

## Smoky Mountain Astronomical Society



### Society's **Ch**Ronological **A**stronomical **P**aper**S**

The real voyage of discovery consists not in seeking new landscapes but in getting new eyes.

—Marcel Proust

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### From the President - Lee Erickson

Fellow astronomers: I have written in personal support of the lighting zone around the Tamke-Allan Observatory. I encourage you all to write to the Roane County News editor Terri Likens at: [rceditor@bellsouth.net](mailto:rceditor@bellsouth.net)

Below is my letter. For best impact, letters should be personal, not in the name of SMAS. Those of you who live in Roane county can get even more bang for your effort by calling your commissioners. Find them at:

[http://www.roanealliance.org/doing\\_business/discover\\_county\\_officials.html](http://www.roanealliance.org/doing_business/discover_county_officials.html)

You will have to scroll down near the bottom.

Please do not simply copy my letter. Write about how Tamke-Allan Observatory has benefited you, or the education of someone you know. You might also describe how you got into amateur astronomy or how you have to travel great distances to observe.

The vote on this measure is on June 11, 2007. David Fields would like help with a Sidewalk Astronomy event that evening at the Court House. My letter follows:

\* \* \* \*

Dear Roane County News: I am writing in support of the proposed ordinance for smart lighting in a zone around the Tamke-Allan Observatory. Although I live in Maryville I often make the drive to Tamke-Allan Observatory to participate in amateur astronomy with Dr. Fields and others who regularly gather there on most first and third Saturdays. I am a member of the local Smoky Mountain Astronomy Society or SMAS. A few weeks ago several SMAS members and I visited the Ridgeview elementary school in Roane County. We spoke with many of the children about our interest in observing the planets, stars, nebula and galaxies which can be seen from dark skies. There were lots of eager listeners and they asked good questions. We hope lots of those children will spend less time in front of a television and out observing from the Tamke-Allan Observatory or from their own yard under dark skies. Like clean air and pure water, clear dark skies are a natural treasure we should all work to preserve for our children and their children.

Thanks to Terri Likens for her recent article **Diamonds In The Sky Deserve Our Protection** and to Jill Picket for **Stars are what they are all about**. They nicely brought to the public attention this opportunity.

I travel to Roane County for the Astronomy.  
Forrest Erickson

## Agenda for June Meeting — Ha! There ain't no meeting!

It's that time of year again. SMAS PICNIC time! We hope to have a galaxy of gastronomy followed by observing with the public at TAO.

Date and time: Saturday, June 2, 2007 at TAO, 5:00 PM

Volunteer menu (so far)

SMAS will provide the "Great Attractor", the main meat dish, Mike Littleton's famous "Boston Butt", which is a tender pork shoulder. Mike says the main course is all cooked and ready to go!

Ericksons

Regular and Diet AW  
Regular and Diet Cola  
Regular and Diet 7 UP  
Plates, bowls, utensils and napkins

Bob Arr

Potato Salad  
Two ice box pies

David Field: chocolate chip bread/cake

*{Note: this newsletter will be distributed only a couple days prior to the picnic, so if you intend to bring a last-minute dish, please call Lee Erickson at 977-1242 ASAP. —Ed.}*

Last-minute suggestions: salad, veggie tray or dish, soft drinks, desserts.



Globular Cluster cookies



The Omega Krispy cookie

The chef insists the density of Omega Krispy to Omega Centauri is only 1, 200, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000 to 1.

But they are still fattening.

Minutes of May Meeting by Bill Dittus

Lee Erickson opened the meeting at 7:30 pm. There were 11 members present.

Lee discussed assisting Pellissippi State Community College with Astronomy workshop programs. Everyone thought this was a great way to help PSTCC.

Dennis Hutcheson made good his offer to donate his Meade LXD55 EQ mount for our Burgess Optical 127mm F8 refractor. It came complete with computer and hand controller, allowing GOTO and tracking. Dennis turned it over to Mike Littleton, custodian of the telescope. Everyone was REALLY excited about this! Thank You Dennis VERY MUCH for your generosity!



Announcements: June Star Parties

June 14 – Unicoi Crest  
June 21 – Look Rock #1

The Night Sky was presented by Mike Littleton -- “Cigar Galaxy”

Main Program: Bob Arr's re-mastered “SMAS Beginner's Course”, now a DVD movie with music.

