondary mount. The secondary fell out, as expected, onto the bed. And then— Voila!!— the problem became obvious. Since Shinn loves to tell this story on me, I'll tell it myself and save him the trouble... Ahem.

Chuck put me onto an accessory called "Bob's Knobs" about six months ago when I mentioned to him that my secondary mirror collimation screws were getting hard to work with since the hex-wrench heads were beginning to round out. I went to Bob's Knobs web site and nearly gagged when I saw that three C-8 collimation screws were only $15.00 (US) plus S/H. So what did I, the neophyte engineer, do? I went to a local hardware store and bought a set of knurled and hex keyed screws to replace my worn ones with. Only cost me about $0.75, a real bargain, eh?

And not realizing, until this morning, why Bob's Knobs cost $15.00 (US) and are worth every penny. I purchased screws that were too long, and that by trying to tighten the screw at one of the collimating mount's vertices, I had actually pushed the secondary mirror off its cork pad and that it was now dangling dangerously by one tiny strip of glue!

So.... into the car for a trip into town to find (a) contact cement, (b) an artificial star for daylight collimation. The glue was easy— a local hardware store carried exactly what we needed. The artificial star was a little tougher. Being almost six months after Christmas, no one was selling shiny Christmas ornaments, so we finally decided to try an automobile parts store to see if they had one of those small convex mirrors that truck drivers glue to their large side mirrors to get panoramic views of what lies behind. Success! They had exactly what we needed!

We slept the rest of the afternoon so as to be fresh for our night on the 36-incher. About 7:00 pm, we drove to the TSP to drop off a camera mount that one of Chuck's friends asked to borrow.

We were at McDonald Observatory about 8:20 pm, and no sign of Walter. Chuck got a little nervous, but about 8:25, I spotted Walter laboring up the hillside, carrying some of his gear. (He stayed at the visiting astronomer's dorm.)

By 9:00 pm we were at the 36-inch f9 Cassegrain and getting an orientation by Matthew Shertone, one of the two chief astronomers on the Hobby-Eberly Telescope. About

9:30, we started our observing run. Once we got used to the UNIX-based GOTO system of the instrument, we were off and running, chasing down everything from huge globulars like M13 and M92, to faint fuzzies (galaxies galore!), to even fainter fuzzies (some Abell clusters) and then remarkable point sources— the quasar 3C273 and the planet Pluto.

I won't give all the details of what we viewed, but here are a few teasers— the Sombrero Galaxy was huge, the dust lane very prominent, and the bulge so easy even a blind man could have seen it. The Black Eye Galaxy had a black eye, but it was not easy to detect. M13 was overpowering.

M92 showed obvious core collapse as the core was separated from the outliers by a very detectable gap of stars (which does not show up in a C-8). M65 and M66 were almost blinding. We viewed a number of edge-on spirals and saw dust lanes in many of them. We saw The Mice, a pair of interacting spirals, and could trace their tails out to about 1/3 of the 15-minute wide field. The Owl Nebula was huge; the central star clearly visible; and the "eyes" obvious. It took up about ¼ of the field. The Abell galaxy clusters we viewed offered anywhere from three very, very faint smudges in the field (at a distance of 1.5 billion light years!) to 9 in one field (at a mere 400 million light years). 3C273 was not impressive visually— it only looks like 13-th magnitude star— but it was impressive mentally, realizing that our retinas were being stimulated this night by light that is older than life on this planet! And Pluto was a treat, dim as it was in a rich star field near Scorpio, only because it is the last planet to be found in the Solar System (even though right now it is closer to the Sun than Neptune).

All the while we were observing, I was learning how to aim the scope and rotate the dome, so I soon became Walter's "assistant", aiming at the objects he had on his list. You probably guessed it by now— Walter and we had a "Harshaw Marathon."

Incidentally, around 1:00 am, the observatory machinist-instrument builder/mounter, a chap named Dave,

We managed to get back to the cabin by 3:15 am, somehow navigating those primitive switchback roads successfully.

It was the grandest night in Chuck's and my lifetimes as amateur astronomers! We will NEVER forget that night when we got to use a professional caliber 36-inch scope for the night to do as we please, with the director of McDonald Observatory along for the ride and fun of it!

Thursday, May 17, 2001

Back at the bunk house, we prepared and ate a hearty supper and then waited with anticipation for the night skies— even though there were high, wispy cirrus clouds in almost every quadrant of the sky, and with more on the southeastern horizon (where the winds were from).

Finally it was dark enough to start work and I finished the collimation of my C-8. I was in the process of polar aligning, when clouds covered first Polaris, then Arcturus, then both (these two being my summer alignment stars). Polaris remained behind clouds for more than an hour.

