



## 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. 13, No. 11    December 2002

## This Month's Meeting...

Thursday, December 12<sup>th</sup>, 2002 at 8:00 PM

Phillips Auditorium  
Harvard-Smithsonian Center for Astrophysics

THIS MONTH we are honored to have Prof. Alyssa Goodman of the Center for Astrophysics as our guest speaker. Dr. Goodman studies molecular clouds: gigantic assemblages of dust and gas hundreds of light years across that float in the cold dark spaces between the stars. Her talk will explain our current understanding of how the interstellar medium forms stars. Dr. Goodman received her BS in Physics from MIT, and her Masters and Doctorate in Physics from Harvard. Professor of Astronomy at Harvard University, Dr. Goodman is one of only a handful of women professors at Harvard.

We will also mark the approach of the holidays and the passing of another year with several poetry readings. Included will be Tal Mentall's annual rendition of "Twas the Night Before Christmas" and the Arctic tale "The Cremation of Sam McGee". Charlie McDonald will recite "Pale Blue Dot" written by Carl Sagan.

Please join our most excellent speaker for dinner at 5:45 PM at the Changsho Restaurant, located at 1712 Massachusetts Ave. in our fair city, Cambridge.

## President's Message...

THIS IS the season for being thankful, and one important thing that we as a club are thankful for is that MIT continues to lease to us the building in Westford that we have named the Tom Britton Clubhouse.

Back in 1974, after needing to leave the top floor of the Schwamb Mill in Arlington, the club's mirror making shop was moved to the basement of club member Bernie Forest. For various reasons this was not successful and the shop was closed and shop parts stored in members' garages and basements, leaving the club without a shop for several years.

A small group of members came upon a house belonging to MIT in Westford. Ed Knight inspected the building and decided it would indeed make a good clubhouse, as well as already being an astronomy site for MIT. So in 1977 Andy Tomer and then Paul Valleli offered proposals to MIT's Dr. Paul Sebring to rent the Millstone Hill Farmhouse, in exchange for the refurbishing and repairing of both its interior and exterior, including the chimney and heating systems. The proposals were accepted and the original five-year lease started on April 1, 1978, with the farmhouse obtained for use from MIT in September 1978.

The house had been the homestead of the Blodgett family from the 1900's to the 1940's. Originally it consisted of only two stories, but these were later raised and a third story built underneath. The land on top of Haystack Hill was a granite quarry, which gave the whole area the name "Graniteville", and presumably was an ideal foundation for construction of MIT's buildings. (Thank you Anna Hillier, Club Historian, for providing us with a written club history, from which the above details were extracted.)

Many of us have spent wonderful days and nights with friends at the clubhouse: observing, mirror making, learning, reading, socializing, eating, working and partying. On November 18-19 up to fifty Leonid meteor shower observers could be found awake or asleep in the club's Dennis Milon Observing Field. It's also a great site to view a Space Shuttle on an up-the-East-Coast launch (which we just did on November 23<sup>rd</sup>), about eight and a half minutes after launch. The interval from engine shut down, jettison of the external fuel tank, and the blinking of the Orbital Maneuvering System engine as it fires short bursts providing additional thrust to allow heavier payloads to be placed into orbit is easily visible from the clubhouse porch. Do try to make the time to visit and enjoy this special place and its warm, inviting, and educational atmosphere. -  
*Eileen Myers-*

## Executive Board Meeting...

THE NEXT Executive Board meeting will be held at the clubhouse at 7PM on Monday, January 13, 2003. Please forward to me any topics you would like the board to discuss. -  
*Eileen Myers,*  
*President-*

## November Meeting Minutes. . .

Eileen Myers opened the 753<sup>rd</sup> meeting of the Amateur Telescope Makers of Boston with a short excerpt from the club history highlighting the times immediately following WWII when the clubs shop activities resumed. At that time the membership count was at 180 people. A number of the members were going on to bigger projects joining local optical companies such as Lexington based Itek Corporation as professional opticians. A perfect symbiotic relationship between our amateur interests and the optical community.

The speaker for the night was our own Lew Gramer who talked to us about meteors in general and the November 2002 Leonid Meteor shower/storms that we would soon be watching. Meteors, Lew informed us, are nothing but small “dust bunnies” – leftover debris from comets, less dense than water, but traveling at anywhere from 25,000 to 160,000 miles per hour. At an altitude of about 30 miles they are vaporized when they slam into the earth's upper atmosphere causing what we see as a meteor. Meteor showers are due to the earth repeatedly passing through the orbit of a particular comet, in the case of the Leonids, comet 55P/Temple-Tuttle first discovered in 1865 but certainly around long before that. Meteor storms occur when the particles left over from a comet are still bunched up together in the orbital path. As we all know this year's storm is the last for sometime to come. Due to the influence of Jupiter's gravity, the next two passes of the comet in 2029 and 2066 will not bring about a storm. The next viable opportunity for a storm therefore will be in 2098 – A very long time for most of us. So he urged us to get out there and watch, record and just enjoy the show. Lew gave tips on when and how to watch both for pleasure and for making scientific measurements. He treated us to a wonderful set of time lapse videos of last years storm that were certainly an inspiration to go out and have a look even though all the conditions this year are not optimal.

