



STAR FIELDS

Newsletter of the Amateur Telescope Makers of Boston
Including the Bond Astronomical Club
Established in 1934
In the Interest of Telescope Making & Using

Vol. 12, No. 4 April 2001

This Month's Meeting...

Thursday, April 12th, 2001, at 8:00 PM
Phillips Auditorium, Harvard-Smithsonian
Center for Astrophysics

This Month's Speaker...

THIS MONTH'S guest speaker will be Paul Horowitz, Professor of Physics and Electronics at Harvard University. The title of his talk will be "FLASH! Searching for Alien Lasers Using Optical SETI". Professor Horowitz originated Harvard's Laboratory Electronic course, now in its 20th year, and is the co-author of "The Art of Electronics". His research interests include observational astrophysics, X-ray and particle microscopy, optical interferometry, and the search for extraterrestrial intelligence. He is the author of some 150 scientific articles and reports, has consulted widely for industry and government, and is the designer of numerous electronic and photographic instruments.

Join our most excellent speaker and us for dinner at 5:45 PM at the Changsho Restaurant located at 1712 Mass Ave. in our fair city, Cambridge.

President's Message...

SPRING IS the season that ushers in a slew of astronomy related events. Astronomy Day at the Boston Museum of Science on April 28th starts it all off. Our club traditionally has a table at the museum on Astronomy Day demonstrating mirror making while several members display their telescopes to show the public what amateur astronomers use to view the heavens. We also pass out literature describing our club's activities. Contact RICH NUGENT at NugentRP@aol.com if you would like to help out. The next astronomy event which I have grown fond of is the Northeast Astronomy Forum and Telescope Show in Suffern, NY held on May 5th & 6th. If you ever want to see the latest products from

some of the larger telescope manufacturers in one day, this is the show for you. There is also a flea market that runs for most of the day. Over 70 vendors will attend this two-day event. See their web site www.rocklandastronomy.com. It would be nice if our club had a presence there. Is anyone interested in making this an ATMoB tradition? StarConn at Wesleyan University in Middletown, CT is the next astronomy event held on May 12th. This is a small gathering that allows you to meet and get to know others with similar interests. Bob Royce is a most excellent optician who regularly attends this conference and is very helpful in lending advice on the fabrication of optics. He is one of the few amateur telescope makers who that makes doublet objectives for refractive telescopes. This year he is giving a talk entitled "The Emerging Image: Fabrication and testing of optics in the age of enlightenment".

For those of you interested in learning how to make a mirror, the first Mid-Atlantic Mirror Making Seminar was held March 2-4 at Mallard Lodge, Smyrna, DE. Steve Swayze of Swayze Optical, as well as Star Gazers Dave Groski, Joe Morris and Don Surles provided instruction in successful mirror making. Dave Lane from Nova Scotia (Micro Guider and Earth Centered Universe) spoke Friday night of his observing experience with the Canada-France-Hawaii telescope on Mauna Kea, Hawaii. On Saturday, Peter Ceravolo talked about the construction of his famous wide-field astro camera. Hopefully this new annual mirror making seminar will grow even more popular. For pictures and details see: <http://www.starastronomy.org/telescopemaking/midatlanticmirrorsseminar/>

-Bob Collara, President-

March's Minutes...

PRESIDENT BOB COLLARA opened the 735th meeting of the Amateur Telescope Makers of Boston, including the Bond Astronomical Club.

Our guest speaker was Dr. Robert P. Stefanik, Director of the Smithsonian Astrophysical Observatory's Oak Ridge Observatory facilities. Dr. Stefanik's topic was "SETI and the Search for Low Mass Companions to Stars at Oak Ridge Observatory". The Optical SETI telescope will be a 72" "light bucket" with a spherical mirror to collect the light and look for laser pulses, using a custom camera containing 1024 ultrafast detectors. These will stare at a stripe of sky measuring 1.6 by 0.2 degrees; all stars in this "declination stripe" will pass through the detector which can detect pulses as short as a billionth of a second. It will take about 200 clear nights to survey the entire sky visible from the site, located 40 miles west of Boston. At Princeton there is a 36" telescope which is slaved to the Oak Ridge scope. If both instruments get a coincidence, it would be considered an extraterrestrial or something physically verifiable. The mirror was made by Ray Desmarais from Stabilite Cellular Mirrors. The observatory will have a roll-off roof. The project is sponsored by the Planetary Society. More information on the All-Sky OSETI Observatory, including pictures and diagrams, can be found at <http://seti.harvard.edu/oseti/allsky.htm>