Lee authorized Michael McCulloch to burn 10 DVD's for distribution for any member who asked for a copy.

Gastronomy followed the meeting. Hit wuz good, too.

SCRAPS depends      Help!  
Upon its friends      Help!

SCRAPS depends      Help!  
Upon its friends      Help!

## Letters to the Editor

One thing not mentioned in the size of stars question is that they can tell rough size of a star by the broadening of spectral lines. The larger the diameter star, even if more massive, is invariably less dense. Some of the larger M type supergiants are considered a hot vacuum even if they are 10 to 15 times more massive than the sun. If you compare the spectrum of an M type dwarf with and M type supergiant, the spectral lines on the supergiant are much narrower as the "atmosphere" of the supergiant is much lower pressure.

Staying closer to home, we can go to Lowe's and compare security lights to fluorescent tubes. The lines widen so much with the medium pressure arc, they can blend together if they are close enough. The pressure in a medium pressure mercury arc is over 1000 psi (75 bar to be exact). The banging together of the atoms in the atmosphere of the lamp or the atmosphere of a dense star will affect the electron shells of the atoms causing the lines to broaden. In fact a high pressure sodium light will show colors other than yellow. A low pressure sodium light will show yellow. Period. It is spectrally pure.

George Weems

### ***May Question of the Month — Answer***

More massive stars die quicker than less massive stars, right? That's cause they burn hotter, using up their fuel a lot faster.

OK, consider Sirius, that beacon of brilliance southeast of Orion's belt. That blazing blue-white star is the brightest one in our northern sky. It is a double, you know: they're called Sirius A and Sirius B. The tiny companion, Sirius B, is vastly smaller than the main star. But B is just a dead brown dwarf, all its fuel gone.

The question: Why didn't the hugely bigger A die first?

*Ach, professor, nobody got it! There were no answers received at all. Perhaps we should withhold dessert at the picnic.*

*Astronomers know that because of its relatively large size as a dwarf, Sirius B was originally far larger than Sirius A is now, and did in fact live fast and die young. But in doing so, it sloughed off prodigious amounts of its mass, much of which eventually drifted over to nearby Sirius A, enriching its unusually high metallicity. Humans began observing long after this process was complete.*

*Ancient astronomers sometimes described Sirius as being red, like Betelgeuse is now. If indeed its light was reddened, nobody knows why today. Sirius B's red giant phase had to have occurred about 120 million years ago, not something humans would ever have witnessed.*

*For more, see <http://www.answers.com/topic/sirius>*

No dessert?



## Unicoi Crest Season Opener, May 13, 2007 — by Lee Erickson

In attendance were Michael McCulloch, Owen Hoffman, Bob Arr, Lee Erickson. and Sasquatch. We were joined by a guest, Mr. Rick Popp. Owen had invited Rick after a chance encounter earlier that day while hiking.

About half the time we had broken clouds, so we were not able to do any systematic observation, but we had a great time showing our guest Venus, M104 and M13. We left UC at about 2:00 AM as the dew began to form on horizontal surfaces.

Clear Sky Clock had predicted poor transparency and Yes, we did have low contrast even when the clouds were not blocking us. The seeing also was poor. Objects not high in the sky, such as Venus and later Antares and Jupiter were swimming in turbulence.

M51 which was near zenith was nice, however. The Needle galaxy, NGC4565, was lower and the view not as good as I remember my first view through Mike Littleton's telescope years ago. Through Bob's scope, Emily, Lee thought he saw some dark lines crossing the bright part of needle on one side of the galactic bulge. Through Sasquatch a short time later Lee could not see the lines. Examining some on line photos the next day, Lee was able to see such dark lines and feels slightly vindicated and maybe just lucky.



This NGC4565 image is from: <http://www.marketiq.com/astro/aa040700.htm>

A wind came up after midnight and made Sasquatch buffet a bit. This was the incentive we had for looking at M4 since Sasquatch was then positioned pointing down wind. Finally we disassembled the equipment. As Bob was loading, Michael McCulloch noticed streaks of light in his flash light beam caused by something blowing in the wind. Perhaps something contributing to the feeling of stickiness he felt in the air. Lee just felt damp and had on an awful lot of insulation for a Minnesota boy.

