



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. 14, No. 2 February 2003

This Month's Meeting...

Thursday, February 13th, 2003 at 8:00 PM

Phillips Auditorium
Harvard-Smithsonian Center for Astrophysics

This month's meeting will be a Show and Tell and Flea Market. This is a chance to give a short talk and show what you have been working on the past year. Share your excitement and ignite it in others. Please email (starleen@charter.net) or phone (978-456-3937) me with your topic. Also, bring items to sell.

Please join us at 5:45 PM for dinner at the Changsho Restaurant located at 1712 Mass Ave. in our fair city, Cambridge. *-Eileen Myers, President-*

President's Message...

It is with deep sorrow that we once again bear witness to a tragic loss of an American Space Shuttle with yet another prominent emissary to the world of space. It is a great loss and such a sad end to what was an historic and most successful mission. Just the other night I witnessed the shuttle cross over head up at the club house after our last executive board meeting. It was 6:36PM when we spotted the space shuttle Columbia (STS-107) at mag -0.6, following it until it all too quickly disappeared into the Earth's shadow before even reaching the zenith. The shuttle was on a 16-day mission dedicated to scientific research and our observing field was, as always, a fantastic spot to set up to see it when it is crossed our horizon during the early evening. My thoughts are with the families and friends of the wonderful and courageous astronauts that we have lost.

In addition to watching the shuttle crossing we did spend some time outside observing some other celestial wonders, despite the frigid 6-degree temperature. Steve Clougherty and Lew Gramer had pulled out the 17" Dob and spent over an hour locating planetary nebulae for the rest of us. Success and enthusiasm was high. When I left the two were still at it, and the temperature was down to zero.

Thinking of our short but successful observing session, as we observed together, my thoughts were on one of the topics we had been discussing at the board meeting – the creation of a buddy system in which a current member greets and offers to bring a new member to one of our dinners, to the clubhouse, or just out observing at their favorite spot. This is something that the executive board would like to implement and I hope you will see this as an opportunity to lend a helping hand. I will talk about it more at the next meeting but for now see the notice on page five for more information. *-Eileen Myers-*

Star Parties

Teachers are asking for our assistance to run star parties in order to supplement their school science programs. I ask that you please help out when you can if a star party is to be held near your area. It is easy to do. Students, parents, siblings, and a few teachers line up for a quick peek through our telescopes. Share a small bit of information and enthusiasm with them and they are thrilled to have had the opportunity to look through a real telescope. During the course of most evenings each telescope is only pointed to one or two bright objects. You can even help out without using a telescope by just pointing out a few constellations, or offering binocular views of an open cluster. These star parties usually last about 2 hours. A list of upcoming star parties can be found on page 5 of the newsletter. For exact details on each event contact the individual star party coordinator, or Charlie McDonald, our club's Star Party Coordinator.

Thank you in advance for your help. It is a wonderful experience for everyone. *-Charlie McDonald, Star Party Coordinator, and Eileen Myers-*

January Meeting Minutes. . .

Our President, Eileen Myers, called the 755th meeting of the ATM of Boston and Bond Astronomical Club to order. Eileen thanked members for the condolences offered on the passing on of her mother.

Eileen continued the tradition of reading some of our club's history. This evening's section recounted the involvement of ATMoB with project Moonwatch in the 1950's.

Our speaker this month was Dr. Brian Marsden, a member of the CfA, and director emeritus of IAU. Dr. Marsden presented an informative and entertaining discussion of Trans-Neptunian Objects. He first discussed a history of observations for objects beyond Neptune, and how various objects (Ceres, Chiron) had been identified as the nth planet orbiting our sun. Central to the effort was the work of Leonard in the 20's and Fred Whipple in the 60's.

Dr. Marsden went on to describe the discovery of 1992 QB1, the first Trans-Neptunian object. The remainder of his talk described the characteristics and taxonomy of the various objects being discovered in that region of our solar system, and beyond. There are currently 700 Trans-Neptunian objects, of which about 300 have good orbit data. Dr. Marsden talked about their orbits, and particularly the relationship (resonance) of those orbits with the orbit of Neptune. This relationship affected their distance from the sun, and their position relative to Neptune, which Dr. Marsden demonstrated with many slides illustrating orbits and positions. With the imaging of 1998 ww31, another interesting phenomenon of double trans-neptunian objects was confirmed. Of the 300 objects whose orbits are mapped, 7 are known to be double. This was a much higher percentage than expected. Another recent discovery in this area was the recovery of the first known Neptune Trojan. A Trojan is an object in the same orbit as a planet, but 60 degrees away, at the Lagrange point. 2001 QR322, the Neptune Trojan, was announced the day before our meeting. Dr. Marsden concluded answering questions from our group.

We went on the business portion of our meeting. Highlights: Eileen quizzing us on the minutes from the last meeting. Bernie Volz reporting on our funds. Peter Psyhos acknowledging one new member. In addition, Peter's mailing address has changed, and he reminded folks to use the new one for membership updates.

