

## Smoky Mountain Astronomical Society



Society's ChRonological Astronomical PaperS

**From the President - Michael McCulloch**

Volume 27, Number 6  
June 2004



Unfortunately, after superb conditions around the full moon, the weather around the new moon in May did not cooperate with our star party plans. We can only hope that June will be more friendly to us stargazers!

### June SMAS Meeting

Plan to attend the June 11th SMAS meeting at PSTCC as the topics will include (but may not be limited to):

- \* Zambuto Optical Company factory tour presented by Bob Arr. Carl Zambuto manufactures some of the highest-quality newtonian mirrors available to amateurs.
- \* Focault mirror test demonstration by Gerald Calia.

### June 12th Public Star Party at Look Pebble

Weather permitting, SMAS will host a public star party at "Look Pebble" on the Foothills Parkway on the night of June 12th. Join us and invite your friends!

(Please see the maps on the SMAS web site located under the "2004 Star Party Info!" link or ask for help in finding Look Pebble if needed.)

### June 19th Star Party at Unicoi Crest

Weather permitting, SMAS will host a star party at Unicoi Crest on the Cherohala Skyway on the night of June 19th. If the sky conditions are good many of us may plan to stay all night. The summer Milky Way will be in prime viewing position around 2 AM. Join us!

(Please see the maps on the SMAS web site located under the "2004 Star Party Info!" link or ask for help in finding Unicoi Crest if needed.)

### Buck Bald Visit Cancelled

After a "working visit" by Bob Arr and myself on the night of May 8th, Buck Bald has been deemed unacceptable as a SMAS observing site. Some of the reasons include:

- \* The sky is not as dark as Unicoi Crest, with significantly more light pollution to the south.
- \* Several local visitors that stopped by during the evening, plus an astro-observer from Dalton, GA that has frequented the bald at least a half-dozen times, indicated that the wind is always gusting on the top of the bald. Bob and I found the constant wind to be intolerable on May 8th.
- \* The access road is rough and time consuming to travel if you wish to minimize jarring of your astro-equipment.
- \* Moving equipment from the parking area to the top of the bald can be an ordeal depending on how much you have to unpack.

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S.C.R.A.P.S. Page 2	<a href="http://www.smokymountainastro.org/">http://www.smokymountainastro.org/</a>	Volume 27, Number 6 June 2004
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If the sky darkness proved superior, a once-a-year visit might still be worthwhile. However, the sky conditions do not warrant tolerating the other problems. Given the absence of any other night-scouted observing sites, the June 19th party has been moved to the familiar and proven Unicoi Crest site as noted above.

### **SMAS Group Camping at Big South Fork in September**

SMAS has reserved the E-II group campground at Bandy Creek Campground at Big South Fork for the nights of September 10th and 11th. In order to offset the up-front reservation costs incurred to reserve the campground, SMAS requests the following:

- \* Provide a list of all persons that will be staying overnight at your campsite.
- \* Pay \$10 to Erik Iverson (SMAS Treasurer) to reserve a campsite on or before June 19th.

Reservations after June 19th will be \$15 per campsite if any remain open. If you plan to attend, it is important to reserve now. Lack of response for early reservation of campsites may result in cancellation of the event due to lack of funds.

The National Park Service allows cancellation up to September 9th with only a very modest cancellation fee which will be covered by SMAS. Therefore, if the weather looks questionable, each reserved campsite will be asked on Wednesday, September 8th for a GO/NO-GO vote. A majority NO-GO vote will result in the cancellation of the event and return of all funds.

### **BSF Group Camp Facts**

**Location:** E-II Campground, Bandy Creek

**Check-in:** After 2 PM on Friday, September 10th

**Check-out:** Before noon on Sunday, September 12th

**Campsite selection:** First-come, first-serve on Friday

**Total number of campsites:** 17

**Facilities:** No electrical hookups at sites

Modern, E-II private bathhouse with hot water and showers

Large covered pavilion with fire-pit, tables, and electrical outlets

Some sites have tent pads

**Reservation requirements:** List of campers plus \$10 on or before June 19th

**Observing:** Friday and Saturday nights. SMAS will request the lights be turned-off in the large Bandy Creek Visitor's Center parking area.