Nevertheless, a good time was had by all!

## Telescope for Kids given to Rockwood's Ridgeview Elementary School

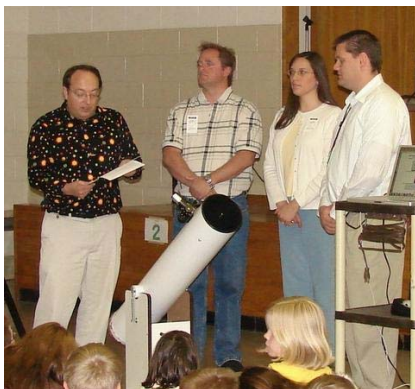
April 21, 2007 Tammy and Bill Burgess of SMAS and Burgess Optical along with SMAS members Scott Byers and Lee Erickson gave a 6 inch Dobsonian "Telescope for Kids" to the Ridgeview Elementary School in Rockwood TN. We met Principal Ayers and the children in 4th and 5th grade. I think there must have been about 200 or more youngsters.



We had with us the club's 5 inch refractor, on Scott's equatorial mount, the club fabricated 6 inch Dobsonian which we were giving away, a pair of 10 X 50 binoculars on a tripod and a department store 60 mm nasty telescope which we dubbed the DO NOT BUY TELESCOPE. Near the beginning of the presentation I asked how many youngsters had a telescope and I was surprised by the high percentage of hands that went up. I am guessing about 30% or so. I then asked how many had a telescope like the DO NOT BUY TELESCOPE and most of the hands remained up. (I hope and think I explained that although the DO NOT BUY TELESCOPE was not a good buy never the less you can see some fun things with it. ..

The youngsters asked many questions: "Is Pluto still a planet?," "How do we know how the Earth was formed?" How would some of you answer this question to a group of 8 year olds?

Bill Burgess spoke about amateur astronomy and how his interest became a business which has taken him and Tammy around the world. In addition to traveling in the orient for vendors of optics, Bill and Tammy have attended star parties all over the USA and Europe too!. Bill was wonderfully animated. Perhaps lost on the youngsters was Bill's story of how, as a young boy, he started mowing lawns to earn telescope money.



We ended the presentation about 1 and 1/2 hours long by giving to Principal Ayers the 6 inch Telescope for Kids with the Burgess Optical and SMAS logo. We also pointed out how their telescope is personally signed by John Dobson.

This was a wonderful experience. I left feeling that we should be doing this kind of out reach more often.

Lee Erickson

## Brent Holt



Brent Holt is a long-time member of SMAS, having joined 12+ years ago when the club used to meet on The Hill at UT. He is a self-taught machinist, welder and fabricator, and he built an elaborate 12' x 16' observatory at his home in west Knoxville, not far from PSTCC. It is a perpetual work-in-progress.

Brent has been interested in stars since he was a boy, when his dad bought him a Kmart refractor. Today he describes himself as an amateur astronomer who loves the science of astronomy. He fabricated the new spider and primary mirror cell in our recent re-build of Sasquatch.

He is a partner in a marina/RV park on Douglas Lake.

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## David Reuter



Name: David Michael Reuter  
Coordinates: 4/24/07 12:35 PM  
Magnitude: 8 lbs 4 oz  
Duration: 21 in

David clearly poses a threat to the recently set record as the youngest SMAS member (6 months of age) to attend a regular meeting, now held by Miles Iverson.

We are gripped by the drama, and fervently await the outcome.

Congratulations, Mom and Pop.

# June 2007

SUN	MON	TUE	WED	THU	FRI	SAT
UTK—roof of Neilson Physics Building on The Hill at UT 1st & 3rd Fridays TAO —Tamke-Allan Observatory Public Stargaze Watts Bar Lake, Roane County 1st & 3rd Saturdays					1     UTK	2 SMAS Annual Picnic At TAO   5 pm
3	4	5	6	7	8 No meeting  Venus at max. east elongation. Continues to brighten until mid July	9
10	11	12	13	14 New moon	15    UTK	16 SMAS Star Party Unicoi Crest  TAO
17	18	19	20	21 It's the sum- mer equinox, right?  No? Uh, lessee, whut wuz it...	22	23 SMAS Star Party LR #1
24	25	26	27	28	29	30   ..the solspice, that's it!  Ain't.it? Huh?