At the business meeting the officers present gave their reports. Membership secretary JOHN SMALL reported that there are now 340 club members. The electronic newsletter will now be sent out on atmob-newsletter, a separate newsletter list. STEVE CLOUGHERTY and others attempted a Messier Marathon on

February 24th despite howling winds and 20° weather. DICK KOOLISH showed slides of the 16" cassegrain telescope at U Mass Boston on top of the library building. It needs a thorough cleaning and help to run it. LOU COHEN showed slides of his trip to S. Texas and New Mexico, including his visit to the 82" telescope at the McDonald Observatory where he spent 3 hours looking through the scope. Star parties are held in the parking lot nearby. Lou explained that the mirror was supposed to be larger than 82", but one builder went berserk and fired a pistol at the mirror and what was left was 82". Upon hearing this, experienced mirror maker MARIO MOTTA quipped, "Everyone who works on a mirror reaches a point where they want to shoot their mirror. This is not an aberration." Mario later reported on the status of the Dark Sky bill. He asked if anyone would help present the issue before the Energy Committee. CHRIS HALAS offered to be there.

-Eileen Myers, Secretary-

Once that was done, which took most of the morning and part of the afternoon, lunch was served by Chef Reed. Then on to work in the meeting rooms and electronics and telescope storage rooms. In the meeting room the rest of the bulletin board was installed and primed, along with some cracks in the plaster which were repaired. Once the rest of the remaining cracks are repaired, along with the framing for an air conditioner, the room can be painted. In the Electronics and telescope storage rooms cleanup continued and a workbench installed.

Thanks to STEVE CLOUGHERTY, DAN FELDKHUN, BRUCE GERHARD, LEW GRAMER, JOHN PANASWICH, JOHN REED, and ART SWEDLOW. The next work party is scheduled for April 7th at 10:00am.

Thanks also go to FRAN and MICHAEL CARNES for the donation of two working slide projectors.

-Paul Cicchetti, Clubhouse Director-

Treasurer's Report...

FOR THE month of March we had \$428.51 in revenue and \$600.00 in expenses for a net loss of \$171.49 for the month.

As of February 28th, 2001 our assets were:

Checking Account - Regular	\$ 18,517.17
Investments	\$ 19,006.66
Total Current Assets	\$ 37,523.83

Of the total, \$2,311.51 is in the Land Fund and \$160.00 is for clubhouse key deposits.

-Bernie Volz, Treasurer-

Clubhouse Report...

SATURDAY OPEN CLUBHOUSE SCHEDULE

Apr 7	WORK	PARTY #4
Apr 7	David Prowten	Gary Walker
Apr 14	Art Swedlow	Tom Wolf
Apr 21	John Panaswich	John Small
Apr 28	Peter Psyhos	David Richardson
Apr 28	Astronomy Day	Boston Museum of Science Contact Rich Nugent at NugentRP@aol.com or 508-879-3498
May 5	Steve Clougherty	Bruce Gerhard
May 12	Richard Burrier	John Panaswich
May 19	Steve Mock	Eileen Myers
May 26	Bruce Berger	Paul Cicchetti

DURING THE last clubhouse work party several of our members snowblowed, moved, or shoveled quite a lot of snow that the blizzard of '01 dumped on us. We continued the same pattern of removal in the Milon Observing field along with the parking area by snow blowers. The remaining areas such as walkways and front of the rear barn doors were done by hand shovel. It is estimated that because of the storm, we had to clear close to 3 feet of snow!

Membership Report...

WE HAVE several new members this month: CHARLES EVANS from Westford, BRUCE TINKLER from Lexington, MICHAEL SKINNER from Littleton and BERNARD KOSICKI from Acton. Please welcome all of these new members.

We also had one member leave the U.S.: our former Membership Secretary CHRIS HALAS has just moved to Scotland. Her husband accepted an astronomy position at St. Andrews. Chris has made her 15-year collection of *Sky & Telescope* available to any club member who would like them. Contact me for details.

-John Small, Membership Secretary-

Upcoming Star Parties...