Meanwhile, Chuck (who has a GOTO Losmandy mount— groans of envy inserted here) did not need accurate polar alignment and was able to start working the only open sky we had— the southern quadrant. He was whipping along nicely, bagging Omega Centauri and then The Sombrero Galaxy, when the Commanche Cloud Ghost really got angry with us and proceeded to blanket our entire sky with a cirrus circus. (These grounds were once the tribal lands of the Commanche.)

We waited at our scopes for an hour hoping in vain for the Cloud Ghost to be appeased, uttering prayers and chants, but he apparently figured out that our Commanche was very bad— we must have been chanting "Bring more clouds" rather than "Take the clouds away."

We decided to go inside and take an hour nap, using my travel alarm clock to awaken us at 12:02 am. We then napped, the alarm went off, and I went outside to check the skies. Still socked in.

At 4:00 am, I awoke to tend to the urgencies of a bladder that was too small for my renal byproducts and stepped outside to let the local trees drink deeply of my runoff. The skies were clear from horizon to horizon. Of course. And daylight only 2 hours away.

Friday, May 18, 2001

Our last chance to see stars is tonight as we must leave tomorrow morning at 6:00 am for our long drive back to Dallas. We decided to offer up NO chants or prayers to the Commanche Cloud Ghost today to make sure we have a chance at ancient photons tonight.

During the day, cirrus clouds began to roll in from the south and continued to build all day. By sunset, the sky was completely overcast with thick gray clouds. We waited until 10:30, but the clouds would not part, so we disassembled all our gear and packed it into Chuck's SUV for an early departure on Saturday.

Saturday, May 19

We had planned on getting up at 6:00 am and leaving by 7:00 am, which would have placed us in Dallas by 4:00 pm or so. This would have let me drive on to Oklahoma City in time for an evening check-in at a hotel.

But about 3:30 am, Chuck woke me, saying, "Richard, I see lightning and hear thunder." That was terrible news, for if it rained on those crude mountain roads before we could get out, we might be stuck for a day or two, as the dust on the roads turned to something similar to mucous when it got wet. So we got up early and were on the road by 4:00 am.

All of which means we got to Dallas at 1:00 pm, and I decided to drive all the way home, returing to Kansas City at 10:30 pm that night— after 1,100 miles and 18 hours in the saddle. Ouch!

Would I Do It Again?

In a heartbeat!

Better yet, why don't some of the 33 Doubles people make plans on going to 2002's TSP? If we get a large enough group, we could even probably get the mountain resort Chuck and I used for the entire group for the week. Any takers?

IGGY the Astro-Cat!

Rod Mollise

During the 1995 observing season, I began noticing that a little cat had started keeping me company as I observed Mars. Iggy (not sure why I started calling him that, but it seemed to fit) was small and gray-striped, and was obviously interested in what I was doing. Before long, Iggy became my regular back-yard observing companion. He was always content to sit and watch with me through even the longest run. When I called it quits for the night, Iggy trotted off home, which, I discovered, was under our house! While Iggy and I obviously shared a love of the heavens, and spent many wonderful hours together, some event in Iggy's little life had made him deathly afraid of humans, and he would not allow me to approach closer than about 6 feet no matter how much I tried.

Late in 1995, Iggy 'helped' me observe Saturn's series of ring plane crossings. Each night, I carried on a running commentary on how beautiful the planet looked while Iggy played the part of the attentive listener. Finally, one evening in early '96, I thought I had made a breakthrough in my relationship with the quiet little cat. Iggy had obviously been fascinated by my Meade 12" Dobsonian telescope for a long, long time, and, on one of the last good nights of Saturn's apparition, he gathered up his nerve and began walking toward me. I was overjoyed. Iggy walked up to the Meade and hesitatingly extended his tiny paw to touch the mount. I just couldn't repress a chuckle of pleasure at the sight, and it was then that things *went to Hell!* Iggy looked up, saw me, and jumped— flatfooted—at least three feet into the air! He shot off into the night like a rocket, leaving me stunned. But I quickly realized what had happened. I had been studying Saturn intently and had neglected to carry on my usual one-sided conversation with the cat. He, in turn, had been so intent on the telescope that he hadn't noticed *me*,