**Further Information See:**

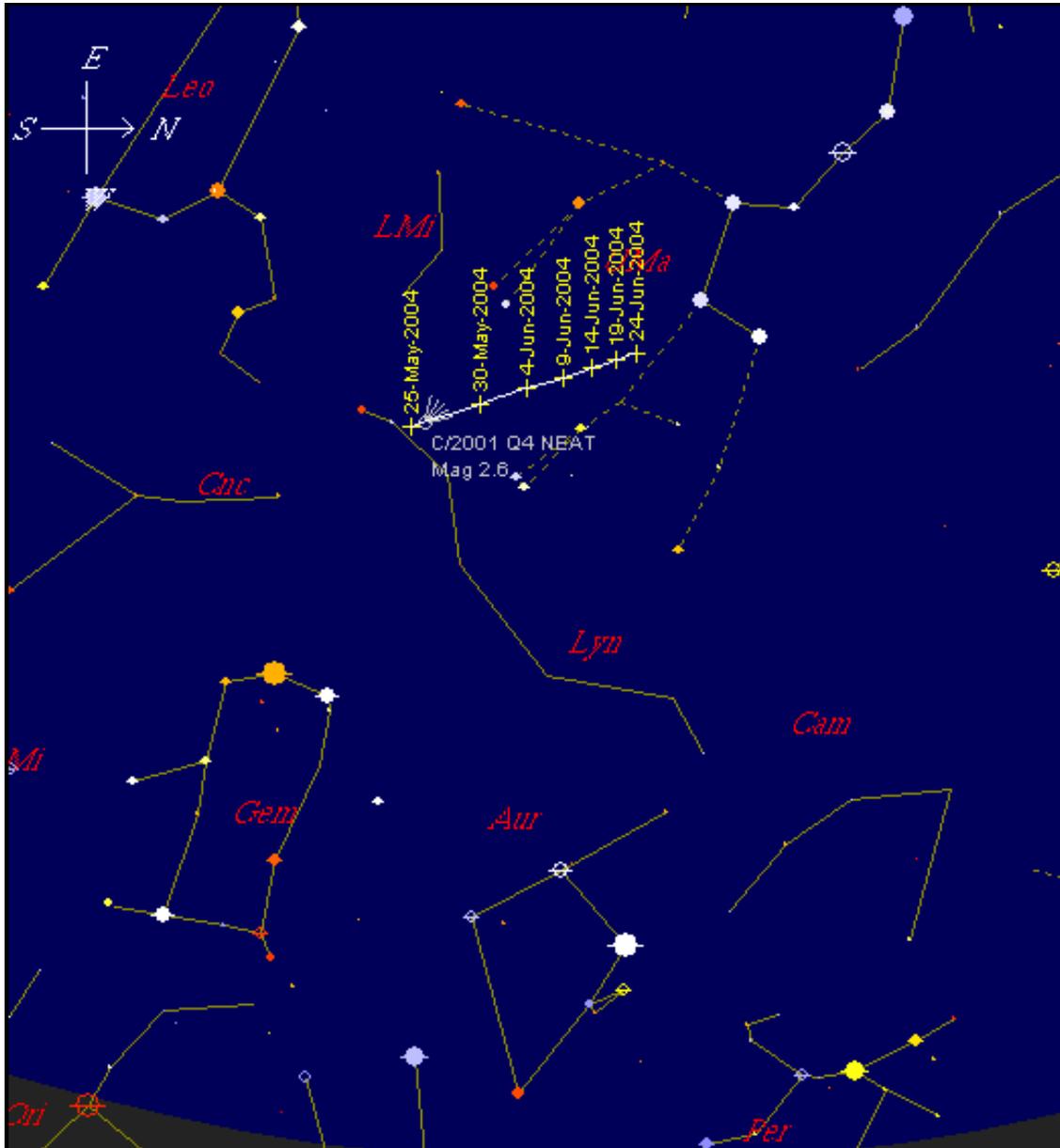
<http://www.nps.gov/biso/pphtml/camping.html>

<http://www.nps.gov/biso/bandycreekcg.pdf>

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**Comet Observations**

Did you get a chance to observe comet C/2001 Q4 NEAT? If not, the comet is still visible and easily seen in binoculars even under light-polluted skies. Comet C/2002 T7 LINEAR should also become visible in binoculars low in the southwestern sky over the next couple of weeks.