Monday April 9th at the Rogers School in Lowell. Coordinator Bill Toomey bill@toomey.net

Friday, May 11th at Fruitlands Museum in Harvard, MA. The museum will be celebrating its opening this year with the program "Under Starry Skies". It will begin at 6:30 p.m., but astronomers are invited to enjoy the refreshments and activities before it gets dark. They are planning on having a storyteller at dusk who will tell stories about the night sky. They expect about 100 people. Contact Eileen Myers at starleen@ultranet.com or 978-456-3937.

Tuesday, April 10th at the Tom Britton Clubhouse in Westford. "Eyeball Star Party" for 6th and 7th grade students of the Cummings School, Somerville. Students will view the night sky without telescopes. Topics to be discussed with the students:

How do constellations REALLY look? (Orion versus "Monoceros?")

How and why do the stars move? (Some rise and set; earth's rotation.)

How do I find Polaris, and why is it special? (The Dippers, Cassiopeia.)

How are sky distances measured? (Angles; the fist method; "guideposts".)

How do stars differ from one another? (Brightness and color; magnitudes.)

What are the stories of the "Spring" constellations? (If time allows.)

Contact Lew Gramer at dedalus@latrade.com or by telephone (see membership list).

Do You Want to Visit the Hayden Planetarium in NYC?...

DID YOU miss the club's first bus trip to visit **the Hayden Planetarium and Rose Center for Earth and Space and the American Museum of Natural History in NYC**, or do you want to visit them again? EILEEN MYERS and MARSHA BOWMAN are starting to plan the next trip. **If you are at all interested in going** contact them. Forty-seven people in total are needed to fill the bus. The date for the trip will be a Saturday: October 20, 27, November 10, or 17.

Email Eileen at starleen@ma.ultranet.com or call 978-456-3937 or email Marsha rmbc2114@email.msn.com

Club History...

REMINDER: The club history is available for proofreading, comments, etc. Contact club secretary Eileen Myers at starleen@ma.ultranet.com for a copy. It's just about time to do the final editing. Please send in your changes as soon as possible.

Astronomy Tour of the Southwest...

SIRIUS TRAVEL is a Colorado-based company specializing in astronomy related travel. Their website is www.siriustravel.com and the trip they are advertising is the "Astronomical Highlights Tour of the American Southwest". One of the highlights of the tour will be the night of August 11th: last quarter moon and the Perseids. They have rented the historic 60" at Mt. Wilson Observatory for a full night of observing with only this group on the eyepiece on the scope! They will also visit the 24" Clark Refractor at Lowell. Mt. Wilson is using a Clark or a Brashear as one of the optical elements in the 60-foot solar tower and they think that the group will be seeing the 100" aluminizing chamber at Mt. Wilson as well. Vicky Alten, the owner of Sirius Travel, Inc. writes, "My great-uncle was Alvin Clark and I am an astronomer so I come by this obsession honestly..." \$1950.00 USD / \$2450.00 USD - Single / Double Occupancy

For more information contact:

Victoria Alten - Owner, Sirius Travel Inc.

URL: www.siriustravel.com

email: alten@siriustravel.com

phone: (303) 544-9540

Lunar Drawing Class...

BECAUSE OF my experience in drawing lunar features, I have been approached about the possibility of running a class that would teach the fundamentals on how to draw craters and other features on the Moon. I like to see how many of you would be really interested in attending such a class. To give you an idea of how I would break out the "course", I would first hold a classroom session at the clubhouse on a normal Saturday night preferably starting before dark. Then if the weather will permit, have a "lab"

outside at the telescope to give some hands-on practice. So, if you think you would like to attend, please email Saturn5pc@aol.com or phone me (978) 433-9215 so I can get a head count. Once this is done, I can give you a date of when I will hold it. Thanks.

-Paul Cicchetti-

Boston Globe Article on Dark Sky...

THE FRIDAY, March 23rd *Boston Globe* finally ran the article on the Dark Sky bill. It appeared on the front page. The reporter was Beth Daley, and the article is titled "Longing For a Darker Night".

Ms. Daley's article did bring out that there is no opposition to the bill, that it saves energy, cuts pollution, and reduces unsafe glare. She also pointed out that the Massachusetts Medical Society supports the bill and that laws of this type are becoming mainstream through many parts of the country and a number of Mass. Communities.

The only negative I have is that she overstressed the importance of a dark sky to amateur astronomers and professionals. Although the beauty of the night sky is VERY important, some react to reading this as a fringe group. On a local radio station in fact the concept of turning out lights for "star lovers" was somewhat ridiculed. This brings up the importance to constantly stress the major themes of energy conservation, decrease in pollution, safety from glare as the selling points, and then add in the beauty of the night sky as a secondary point. All in all, however it was a good article, and comes at a good time, as the dark sky bill now is about to go in front of the science and technology committee. The current bill is House bill 3528.

