

Smoky Mountain Astronomical Society

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S.C.R.A.P.S.

Society's Chronological Astronomical PaperS



NOVEMBER 12th SMAS MEETING

Where: PSTCC, Main Campus, Hardin Valley Road
Alexander Bldg, Room 223

Time: 7 - 9 PM

Topics

- *The Wiz* will begin the meeting by illustrating the solution for the July SCRAPs challenge on celestial mechanics
- Then, Misc. Club business
- Finally, due to clamor for more, Dr. Mike Guidry, of UT, has graciously consented to continue his overview of modern cosmology and the observational evidence on which it rests. This lecture is suitable for a general audience and will introduce even the beginner to the wonderful things science has revealed to us about the universe in which we live.



Calling All Volunteer Astronomers!

SMAS has been invited to give presentations at Fort Craig Elementary School in Maryville on Wednesday, November 17.

The presentations will be from 9:30 to 10:10 am, from 10:10 to 10:50 am, and from 10:50 to 11:30 am. Each presentation will be attended by about 35 students.

The main purpose of the presentations is to familiarize kids with different types of telescopes and how they work and to give the kids a chance to see actual telescopes. Lee Erickson is working on an outline for the presentation.

If you are free on November 17, please consider bringing your telescope or other observing gear to Fort Craig. The more telescopes we have, the easier it will be for all students to get a look.

Please contact Angela Quick at amqtn@earthlink.net or (865) 981-8038 to volunteer!



Orion Rising at LR #4
10/17/04 2:10 AM EDT

The constellation Orion rising at Look Rock #4

Single 30 sec, 1600 ASA exposure taken with an unguided Canon 10D on a tripod.
Michael McCulloch

The Wiz

Dear Wiz,

I'm sure he won't roll over in his grave worrying about this, but just what is the correct way to say 'Tycho Brahe'?

P. Ounce

Dear Ms. Prone,

I don't know. I'm not a Dane, nor do I know a Dane to ask. The best I can do is to cite Funk and Wagnalls: Brahe, Tycho 1546-1601 Danish astronomer

First name: Tycho (Tü'-ko)

To pronounce *ü*, round the lips (as for *pool*),
and pronounce *e* (as in *even*)

Ty should sound very similar to *tea*
ko is shown as *long o*, as in *open*; like *co-owner*

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Tycho becomes TEA co

Last name: Brahe (Brä'-ə)

The unlauded *ä* is pronounced as the *a* in *palm*, or *father*.

Bra should sound like *bra* (short for brassiere)

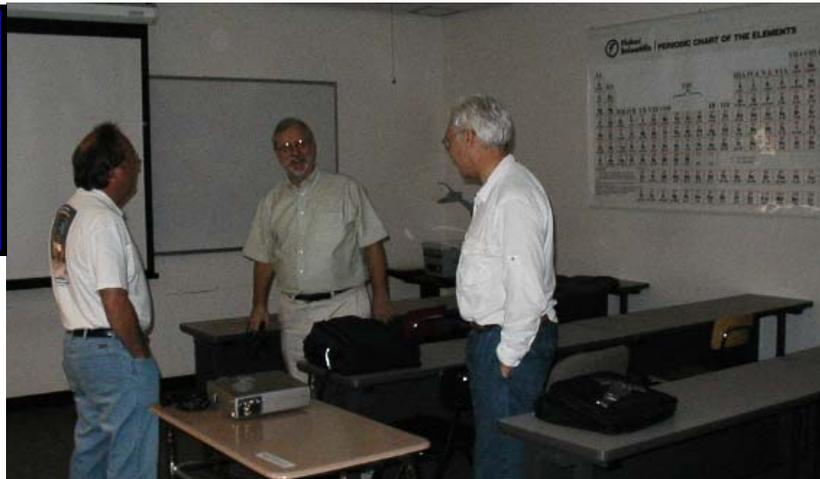
ə is pronounced as the *e* in *even* or *tree*

Brahe thus becomes one size larger than a d-size bra, that is, BRA e

Get it? Tycho Brahe is pronounced TEA co BRA e

Last Month's Meeting - Angela Quick

SMAS Meeting
Friday, October 8, 2004
Main Campus, Pellissippi
State Technical Community
College



Dr. Michael Guidry (center) is asked questions after the extended meeting

The meeting began at 7:05 pm, with 15 members and two guests present. Jack McConnell announced that there would be a public astronomy program on October 16 at Big South Fork Bandy Creek campground, and that one campsite, for up to six people, would be reserved for program volunteers. Paul Lewis is in charge of these events, which consist of a public program by Paul at 9 pm followed by observing.