Finder chart for C/2001 Q4 NEAT

## **What You Missed At The Last Meeting—by Angela Quick**

### **Minutes**

SMAS Meeting  
Friday, May 14, 2004  
Main Campus, Pellissippi State Technical Community College

The meeting began at 7:10 pm, with 13 members and two guests, David and Susan Fowlkes, present.

#### **1. Star Party Updates**

Unfortunately, a night time trip to Buck Bald revealed that it is an unsuitable observing location. A strong wind blew constantly over the bald, there was significant light pollution on the southern horizon, the approach road was rough, and the 10 foot elevation change from the small parking lot to the top of the bald made setting up equipment difficult. There was also near-constant drive up traffic well into the night. All in all, Unicoi Crest is a much better observing location. In light of this, **the June 19 star party will be held at Unicoi Crest.**

Fortunately, Michael successfully reserved group camp site E-2 at Bandy Creek, Big South Fork, from Friday, September 10 through Sunday, September 12 for our star party/campout weekend. Current plans are for members to arrive at will on Friday afternoon (with check in any time after 2 pm) to set up camp, “serious” observing from the East Rim Overlook on Friday night, a Saturday afternoon communal picnic, Saturday evening observing with the public from the Bandy Creek Campground parking lot, and Sunday morning check out (by noon). If you plan to attend this event, please reserve a campsite in advance with Treasurer Erik Iverson. If you reserve on or before June 19, the deposit is \$10; after June 19, the deposit is \$15. On Wednesday, September 8, all those signed up to participate will look at the weather forecast for the weekend, and vote Go / No Go on the trip. If the vote is to cancel the event, the club treasury will pay the \$14 cancellation fee to Bandy Creek, and all deposits will be refunded to members.

#### **2. The Night Sky**

The Night Sky was a double feature this month, with Angela Quick speaking on the constellation Scorpius and Bob Arr giving a tour of the Summer Milky Way. Both speakers provided star charts, which appear in the “Files” section of the Yahoo! group page.

#### **3. Astronomy week event report**

Erik Iverson reported on SMAS’s Astronomy Day events held Wednesday, April 21 and Saturday, April 24. About 40 people showed up on Wednesday, and around 120 on Saturday. On both evenings, people enjoyed the Hubble Space Telescope DVD and the 3-D pictures of Mars in the auditorium, the plethora of free information including SMAS club brochure, “Getting Started Right in Astronomy” flier, SMAS Beginner’s CD, and sky charts and calendars for May, the wonderful dis-

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S.C.R.A.P.S. Page 5	<a href="http://www.smokymountainastro.org/">http://www.smokymountainastro.org/</a>	Volume 27, Number 6 June 2004
------------------------	---	----------------------------------

play of telescopes and astronomy gear set up outside, and even glimpses of the moon and Venus through breaks in the clouds! Several Pellissippi students in attendance asked questions on extra credit worksheets that gave us a mental workout. One student video-graphed the event for a class assignment; we are trying to get a copy of his footage. The event generated at least 3 new memberships. One new member was so excited he couldn't wait to buy a telescope – so an 11" Celestron on a German Equatorial Mount will be showing up at a star party sometime soon!

Thanks to Burgess Optical for providing funds for handout duplication in exchange for advertising, to GamesForOne.com for providing the 3-D glasses and slide show of Mars photos, to Lee Erickson and Angela Quick for manning the information table, to Mike Naney for masterfully coordinating activities with Pellissippi State, to all members who participated by setting up their equipment and talking to the public, and to Erik Iverson for planning and organizing the event. Think of how wonderful this could be next year with clear skies!