The meeting concluded with the business section. Reports were read by the committee members. Eileen sadly informed us of the passing of long time member Ed Wallner and also that of Phil Morrisons wife. Phil was a speaker for us in the past. Charlie McDonald informed us that Astronomy Magazine is working collaboratively with groups such as ours when we host star parties. They have offered to send information to people who are giving the star parties and possibly some material to be handed out as well. Charlie also expressed a desire to give up his post as Star Party Coordinator. Eileen asked that someone please step up to take over this position. Bruce sold a lot of T-shirts tonight and indicated that he would be ordering more and is also looking into other items such as collared shirts and caps. Bruce also told us a bit about the Wallace Observatory tour. Eileen told us about the trip to New York and the October IDA meeting at the Museum of Science. Eileen also informed us of a decision by the Museum of Science to change the policy in hosting Astronomy Day

next year. We will be assembling down near the Omni Theatre this time around so should be more visible to museum goers. Mario Motta sold out the Astronomy calendars that contain four of Matt BenDaniels photos. Way to go Matt. He also gave us an update on the dark sky bill. He still has his fingers crossed. The meeting concluded with a show of hands that would like to continue the Christmas tradition of the reading of holiday poems. All were in favor. –*Michael Hill, Secretary*-

## Treasurer's Report...

For the month of October, we had \$592.83 in revenue and \$1,776.01 in expenses for a net loss of \$1,183.18 for the month.

As of October 31st, 2002 our assets were:

Checking Account - Regular \$ 15,976.64  
Investments \$ 26,704.36  
Total Current Assets \$ 42,681.00

Of this \$42,681.00, \$2,804.31 is in the Land Fund and \$155.00 is for clubhouse key deposits. –*Bernie Volz, Treasurer*-

## Membership Report...

To be presented at meeting

–*Peter Psyhos, Membership Secretary* -

## Clubhouse Report

To be presented at the meeting . . .

### Clubhouse Saturday Schedule

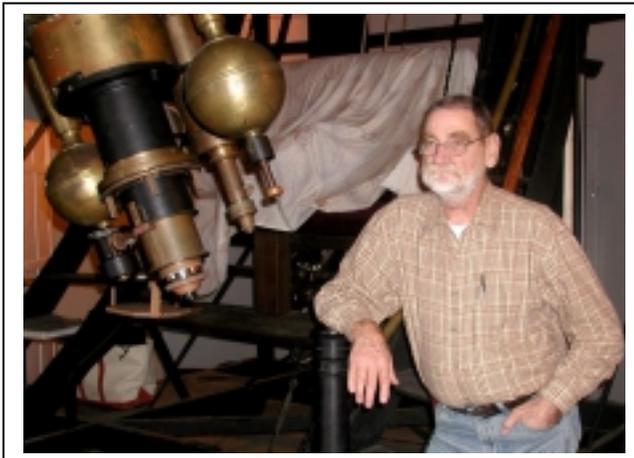
Dec 14	Steve Clougherty	Tom Wolf
Dec 21	Steve Mock	Gary Walker
Dec 28	Bruce Berger	Bruce Gerhard
Jan 4		

## Ed Wallner...

IT IS with great sorry that we announce the passing of long-time club member Edward P. Wallner, Jr. on November 1, 2002. Ed was a member of the ATMob since 1973. He was also a member of the Bond Astronomical Club. Ed was a resident of Wayland for forty-two years.

Ed was born in Louisville, KY. He received a Bachelor of Science in Engineering from the University of Louisville and a Master's in Engineering from Rensselaer Polytechnic Institute of Troy, NY. Ed served with the U.S. Navy as an apprentice seaman and was a World War II veteran. He was an electrical engineer for more than forty years and was associated with RCA in Burlington and ITEK in Lexington before retiring. He was an active member with the Friends of the Wayland Library and the Democratic Party of Wayland. He served the town of Wayland on the Lighting and Bicycle Committee and was involved in the community affairs of the town. Ed enjoyed studying about the tides and wrote the tide prediction software "TIDES". He had an avid interest in astronomy and visited many schools with his telescopes, sharing his interest with school children. He attended several Bond Club lectures accompanied by his own children when they were young. Ed enjoyed traveling throughout the country and the world to view eclipses. Ed was an active member of the Amateur Telescope Makers of Boston. He was a member of the group that refurbished the Great 15" Refractor of the Harvard College Observatory. Ed also helped teach the club's Celestial Mechanics class.