On a sad note, the New Hampshire house voted down the NH dark sky bill, stating they want a "gradual phase in" (even though the bill asked for just that!). The NH DPW for some bizarre reason kept insisting the bill would cost money with no facts or understanding of the bill to back up these absurd claims. NH house stated there will be "public hearings" in the spring on the issue, and that they will send out guidelines for towns in NH to follow for full cutoffs as no one is against the principles of the bill. (Then why didn't they just pass it?)

Keep up the good fight, and thank you to Beth Daley for a great article on the front page no less! (Editor's note: An editorial in the *Boston Globe* on Monday, April 2nd completely supports Representative James Marzilli of Arlington and the "...passage of his sensible light pollution-reduction bill, filed every session since 1992, but never moving out of committee. This could – and should – be his year...")

-Mario Motta-

The Warranty...

It was about lunchtime when I got the call from my frantic wife.

"I killed it!" she said. "I washed it, it went into shock, and now it's dead."

"Moo wauff?" I stammered, trying to swallow a bite of roast beef sandwich.

"I killed it and now it won't start" she said.

"Ooouhm." She was talking about our 1996 Dodge van.

That evening a couple of turns on the ignition key confirmed that she had killed it. I'm not a backyard mechanic, but the rickety-

clack noises from under the hood sounded like the starter gear and flywheel had only a passing relationship.

We bought the van used, so we also purchased one of those extended warranties, 100,000 miles or five years, and our odometer now read 99,909. Finally, I was going to get something out of a warranty. A couple of minutes later we found the warranty in a drawer and also found that the five years were up 12 days ago.

This got me thinking about adding usable warranties to used telescope equipment. I don't know about you, but I'm tired of useless warranties that elapse just before I get a chance to use them. I'm not talking about a warranty on the equipment, but a promise to help or teach the new owner about the equipment.

When we sell a scope to someone new to astronomy or donate an old scope to a school, we are dumping it in the hands of someone who doesn't always know how to use it. They won't know its peculiarities or its benefits.

Suppose we add another piece of equipment to the package, something really useful. I propose not a 100,000-mile warranty, but the Million Photon Warranty. It ought to include clauses like this.

1. I warrant that this telescope equipment will perform substantially as you expect. However, this equipment is offered on an as-is basis and I will show you what doesn't quite work.
2. This warranty entitles you to a demonstration session explaining the set up and use of all the equipment, except for that extra thingamabob. It came with this telescope package originally, but I don't know where it fits. I saw one like it in a catalog once, but it belonged to another model. I include it with this telescope in the hope that you will figure it out and let me know.
3. You and I are in this together. Whether you are an old hand or newly interested in telescopes, I will attempt to answer your questions as best I can.
4. Telescopes are made for looking at the sky and learning the sky is best done through perseverance. I can help point out a few nice objects, show you a nice map and tell you about a couple of good reference books. Unfortunately, just like your mother told you, I can't learn it for you.

Spelling out the help the new user can expect from us will go a long way toward expanding the friendship we enjoy in amateur astronomy. If you would like to contribute to this growing list of promises, I'd love to hear from you at jmskala@iname.com

Oh, and the problem with the van? Well I told you I wasn't a mechanic and I'm a little embarrassed to admit that the van's original battery finally succumbed to five winter seasons. So, as it turns out, the warranty, even if it had still been in force, would have been useless, just like all the others I've had. **-Jerry Skala-**

Egyptian Astronomy...

KENT R. WEEKS, in his book *The Lost Tomb* (William Morrow, 1988, p. 72), which describes the excavation of the tomb KV 5 in the Valley of the Kings at Thebes, Egypt, includes a description of the tomb of Seti I, who ruled Egypt from 1291 to 1278 BC:

Beyond these final corridors lies a pillared hall, then a vaulted burial chamber. The vaulted ceiling in the burial chamber is spectacular. It offers one of the best

preserved and most complete astronomical ceilings ever found in an Egyptian tomb. Instead of simply showing the sky goddess, Nut, swallowing the sun at evening and giving birth to it each morning or, even more simply, showing a geometric pattern of five-pointed stars, the ceiling gives us a complex map of the northern hemisphere's night sky. Against a dark blue background, red stars are overlaid on figures that represent the constellations as the ancient Egyptians saw them. The figure of an ox represents Ursa Major; a man with arms outstretched is Cygnus; a crocodile crawling atop a hippopotamus is Boötes; a running man is Orion. Especially prominent are the "Imperishable Ones," the circumpolar stars that fascinated the Egyptians because their position in the heavens never changed. Aesthetically, the ceiling is a delight. It is also a scientific document and a statement of religious belief, an attempt to explain how the universe operates.