#### **4. Open discussion at the end of the meeting**

Michael McCulloch has 3 mil rubylith film available for 1 cent per square inch. If there is any light source you would like to make night-vision friendly, see Michael! Flashlights, laptop computer screens, and car dome lights were three projects mentioned by those purchasing film. Our visitors purchased copies of the Mag 5 Star atlas from Bob Arr. There was rampant speculation as to whether or not the weather would be decent for tomorrow night's scheduled star party at Unicoi Crest. Bob Arr swore he was going as long as he could get a series of sucker holes to peek through! The clear skies apparent from the parking lot as the meeting broke up tempted members to an impromptu observing session of comet NEAT passing M44, the Beehive cluster; a radar check showed there was only a short window of opportunity remaining before storms swept in, so we all passed on a formal group party to catch what we could of the spectacle from our own back yards.

### **Look Rock Web-Cam**

Now that repairs are underway on the Foothills Parkway and we can look forward to resuming our observations at Look Rock, you might have occasion to check the sky conditions in that vicinity before leaving home.

There is a webcam permanently mounted on top of the Look Rock Tower, and it feeds its live signal continuously onto the Internet. All you have to do to see the live picture is connect to

<http://www2.nature.nps.gov/air/webcams/parks/grsmcam/grsmcam.htm>

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This photo was taken at 7:30 am on May 20, 2004. The website also shows you the area covered in the picture (primarily Cades Cove and the Mt LeConte area).



While the scenery is always beautiful, this dramatically lit shot captures the magic of the fog-laden hollows and slopes under the soft and gentle cirrus of a Smoky Mountain spring sunrise. (B. A.)

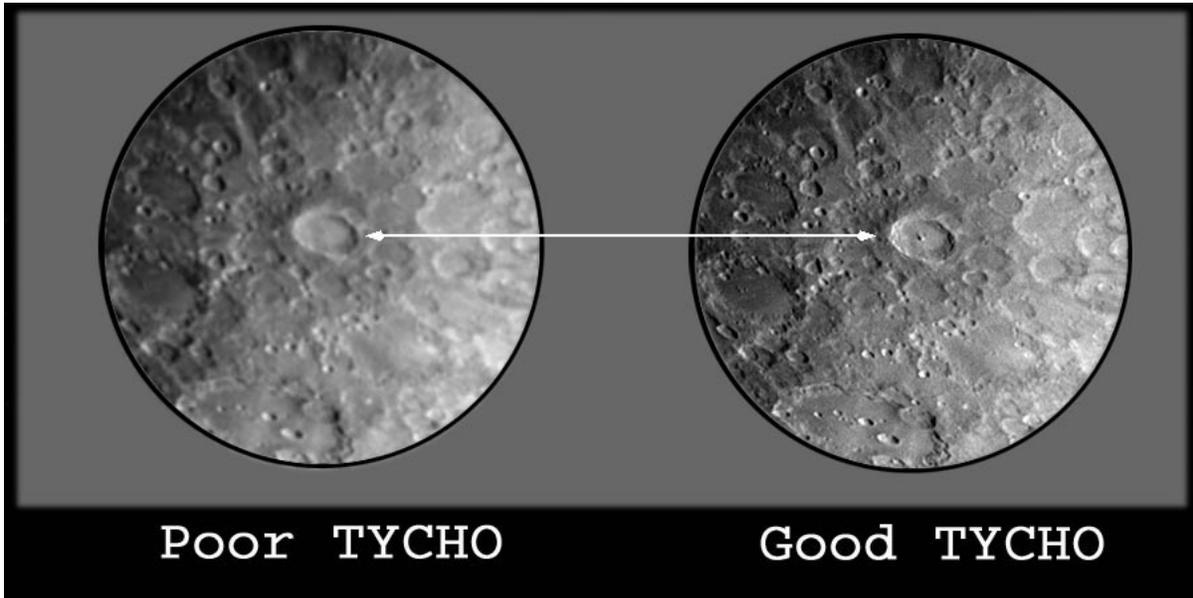
### **The Wiz**

Dear Wiz,  
Is there an easy way to tell if my optics are worth a toot?  
B. Eide