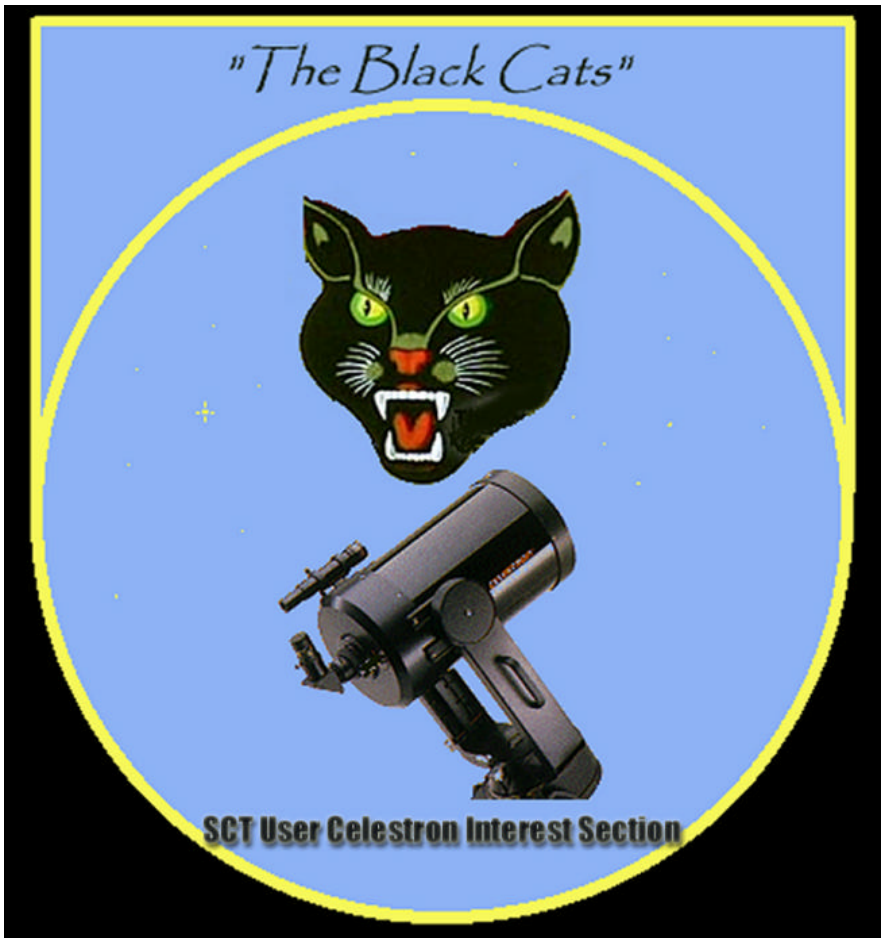
and had decided that it was safe to touch the Dob. He looked up, saw me standing there, and freaked!

Sadly, I didn't see Iggy for a couple of months When I finally caught sight of his little gray form again, he was at the end of Selma street, almost at Michigan Avenue. I stopped the car and called to him, and Iggy *did* stop, but only long enough to turn and give me a dirty look that seemed to say 'traitor!'

Another couple of months went by before I got more than a long-distance glimpse of my old friend again. This time under very sad circumstances. Heading off to work one morning, I sighted Iggy standing right out in the middle of Michigan Avenue! I stopped, and soon saw what was going on. He was standing faithfully beside the body of his friend, an aged yellow tom, who had been run down in the street and killed. Thinking back, I remembered that I had occasionally seen Iggy and the yellow cat as they had made their 'rounds' through the neighborhood. Poor Iggy was nudging the body of his pal, trying to get him out of Michigan Avenue. I did the only thing I could think of: I yelled at the top of my lungs at Iggy to GET OUT OF THE STREET! The cat naturally ran in fright. I thought, sadly: 'That's the last I'll *ever* see of Iggy.'

But imagine my surprise, shortly after Winter rolled around, when I saw a little gray face peering out from under our porch on one cool afternoon! And, not only that—Iggy was accompanied by a gray tabby-cat female and a young kitten! I've been plying Iggy and his family (I don't think I've *ever* seen three cats traveling in a family group before) with cat chow, and hope to keep the three of them safe at home now! What brought the Ig back? At first I was puzzled, but then it came to me: *the upcoming apparition of Mar*s. He obviously couldn't let this opposition go by without checking-out the red planet with *his* 12" Dob!

It's been a long time since I've seen the Iggster. But never fear—his numerous progeny, identifiable by their light gray coats, their long, inquisitive snouts, and their fondness for backyard telescopes, prospers and thrives to this very day!



My Back Pages

Astropoem

Planet Caravan

We sail through endless skies,
Stars shine like eyes,
The black night sighs.
The moon in silver dreams
Falls down in beams,
Light of the night.
The earth, a purple blaze
Of sapphire haze in orbit always.