Ed's wife, Joy L. Wallner, has generously donated Ed's library of astronomy books to the club. -*Eileen Myers*-



Ed Wallner and the 15" Great Refractor

## Star Parties Held

Two star parties were held in Lowell, MA during November

11/7 – Bailey Elementary School  
250 attendees

11/20 – Riley Elementary School  
75 attendees

Star party organizer and lecturer for both events was soon-to-be member PAUL MANNING. Many thanks to BOB COHEN for "viewing the heavens" to the students at Bailey. CHARLIE MCDONALD brought his telescope to both events.

Note: ATMob furnished both schools with information for obtaining US Postal Service (USPS) "Publication 39" - a **FREE** 48 page space and astronomy coloring book, suitable for elementary schools. All four Reading elementary schools have been supplied with these books, for the past two years, via the USPS and the ATMob.

This little known resource is available to all that ask as part of the USPS educational outreach efforts. If you want more information about obtaining this publication for your star party contact your local post office. Or call Charlie McDonald at (781) 944 - 6140

## Wanted: Star Party Coordinator

Due to personal demands, CHARLIE MCDONALD has decided to give up his post as Star Party Coordinator. We would like to get someone to fill this position. It does not have to be a high maintenance position. You can make it what you want. We want someone to just coordinate some of the star parties we would like to provide to the public and in SOME cases, not all, act as the initial point of contact between the organization and the club member organizing the star party. If you are motivated and want to initiate star parties and get the other club members motivated to participate in these events then that would be even better. Here is an opportunity to get involved if you like promoting the beautiful nighttime (or daytime) sky.

If you think you would like to take this on then contact Charlie at (781) 944-6140, or else you could email me at the address [noatak@aol.com](mailto:noatak@aol.com). If you're thinking of it, then c'mon - just do it!! We need YOU.

## Schupmann Mount Refurbishment

Bruce and I have been working hard on getting the equatorial mount for the Schupmann Telescope refurbished. We have been at it since the beginning of October and are coming along quite well. A week ago we put the mount back together since it was first pulled apart. That, to put it mildly, was a really tough job. The mount had been sitting on the barn floor for years, after who knows what kind of treatment before that. It was really in rough shape. It took hammer and crowbars and blow torches and arbor presses to finally get all the bearings to come off the 2" steel shafts. Once apart Bruce went to work with a VERY POWERFULL rotary wire brush, removing all of the old crusty paint.



**Bruce Wire Brushing Off the Old Paint**

In the meantime I cleaned up the bearings and two drive assemblies which were coated with old dirt encrusted grease. We went through a lot of cleaner and stripper, let me tell you. But once done the parts looked pretty good.



**All the parts to the R.A. Drive before Re-Assembly**

We primed and painted all the parts to the mount. The color scheme decided on was similar to the cream colored Astro-Physics mounts. We let it all dry for a week and we were ready for re-assembly. We got together on Saturday and after Bruce installed some sorely needed fluorescent

lights in the barn we went to work. Using the best of our memory we started to put the parts back where they came from. It took a little work to make all the parts fit. After some touch ups to the shafts, especially at the ends, which were slightly burred due to the rather rough treatment required to disassemble them, we finally got all four bearings to slide smoothly on to the shafts and a new mount was in the making. After some lining up and installation of all the hardware we were done. A telescope mount was reborn.



**It's Starting to Look like a Usable Telescope Mount**

Of course we're not done yet. We still need to install the pier for it in the observatory and get the drives running with a new control box and finally we need to build an interface to attach the telescope to the mount. We're getting there however. We hope to have a telescope in the observatory by spring. Thanks to John Blomquist, Dave Prowten, and Dave Schuh for helping us get this thing apart.

**-Michael Hill -**

## New Year's Eve Party...

WHAT ARE you doing New Year's eve? We hope to see you at the Tom Britton Clubhouse at our annual New Year's Eve Star Party! Bring a tasty dish to share, dress warmly, and join us anytime from 7PM to midnight as we celebrate the Start of the Year 2003 every hour on the hour as it moves through the time zones until it reaches New England. Bring family and friends. There will be games and prizes too! **-Eileen Myers-**

## Wallace Observatory Tour

Last month we were treated to a wonderful tour of a nearby neighbor, - The Wallace Astrophysical Observatory in Westford. Many thanks to Bruce Berger for arranging this. Attendees, of which there were at least 40, gathered at the clubhouse an hour early for some pizza and socializing. We headed up to the observatory after that and were treated to a very interesting time. The observatory has two domed telescopes, a 24" and a 16" cassegrain reflector. We didn't get to see the 16" scope since it is currently under repair but we did get up close and personal with the very massive 24" instrument. Outside is a very, very long roll off roof observatory that houses three Celestron 14" and one Celestron 8" Schmidt Cassegrain all equipped with CCD cameras and a dedicated "Mac" Computer.

