

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

Society's ChRonological Astronomical PaperS



John Dobson's Visit to East Tennessee

John Dobson's visit to the East Tennessee Astronomy Community was a stellar success! His five formal appearances were hugely attended, and his informal interactions with small groups of members were delightful. John's dedication to amateur astronomy is legendary, and many of us saw it in action at three separate star parties. His passionate talks on cosmology were fascinating, as he spelled out his unique interpretation of scientific facts and personal philosophy. He also autographed several members' telescopes - no small momento.



John Answers Questions at PSCC

The impetus to bring John to East Tennessee came from Owen Hoffman. Hosting John was made possible by the work and generosity of members of SMAS, ORION and TAO. Roane State and Pellissippi State Colleges contributed space and support. We want to thank everybody who participated. It was an experience to treasure.



***Owen Hoffman, Sponsor, Admirer, Disciple, Champion, Advocate, Backer, Promoter, and Devotee**

From the President by Bob Arr

As you know, this is my last "From the President." I want to say "Thanks!" to all the members, for helping support the programs and growth the club has experienced for the past two years. I feel like we've come a long way, and a most enjoyable one. We share a wonderful hobby. For me, it has been a pleasure to serve the club, but I want to point out that my officers, elected and appointed, did most of the work. There really are many chores, and it takes a lot of help. I am looking forward to the club's future star parties, meetings and special events. At the upcoming February meeting, we will elect next year's officers. I want to wish the next president and next executive committee "Good Luck".

February SMAS Meeting Agenda

The February SMAS meeting is on Friday, February 13, 7 PM at the Main Campus of Pellissippi State Community College. The agenda is as follows:

- Voting for next year's officers
- End-of-year financial report - Erik Iverson
- Double Stars - Bob Arr

Also 2004 dues are due this month and remain at \$20. Your prompt payment will be appreciated.

The Wiz

Dear Wiz, that John Dobson guy that was here — he really messed me up. Did he say there ain't no matter, there's only energy?
R. Corr

Dear Rocky,

Sometimes cosmology and philosophy can spill over into each other. In philosophy, there have always been two concepts, called Idealism and Materialism that people have argued over for all of recorded history. Idealism says that since humans can only experience the world through their five senses, and these sensations are all represented as ideas by the mind, that ALL - every bit - of our knowledge of the world is ideas, and nothing more. Materialism almost speaks for itself, one of its sly arguments being that our very sensors--eyes, ears, nose, etc, are themselves made of materials, and that it is silly to suggest that we live only in a world of immaterial ideas.

Around 1720, in jolly old England, there were two famous figures who used to argue these concepts publicly, Ben Johnson (the writer) and Bishop Berkeley (the prelate). At one point, Ben wrote, "Every time the good bishop convinces me that everything I perceive in the world is only ideas, I go out to the biggest rock I can find and kick it as hard as I can. All of his reasoning is instantly wiped out, and I can retire to my home vindicated, to nurse my wound." If you like, Rocky, you may repeat this experiment on an ordinary curb.

January Meeting by Angela Quick

The SMAS meeting was held on Sunday, January 18, 2004 at the Main Campus, Pellissippi State Technical Community College. The meeting began at 2:10, with 18 members present. Bob especially welcomed Bettie Levy, who joined us for this afternoon's meeting and lecture.

1. **SMAS approved the purchase of liability insurance for 2004.** Erik Iverson presented the bill for \$327; Bob Arr moved we pay; multiple seconds; confirmed by voice vote (no nays).
2. **Angela Quick, secretary, opened nomination of officers for 2004.** There was one nomination for president – Michael McCulloch. Michael consented to the nomination. Erik Iverson offered to serve a second term as Treasurer. Angela Quick offered to serve a second term as Secretary. Since the office of Vice President remained empty on the ballot, Angela read the job description for that office aloud, and asked members present if any of them would agree to be Vice President for the year. Lee Erickson was nominated and consented.

Minutes (continued)

Slate of officers for February 2004 election:

- Michael McCulloch, President
- Lee Erickson, Vice President
- Erik Iverson, Treasurer
- Angela Quick, Secretary