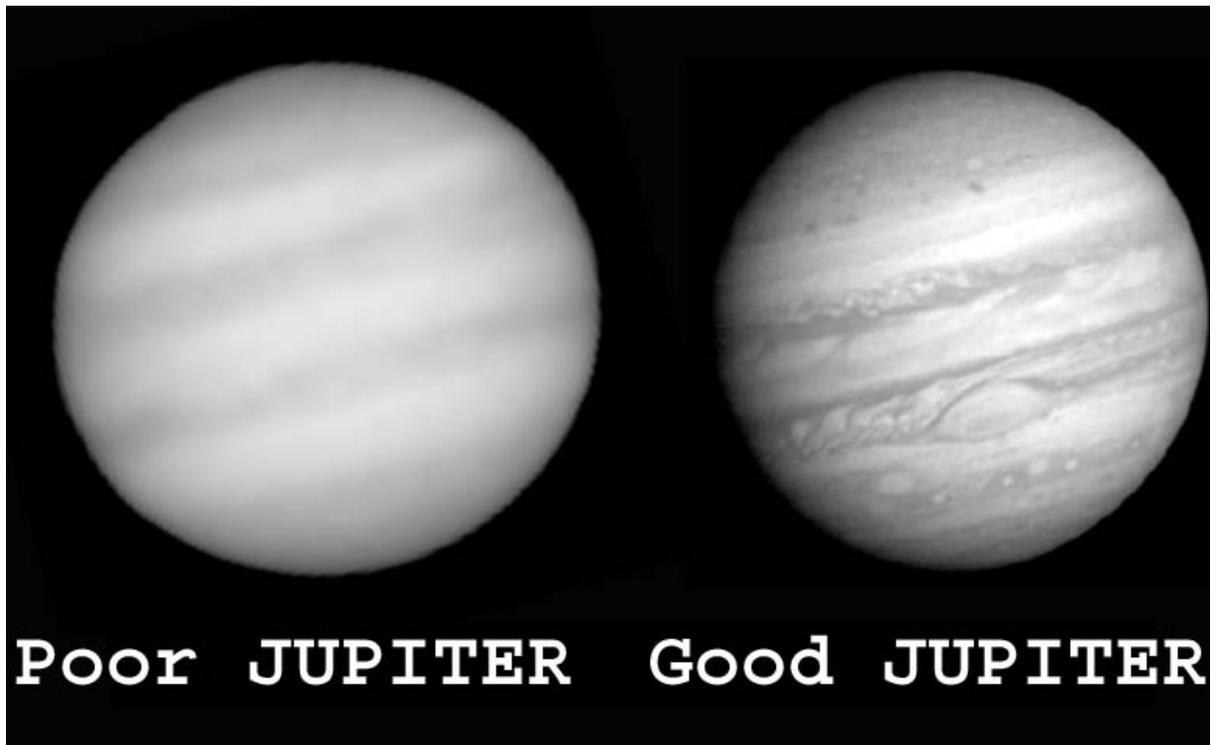
Dear Bleery,

Many people apply “proof of the pudding” tests. They simply have a couple special objects they look at. If they can see the objects clearly, then their optics are good. Fine, low-contrast details are the criteria, but you must have good seeing or no optics can deliver clear details. \*

Easiest is on the moon--the craterlets inside the big crater Tycho. They should be sharp. (Be sure the phase is right, so that they cast shadows.) If they are blurs, well, not so good.