While down below the trees,
Bathed in cool breeze,
Silver starlight breaks down from night
And so we pass on by
The crimson eye
Of great god Mars
As we travel the universe

--Ozzy Osborne

Club Notes

MAS

Just when you think things are gonna be fine… All of you are aware of the recent travails of the Mobile Astronomical Society's home, the Public Schools' Environmental Studies Center. With the positive vote on the property tax issue, we had begun to think the ESC's troubles were over. That's what we get for thinking! In July the ESC's classroom/laboratory building suffered major damage from a severe thunderstorm. Examination of the building revealed possible structural decay from fireproofing done when the center was built in the 1970s. The result is that the MAS does not currently have a place to meet while the situation at the ESC is being evaluated by school authorities.

SCT-USER

The Winners of the 2001 SCT User Imaging competition were announced on July 15:

CCD IMAGE
Kevin Cooper
Steve Reilly
Paul S. Walsh

NOVICE IMAGE
Richard Lawler
Christopher D. Porada
Bob Reim

PIGGYBACK
Norrene Albright
Paul LeFevre
PJ Anway

PLANETS
Tan Wei Leong
Charles Allison
Paul LeFevre

*"Ahhhhhh…school's **in**! No more Beavis and Butthead to bug me—at least not on the rare occasions when they actually go to school!" That's what I thought as the big yellow school bus trundled up Selma Street. But the Two Hooligans were to get in a final shot: "Hey dillweed, here. We've gotta go and learn stuff or something!" "Yeah, we're gonna LEARN, heh-heh, heh-heh, heh-heh." With that, a hermetically sealed mayo jar came flying out of a bus window, hitting your fearless editor straight between the eyes. When I'd come back to what's left of my senses again, I found that said jar did indeed contain still more…*

RUMOURS

What is Meade up to these days? Most of us have been *assuming* that Meade has been readying a replacement for the long-in-the-tooth **LX-200** (believe it or not, everybody's favorite goto scope will soon be *10 years old*, and now has the NS11 GPS to compete with). Howsomeever, we've not heard a *peep* out of the Big M. The only thing we *have* heard, as a matter of fact, is that a **10 inch LX-90** is in the offing. I personally think that an "LX-300" (AKA *LX-2000*) *is* waiting in the wings, but the fact that Meade has recently upgraded the LX-200's declination drive system to a real roller bearing arrangement would make it easy to argue that the LX-200 is going to stay around for awhile. Why upgrade an obsolete telescope? We'll see…word on the streets is that some kind of announcement should be forthcoming "shortly."

And Celestron? The **11 inch NextStar GPS** has hit the streets. Little word on its quality or capabilities yet, but it seems to be "go" (you can read David Novoselsky's review at http://www.cloudynights.com) One small problem that's cropped up is that the company does not seem to be able to obtain the composite tubing for the OTA in quantity. Celestron is therefore offering buyers the option of aluminum tubing on the NS11 GPS, and, to soften the pain of having a slightly less hi-tech 11, is either providing a free accessory kit or a $100.00 price break.

Again at Celestron, the Torrance boys are getting ready to release an NS **8** GPS. This scope will be quite different from the lightweight NextStar 8 in that it will feature a double tine fork, a sophisticated drive, and the same GPS features as the new 11. In fact, it should basically be *identical* to the NS11 GPS except for aperture. One thing the guys on the corner are commenting on is that this new 8 is only about 500 bucks less than the 11. Celestron apparently thinks that some folks will want the portability of an 8 and won't care that "the 11 is just a little more."

Once more at Celestron…we hear that Celestron will be one of two dealers in the U.S. to market the new Chinese (Synta) **EQ-6 German equatorial mount**. This mounting, which is substantially heavier duty than Celestron's CG5 (the Chinese Great Polaris "clone", aka EQ-4), features a built-in dual axis drive system and, we are *told*, high quality gears. Rumors…you want *rumors*? We still understand that the final configuration here will be the 9.25 on the EQ-6 with a *goto option*. We have pretty reliable information, now, that the long-whispered-about EQ-6 goto system really *does* exist.

One last time at Celestron (these guys ain't restin' much lately)…I've just gotten word that Celestron is releasing a **goto version of their GEM mounted C14**. This will feature the *CI700* mount equipped with a goto drive system based on the company's NextStar technology. This makes it sound as if the rumored fork-mount goto C14 is just that: R-U-M-O-R…

Questar has been sold. Longtime astronomy fixture Questar Corporation of New Hope, Pennsylvania has been bought out. The new owners have, somewhat surprisingly, stated that they want to maintain—and even expand—the Q's amateur scope line. Does this mean that the Anonymous one can finally get that $2000.00 **Questar 7 of his dreams**?!

All for now!

The Anonymous Astronomer