Kent R. Weeks, in his book *The Lost Tomb* (William Morrow, 1988, p. 198), which describes the excavation of the tomb KV 5 in the Valley of the Kings at Thebes, Egypt, tells of the events of the last week of the 1997 field season. One of the workmen discovered a piece of alabaster with writing on it which indicated it had been washed by flood waters from a different tomb. He then continues:

The other excitement of the week was a full moon, a partial lunar eclipse, and a spectacular view of the comet Hale-Bopp, which hung directly over the Qurn and the Valley of the Kings. It was a marvelous sight, and Ahmed [the foreman of his workers] decided that it was a good sign for our digging in KV 5.

The last time this comet was seen on Earth was 4,200 years ago, when Egypt's Sixth Dynasty ruler, Pepi I, sat on the throne. One of the Pyramid Texts carved on the walls of his burial chamber in his pyramid at Saqqara refers to a comet, very possibly the earliest reference to Hale-Bopp itself: "I see what the *nhh*-stars do, because so fair is their shape; it is well for me with them and it is well for them. I am a *nhh*-star, the companion of a *nhh*-star, I become a *nhh*-star, and I will not suffer for ever."

Virginia Lee Davis, a former classmate of mine at Yale, was the first to note that in the hieroglyphic original of this text, the word "*nhh*-star" was written with the drawing of a star followed by the hieroglyph for long hair—a delightful way, she believes, of representing a star with a wispy tail—that is, a comet. (The word "comet" derives from the Greek word for hair, a confirmation of this idea.)

-Bruce Gerhard-

For Sale...

SELLING MEADE ETX 90mm telescope, Maksutov-Cassegrain type, not including equatorial fork mount, on Bogen tripod with

camera head. Includes finder conversion, 2x 1¼ Barlow, and dew shield. Telescope may be seen at the April meeting.

-Stephanie Griffin-

Lost and Found...

A 5-FOOT long black scarf with fringes (Polar fleece type fabric) was left on a seat in the Phillip's Auditorium after March's meeting. Its owner can claim it at the April meeting.

-Eileen Myers-

ATTENTION

May *Star Fields* deadline is SUNDAY, April 25th
Email articles to *Star Fields* Editor / ATMoB Secretary
Eileen Myers at starleen@ma.ultranet.com

Articles from members are always welcome.

POSTMASTER NOTE: First Class Postage Mailed April 4, 2001

Amateur Telescope Makers of Boston, Inc.
c/o John Small, Membership Secretary
9 Bear Hill Terrace
Westford MA 01886-4225

FIRST CLASS

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How to Find Us...Web Page www.atmob.org

MEETINGS: Held the second Thursday of each month (September to July) at 8:00PM in the Phillips Auditorium, Harvard-Smithsonian Center for Astrophysics, 60 Garden St., Cambridge MA. For INCLEMENT WEATHER CANCELLATION listen to WBZ (1030 AM)

CLUBHOUSE: Latitude 42° 36.5' N Longitude 71° 29.8' W
The Tom Britton Clubhouse is open every Saturday from 7 p.m. to late evening. It is the white farmhouse on the grounds of MIT's Haystack Observatory in Westford, MA. Take Rt. 3 North from Rt. 128 or Rt. 495 to Exit 33 and proceed West on Rt. 40 for five miles. Turn right at the MIT Lincoln Lab, Haystack Observatory at the Groton town line. Proceed to the farmhouse on left side of the road. Clubhouse attendance varies with the weather. It is wise to call in advance: (978) 692-8708.

Heads Up For April..

Eastern Daylight (Savings) Time - Subtract 4 from UT to get EDT

Evening planets Jupiter mag -2, Saturn +0.2, Saturn's rings 24° - 25° from edge-on.

Morning planets Venus -4.0 to -4.5, Mars mag -0.2 to -1.0

Sun Apr 22 Lyrid meteor shower peaks before dawn

The sky is still just right to do your own Messier marathon.