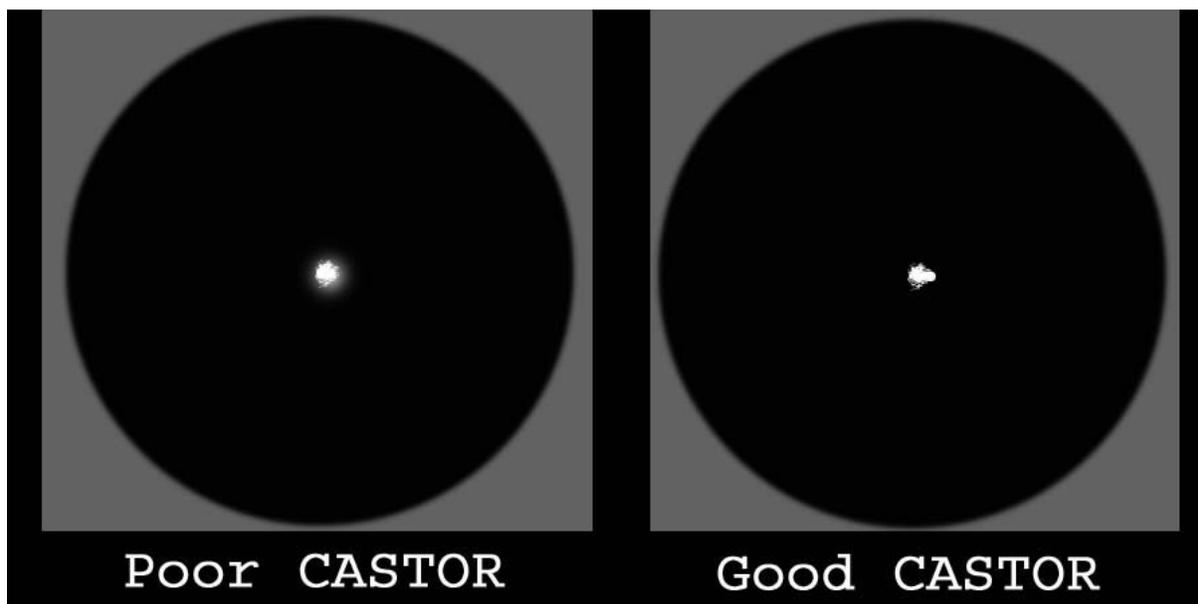


Festoons along the belts of Jupiter can only be seen with good optics, but again, require excellent seeing.



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Double stars less than 5 seconds separation need a bunch of power to split, usually 100x or more. If you get a clean split, your optics are excellent. But poor seeing can make a clean split impossible.



By the way, these “proof of the pudding” tests work quite well in reverse. Once you know your optics are good and properly collimated, then if these test objects appear fuzzy, you know that the seeing is bad.

There is another test, a “star test” that is definitive, but it requires the best of seeing conditions. You must use very high power — 300x to 400x — and aim at a fairly bright star (Polaris is recommended, since it doesn’t drift out of the field of view). Center it, focus it, then defocus it slightly in either direction. Clear, concentric diffraction rings should appear. Shift the defocus to the opposite side, and a similar pattern should appear. If the defocused diffraction patterns are not apparent (or are deformed), something’s wrong. (If they’re similar, but diametrically lopsided, you need to collimate.) Again, seeing must be excellent for this test to work.

\*This is the sine qua non. The seeing must be really good, or no test will be accurate. How can you tell if it’s good enough? Lots of telescopes! If just one of the telescopes in the party sees these objects clearly, then the seeing should be good enough for everybody. But there are some qualifications, even then.

The seeing may only be cycling from good to bad and back every few minutes. If it stays good for :05 or more, that’s great. Be sure all the observers know to wait it out.

Don’t rush to judgment. Suppose you know from experience that one of the telescopes has great optics. Then the owner looks and announces that tonight’s seeing is lousy. He ought to know, shouldn’t he? Maybe, but did he check his collimation first?

It also happens that part of the sky dome may have excellent seeing while another part may be terrible. That’s a characteristic of being on the edge of a jet stream.

As the atmosphere cools down during the night, seeing almost always gets better. Patience and persistence are the keys.