The Celestrons under the roll off roof are for students from MIT to learn to observe and use the CCD Equipment as well as to do required research for the courses that they are taking. The 24" scope is used for more serious research including work with variable stars, asteroids, and planetary occultations. This latter work was highlighted by a short presentation given to us by Jim Elliot, the director of the observatory. Jim, along with some students from MIT, had done leading edge research that led to the occultation prediction of a star by the planet Pluto in July of 1998. Further measurements and calculations were used to predict the exact and narrow path of Pluto's shadow across the earth. This allowed astronomers to go and observe the event which is quite important since it allows an indirect means of measuring the structure of Pluto's atmosphere as the star fades away behind it and then the planet. The results from this expedition coupled with results from another one done in 1988 has led to distinct conclusions about the cooling of the atmosphere and even theories about changes in the atmospheric pressure. Jims talk was very interesting and it was fun to see the equipment used to do this work..



Members Gather for the Tour of Wallace Observatory

## Opportunity to Teach Astronomy

PAULA GRASSMANN from the Brookline Public School System is looking for a volunteer to teach a basic introductory astronomy course, and through Tal Mentall has passed this invitation on to our members.

### Possible Course Offering

Hello. I am wondering if anyone in your club would be interested in teaching a very basic introduction to astronomy course.

Our spring term runs from March 24-May 23, 2003, with Passover on the 16<sup>th</sup> and 17 of April, and school vacation week during the week of April 20.

Brookline, as you may know, is a community that values lifelong learning. This program is the largest public program in the state, with close to 2,000 courses and over 20,000 enrollments yearly. It is a self-supporting program of the public schools, and our budget is funded entirely from course fees. Our mission is to provide service to the community and enlist its support for public education. We're dedicated to offering lifelong educational opportunity to all: newcomers to the US, working people and professionals, those in need of transition or career change, older citizens, persons with special needs, and especially those who have not been able to participate fully in the educational process.

We would love to include this course in our program. Is this something you might be interested in?

Paula R. Gassmann, Assistant Director  
Brookline Adult & Community Education Program  
P.O. Box 150  
Brookline, MA 02446  
617-730-2700 x110  
Fax: 617-730-2674

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**January *Star Fields* deadline  
is Early !!  
Sunday, December 22<sup>nd</sup>**

**Email articles to Mike Hill  
at [noatak@aol.com](mailto:noatak@aol.com)**

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**POSTMASTER NOTE:** First Class Postage Mailed December 6, 2002

Amateur Telescope Makers of Boston, Inc.  
c/o Peter Psyhos, Membership Secretary  
85 Swanton st  
Winchester, MA 01890-2039

## FIRST CLASS

### EXECUTIVE BOARD 2002-2003

PRESIDENT:	Eileen Myers	(978) 456-3937
VICE PRES:	Bruce Berger	(978) 256-9208
SECRETARY:	Michael Hill	(508) 485-0230
MEMBERSHIP:	Peter Psyhos	(781) 721-9609
TREASURER:	Bernie Volz	(508) 881-3614
MEMBERS AT LARGE:		
	Lew Gramer	(781) 396-7822
	Dan Feldkhun	(617) 721-4992
PAST PRESIDENTS:		
2001-02	Bob Collara	(781) 275 9482
1998-00	Joseph Rothchild	(617) 964-6626
1996-98	Peter Bealo	(603) 382-7039

### COMMITTEES

CLUBHOUSE :	Paul Cicchetti	(978) 433-9215
	John Reed	(781) 861-8031
	Steve Clougherty	(781) 784-3024
HISTORIAN:	Anna Hillier	(781) 861-8338
OBSERVING:	Charlie McDonald	(781) 944-6140

## How to Find Us...

### Web Page [www.atmob.org](http://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 Month...

*To calculate Eastern Standard Time (EST) from Universal Time (UT) subtract 5 from UT.*

December 11 First quarter moon  
December 14 Geminids peak this morning  
December 16 Saturn at opposition  
December 19 Full Moon  
Shadow of Europa falls directly on Io (11:50 pm EST)  
December 21 Winter Solstice 8:14 pm EST  
December 26 Last quarter moon  
January 2 New moon