Michael McCulloch introduced the evening's speaker, Dr. Michael Guidry, University of Tennessee Physics and Astronomy professor. The entire meeting was devoted to Dr. Guidry's presentation, "An Introduction to Modern Cosmology." Dr. Guidry was an excellent speaker, allowing plenty of opportunities for questions and interaction during the presentation. He spoke from 7:15 to 9:45, and we made it about one quarter of the way through the material he had prepared! Dr. Guidry indicated he would be happy to return to a future meeting to finish the presentation. The meeting spurred a lively discussion on the SMAS Yahoo! Group in the following weeks.

**Big South Fork
Astronomy Campout —Angela Quick**

On Friday, September 10 through Sunday, September 12, around twenty amateur astronomers from SMAS and their guests gathered at Bandy Creek Campground E-2 in the Big South Fork National Recreation Area near Oneida for a weekend campout and star party.



SMAS campers setting up sites

The group began gathering on Friday afternoon, when Michael McCulloch, Roy Morrow, and the Worley clan set up camp. Erik Iverson, Angela Quick, and Lee and Janice Erickson arrived later in the evening and pitched their tents. At dusk, Michael, Roy, Erik, and Mike Naney began setting up for a public program and observing in the visitor's center parking lot area. Fortunately, the rangers turned out the lights for us. Unfortunately, turning out the lights also turned off power to the parking lot, so Roy's Stellacam did not make its appearance. Instead, visitors were treated to views through Roy's 8" SCT, Michael's 12.5" PortaBall, Erik's 4" Orion refractor, and Mike's ETX 90. Ed Gorney and Jack McConnell joined us during the evening observing.

We enjoyed a truly spectacular sky. The Milky Way shone bright, spanning the entire sky from Scorpius to Casseopeia. The double cluster in Perseus and the Andromeda galaxy were clearly visible to the naked eye. With still air and no haze, it was hard to believe we were in Tennessee! But Jack McConnell, who frequently volunteers for public astronomy events at Big South Fork, says the sky at Bandy Creek is often this good. Objects observed included the Cat's Eye nebula, Saturn nebula, M11, M27, the double cluster, M57, the ET cluster, the "winter rose" in Casseopeia, M52, M13, M15, M2, and galaxies in Pegasus. The only distraction during observing was the traffic in and out of the horse barns, which slowed by 11 pm. I left the observing area around 1 pm, when slight ground fog appeared.



Lee, Angela, & Ed at Twin Arches

On Saturday, after a leisurely sleep in and various breakfast cookouts, two groups hiked to Twin Arches in the afternoon. The "energetic" hikers McCulloch, Hoffman & Hoffman, and Morrow made quick work of the 1.5-mile loop. The "leisurely" hikers Erickson & Erickson,

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Quick & Iverson, and Gorney made an afternoon of it, exploring the two arches and surrounding geologic formations between those three flights of killer stairs. The Worleys chose to explore the Rugby settlement.

By Saturday evening, the Hoffman campsite appeared and Owen and son, Bob Arr, and guests Jennifer Carless and Kevin McLeod had joined the throng. Unfortunately, by Saturday evening heavy clouds also joined us, covering the skies. (Owen reported that according to his wife, BSF was the only location in the entire state to have cloud cover on Saturday evening.) The evening campfire gathering that started at the Erickson campsite moved (rather quickly) to the picnic pavilion as rain began. Janice



Bob 'Rain Cloud' Arr makes his arrival



Picnic Pavilion

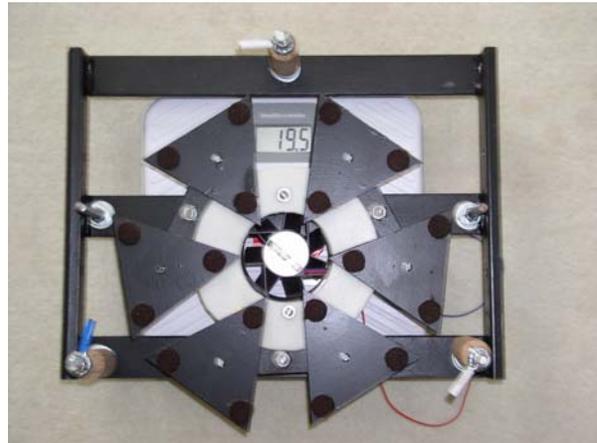
“Prometheus” Erickson and Ed “Fireboy” Gorney transferred the blaze, log by log, to the brick fireplace in the pavilion. Bob “Rain Cloud” Arr started a round of the astronomy letter game – you know, say a word that has something to do with astronomy, then the next person has to think of another astronomy word that starts with the letter with which the previous word ended... The letter ‘Y’ was soon banned; the letter ‘A’ finally did us in. Then those present shared memories of the experience that got them hooked on astronomy.

Owen Hoffman, Bob Arr, and Michael McCulloch set up to observe in the parking lot around 11 pm, where visibility conditions varied through the night. The observers bravely battled dew and ground fog, ending their session around 1 am. I can report fairly clear, magnitude 4 skies in the wee hours, with the Pleiades and Orion rising in the east; however, as my primary purpose in being up was not observing, I merely glanced at the sky for a few minutes before returning to bed.