## Remembering Walter Denton—Mike Fleenor

Many of you may have heard of the passing of Walter Denton this past month. He was an amazing person and a great friend of SMAS. Chances are you may not have known him personally unless you have been in the club for awhile but if you ever did meet him his kindness would leave a lasting impression. Even if you never knew him his precision telescope focusers have appeared in Sky & Telescope and are literally on telescopes all over the World!

While I only knew Walter a short time I was at many times encouraged by his soft spoken words of wisdom and insight. This seemed to contrast his physical appearance of a big guy with a thick mustache. I first began attending SMAS meetings in the time period between the apparition of comets Hyakutake and Hale-Bopp in the mid to late 90's. Needless to say that was a flourishing period for SMAS and I would in great part attribute that success to the efforts of Walter Denton who was then serving as the Club Chairman. While an outstanding leader in the club, Walter was also highly regarded as a master craftsman when it came to machining metal. I must admit when I first learned of his death I immediately wanted to kick myself for not getting up to see him since he relocated to Virginia, however my mind quickly brought to memory the first time I got the "tour" of his machine shop in South Knoxville.

I had just gotten over the film astrophotography bug with Hale-Bopp and was diligently working on my self built 8" Newtonian with a home-grown f/7 mirror. Walter was very fond of long focal length planetary scopes and for a first time mirror maker his insight was very helpful. Walter had suggested f/7 to me as a compromise between a really long focal length scope and the shorter scope that others were suggesting. When I started to fine-grind and polish that mirror, I would soon learn just how fortunate I was that I had listened to him! My mirror with the help of Garry Noland and Steve Balay turned out excellent! Walter also was never stingy when it came to taking time to build something for somebody's telescope project. My secondary spider and support mechanism were built by him one evening after a long day at work. I remember it just like it was yesterday, as Walter setup his machines to fabricate some parts for me after a he had just finished a job for a client. His ball and socket secondary alignment system has worked flawlessly over the years.

When you entered his shop, you more than likely were mesmerized by all the machines - Lathes, Mills, Presses and even a few custom jigs and accessories that Walter had made up himself. That first night when he gave me the walk around his shop, I couldn't help but think here is a man much in the same caliber as Tesla or Edison. Not only was Walter a highly skilled machinist, but he was an inventor. While he would never brag about his accomplishments, I learned he was very instrumental in both the Mercury and Gemini space programs. He built the power supplies for the Gemini's and helped develop the alarm systems on the Mercury. His handiwork didn't stop with the aerospace industry, as Walter also invented a surgical tool that is still in use today! I have no idea how many patents he was awarded, but he was quite prolific with his creative mind.

While I am sure many folks can tell even more stories of the life of Walter Denton, I think I shall most remember him for his kindness and willingness to help out a fellow astronomer. He will be fondly remembered every time I use the 8" Newtonian that he helped me build. Walter you were an amazing human being!

**And Congratulations to Robb & Becky Feldhege**

Looks like former SMAS Vice President Robb Feldhege, will have stars in eyes for some time due to the birth of his first child. Congratulations Robb & Becky!



Logan Michael Feldhege was born at 10:13 PM on June 1st. He is 10 weeks early but is doing very well at the Children's hospital Neonatal Intensive Care Unit. He will be there for about 6 weeks or so before we can bring him home. He weighed 3.3 lbs and is 16.25 inches long.

Robb and Becky Feldhege

# June 2004

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3 <i>Full Moon</i>	4 UTK	5 TAO
6	7	8 Transit of Venus (Early Morning) 	9	10	<b>11</b> SMAS Meeting PSTCC RM 223 7 PM	<b>12</b> Public Star Party Look Pebble
13	14	15	16	17 <i>New Moon</i>	18 UTK	<b>19</b> Star Party Unicoi Crest TAO
20 Summer Solstice Father's Day	21	22	23 Moon Beside Jupiter	24	25 SCRAPS Submission Deadline *****	26
27	28	29	30	UTK—roof of Neilson Physics Building on The Hill at UT TAO —Tamke-Allan Observatory Public Stargaze Watts Bar Lake, Roane County		