3. **We discussed getting a trailer to house and transport club telescope, Sasquatch.** Discussion favored a hard-sided, self-contained trailer that could serve as both weatherproof storage and transport unit. Trailer would need to be 8 feet long by 4 feet wide. Erik Iverson offered garage space for trailer storage. Perhaps SMAS should form a trailer committee to pursue this project in the coming year.
4. **Bill Burgess of Burgess Optical donated a 5" f/7 achromatic refractor with tripod to SMAS.** We will receive the scope when the tripod is completed. We agreed to credit Bill with a sticker on the tube giving contact information, and possibly, with business cards that could be handed out at star parties.
5. **Lee Erickson noted we need to credit Bill Burgess on the two "Telescopes for Kids" that are in his basement.** We agreed to put a SMAS sticker on one side of the rocker box, and a Bill Burgess sticker on the other.
6. **Peter Bush needs a copy of Microsoft Publisher if he is to help Mike Littleton with the SCRAPS newsletter.** The combined computer software expertise of the club determined that it would be legal for Bob Arr to give Peter a copy of Publisher that came with an old computer and is no longer being used.
7. **Members talked about the scratched NASA mission to the Hubble Space Telescope, and possible ways to keep the Hubble project going.**
8. **Since so many people came with cash in hand and offered to pay dues, Erik Iverson announced he is accepting 2004 dues today!** Dues are \$20 per year. See Erik, who accepts cash and checks. You can also mail your dues to the SMAS post office box, or pay them at the February meeting.
9. **Steve Rothchild was presented the Astronomy League's Messier Club Certificate by SMAS's Observe Chair, Ron Dinkins (right)**
10. **The meeting adjourned at 2:50 for a brief intermission before the moment we have all been waiting for at 3:00 ...**
11. **Renowned amateur astronomer, telescope maker, and cosmologist John Dobson spoke to an audience of 59 in a question-and-answer style lecture.** The conversation covered a broad range of astronomy related topics, including biographical vignettes from John's life, telescope making and design, John's work reconciling physics with Vedanta teachings, John's most memorable sights through a telescope, and working with the public and Sidewalk Astronomers in the National Parks.



January Meeting (continued)

Owen Hoffman asked John Dobson what the essential points of a successful public astronomy presentation were. John replied with the following guidelines for carrying on his work.

1. Start with an informational slide show, then take the public to the telescopes. (He called this "flushing them down the tubes.") The observing goes better if you have already set the stage.
2. Equip yourself with knowledge. People will ask you about what they are seeing. Be able to tell them. Be able to explain.
3. Use common, everyday language, not professional astronomy terms.

Here are some essential quotes from John Dobson's lecture that he invited us to reflect on:

- "Very few restrict what they say to what they know."
- "If amateurs do not offer the public views through a telescope, no one will."
- "If there aren't any questions, there aren't any answers."

Spherical and Parabolic Mirrors (or, SCTs and Newts) By Geoff Gaherty, RASC, Toronto. Reprinted with permission.

Spherical mirrors are the simplest to make: their surface is part of a large sphere. Unfortunately, they don't reflect all the light to the same point, an effect called spherical aberration. This isn't serious if the focal length is long enough ($f/8+$), but becomes worse as the focal length decreases. There are several ways of correcting this.

One is to alter the curve of the mirror slightly while polishing so that it becomes part of a parabola, rather than a sphere; this is the way most Newtonians are made. The down side is that this introduces a new aberration, coma, which becomes worse the wider the field of view (and the shorter the focal length). *(Seen in an eyepiece, coma makes stars in the periphery of the field of view appear to be stretched laterally, sprouting tiny arcs. These arcs are always aimed at the center of the field. - Ed)* This can be corrected by a "coma corrector", of which the best known is the Tele Vue Paracorr.

The alternative is to leave the primary mirror a sphere, and add a corrector lens. Schmidt and Maksutov telescopes use different kinds of correctors in front of the mirror, and some other designs less successfully use correctors closer to the focal plane. Most of these introduce yet more aberrations, such as curvature of the focal plane. Basically there is no free lunch: every design is some sort of compromise, and we all argue till we're blue in the face about which is better and why!

FOUND

Plossl eyepiece in white plastic container apparently left at my house I do not know when. Owner may claim it by identifying focal length. Contact Bob Arr at 982-3599.

LIKE THIS NEWSLETTER?

If you do, keep it going by sharing your astronomical experiences and images with the rest of SMAS and everyone on the Internet by writing an article for SCRAPS. Contact Mike Littleton at (865) 671-1022 or email mlittleton1022@charter.net.



February 2004

President:
Bob Arr

Vice President:
Rob Feldhege

Secretary:
Angela Quick

Treasurer/ALCOR:
Erik Iverson

SCRAPS Editor:
Mike Littleton

Webmaster:
Mike Fleenor

Observe Chair:
Ron Dinkins

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6 UTK Full Moon	7 TAO
8	9	10	11	12	13 SMAS Last Qt. Moon	14
15	16	17	18	19	20 UTK New Moon	21 TAO
22	23	24	25	26	27 1st Qt. Moon	28
29						

SMAS Website:
<http://www.smokymtnastro.org/>

SCHEDULE OF EVENTS

- **2/6/04 and 2/20/04** Public observing from the roof of the Physics Building at UTK
- **2/7/04 and 2/21/04** Public observing at Tamke Allen Observatory
- **2/13/04** SMAS business meeting and election 7 PM at PSCC Main Campus
- **2/15/04** Mercury rises at 6:54 AM; Venus sets at 9:38 PM; Mars sets at 12:04 AM; Jupiter rises at 7:42 PM; Saturn sets at 4:39 AM