All broke camp the next morning, with Worleys and Iversons clearing the campground at noon. Despite the apparent return of the curse of “Rain Cloud” Arr, the BSF Astronomy Campout was fun.

Trials and Tribulations of Building a Dobsonian Telescope—Mike Littleton

A few years ago, I acquired one of the old Coulter Optics Red Tube 13.1" dobsonians. It was a very basic telescope made of a cardboard tube, plywood mount and a pipe fitting focuser. The idea was to use the optics and discard the rest. With David Kriege and Richard Berry's book, *The Dobsonian Telescope*, in hand, I went about constructing the mirror cell. The problem with the mirror cell design in the book is it is made of steel and requires some welding. My shop is equipped for carpentry, not steel working. A friend's son-in-law happened to work in a specialty metalworking shop in Knoxville and I gave him the design. Unfortunately, he moved to Denver with the cell partially completed. The owner of the shop took over the project and a few months later completed it. The mount was a little small to fit a 13.1" mirror and weighed in at 19.5 lbs! (See the picture right – Dob Mount) The owner had substituted ½" plate for the intended 1" x 1" square steel tubing. After assembling the parts and adding the fan, I put it into a closet where it remains today.



Using the Internet, I found AstroSystems (<http://www.astrosystems.biz/>) in Colorado that supplies complete dobsonian kits for mirrors from 21.5" to 32". The kits have some really nice features such as a filter slide allowing the use of multiple filters without removing an eyepiece, birch plywood construction and a quality focuser. I placed an order in late November 2003 for the 13.1" kit. Orders for the kits (TeleKits) are booming and damage to a critical lathe by a vehicle that came through the wall of the facility delayed manufacture of the TeleKit.

The first shipment of the parts did not arrive until June 2004. This first shipment was 3 large boxes, which comprised the bulk of the parts. The final box arrived in late August. Something was wrong with the kit—it had no filter slide. This is the one part I need to complete the secondary cage. I unpacked all the boxes and performed an inventory against the manual. Other parts were missing. I emailed AstroSystems and they called me the next day. They said I used the wrong inventory and to look in my manual for an appendix for the smaller kits. There was no appendix. AstroSystem faxed me the appendix and I performed a second inventory. Parts were still missing. AstroSystems assured me they would send the missing parts in a few days. What arrived was another set of truss tubing and wheelbarrow handles.

I believe AstroSystems will make good on the kit. The last shipment was probably for someone who is waiting for truss tubing and wheelbarrow handles and who is wondering

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why AstroSystems sent another filter slide. The people I talked to at AstroSystems have really tried to make the order right. They appear to have fulfilled the dream of many amateur astronomers, to turn a hobby into an occupation. The problem is their business is growing faster than they can keep up.

In the sequel to this article, I hope to report on the successful completion of the TeleKit and its excellent views of the Realm of the Galaxies. For those astronomers buying the TeleKits, my advice is find an open space in home or garage, lay out the parts, and perform an inventory. Here is a picture of the parts for a 13.1" kit (sans a few parts and partially completed secondary cage). The green ring is a dog's toy.



Dear SMAS Members

On November 8th I start a new job with SkyQuest International selling turboprop aircraft, those “puddle jumpers” that most people do not like to fly on. This new job will require me to move to Winston-Salem, NC.

For several months I have not been able to be active in the club. However I have enjoyed getting to know all of you and have good memories of star parties, cookouts, and other get together. Even though I will not be living in East Tennessee I will keep up with the club thru the newsletter on the Internet.

Best wishes to all,
Gene Johnson—Email: ehj110@comcast.net

Last Scheduled Star Party of the Year!

November 13th at Look Rock Overlook # 4 on the Foothills Parkway

This is the last scheduled star party for SMAS until next spring. SMAS recommends visiting Tamke-Allan Observatory on public observing nights (1st and 3rd Saturdays) during the winter months as the facilities provide much needed warmth during the colder months of the year!

November 2004

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2  Election Day	3	4	5 UTK	6 TAO
7	8	9	10	11 1572: Tycho Brahe sees supernova in Cassiopeia. Brightest in past 900 years	12 SMAS Meeting PSTCC Rm 223 7 pm <i>New Moon</i>	13 SMAS Star Party Look Rock #4
14	15	16	17 SMAS Fort Craig Presentation <i>Leonid Meteors</i>	18	19 UTK	20 TAO
21	22	23	24	25  Thanksgiving	26 <i>Full Moon</i>	27
28	29	30	<div style="border: 1px solid black; padding: 5px;"> UTK—roof of Neilson Physics Building on The Hill at UT TAO—Tamke-Allan Observatory Public Stargaze Watts Bar Lake, Roane County </div>			