John Reed and Paul Cicchetti described the progress being made on the Observatory, and an upcoming work party on Jan 18th. Notice was given that the Baxter State Park trip for end of August has been cancelled for lack of folks signing up. Steve Mock and Nitin Sonawane have reserved space at the end of July at Baxter. Contact them for more information. Charlie gave us some more information about Project Astro, a program teaming amateur astronomers with elementary and middle school science teachers. See Charlie for more information. Joseph Rothchild spoke about light shields, and has a catalog available if folks are interested in purchasing them. Visitor Hom Phong spoke briefly about his company in Reading,

RITI, which produces a software moon mapping program. Their web site is www.riti.com. Eileen announced the next meeting most likely would be a show and tell if there were enough participants. The meeting ended at 9:50 for snacks and socializing.

-Dave Siegrist-, stand-in Secretary for Mike Hill, who was on vacation. (Great job Dave, and thanks)-

Treasurer's Report...

For the month of December, we had \$312.35 in revenue and \$245.83 in expenses for a net gain of \$66.52 for the month.. As of December 31th, 2002 our assets were:

Checking Account - Regular \$ 17,894.08
Investments \$ 26,704.36
Total Current Assets \$ 44,598.44

Of this \$44,598.44, \$2,804.31 is in the Land Fund and \$155.00 is for clubhouse key deposits. As our CD renewal occurs in January, \$3,000.00 additional will be transferred to the CD. We do need to keep a minimum in the checking to avoid fees and earn interest.

-Bernie Volz, Treasurer-

Membership Report...

This month we welcome the following new members: THOMAS CONSI of Cambridge, MA, HOWARD BENJAMIN of Lexington, MA, JEFFREY LICHT of Cambridge, MA, and MARY BECKER of Belmont, MA. *-Peter Psyhos, Membership Secretary -*

Clubhouse Report

2003 came in with a vengeance! Snow clearing before the NewYearsEveParty was continued on Jan 4, 5,& 11. Only a dusting of snow remains on the driveway, parking area, and observing area cleared of deep snow. The 3 Thursday evening grinding nites saw 36 members in action; thanks to Ed Los & Bob Collara for leading. In addition to the 3 snowplow sessions, the scheduled Jan 18 work party cleaned the observatory interior of forms used for the concrete pours, sub-flooring repaired, and finish flooring installed. John Blomquist is assisting Dave Prowten, Mike Hill, & Bruce Berger with machine work on the Schupman mount. Also, the long awaited electrical upgrade in the electronic room was completed for Dan Feldkhun's CCD class. Thanks to D. Prowten, B. Gerhard, A. Swedlow, J. Panaswich, G. Walker, S. Clougherty, R. Koolish, WE Knight, D. Siegrist, P. Cicchetti, J. Reed.

See page 5 for clubhouse schedule . . .

ATMoB & ATS “Re”-Discovers & Restores MIT’s 5” Alvan Clark

Back in October, Bruce Berger was rummaging through the ‘basement’ of the 24” dome at MIT’s Wallace Astrophysical Observatory (WAO), located not far from the ATMoB clubhouse. He came upon a long gray wooden crate with a well worn black stencil proclaiming that this was an ‘equatorial telescope’. Peering inside the crate from the barely lit room just ten feet under the five thousand pound, twenty-four inch Cassegrain, Bruce discovered a treasure that has brought ATMoB and MIT closer together.

With permission from Dr James Elliot, the WAO director perhaps best known for his co-discovery of the rings circling Uranus in 1977, and help from Chelsea Logan, WAO Observatory Specialist, the crate was dragged out into the open on November 7th, and once again mated to the brass equatorial mount sitting on top of tall wooden legs beside the dome where it had rested for at least 26 years. There, etched into the dull brass endplate in floral script were the words, “Alvan Clark & Sons. – Cambridgeport, Mass.

Bruce later reported that the objective looked as if it had been splattered with black paint, and he immediately returned it to its storage crate, realizing that working on a scope like this was way over his head. He then contacted Dr. Elliot and received permission to call in a specialist to do a preliminary assessment. Some research on the internet brought Bruce to the website for the Antique Telescope Society where he found a name he recognized – ATMoB member Ken Launie. Photos were emailed to Ken, and later to Paul Valleli, and a work session was set up on November 21st.

Ken and Paul arrived with tools in hand. Paul immediately took to disassembling the objective cell. As expected, witness marks were found on the edges of the lens elements. Paul very carefully applied a strippable lacquer to the glass surface and proceeded to peel off years of dirt and grime. A water rinse and an acetone final wipe revealed lens surfaces that were in much better shape than one would have guessed before the cleaning.

Ken took to examining and measuring the tube, focuser, the Herschel wedges and even the case for clues about the history of this instrument that records indicate was sold to MIT in 1897. Ken was assisted by Dr. Elliott and graduate student Susan Kern as they removed the more modern tube rings and vacuumed the interior of the barrel and Bruce and Chelsey took numerous photographs. Two rodent carcasses and nesting materials were removed in the process!

The team assembled once again on December 30th for the final cleanup of the brass tube and the mount. Club member Dick Koolish and Ken arrived mid-afternoon and started on the brass mount. The entire assembly was dismantled, cleaned, lubricated and re-assembled before Paul and

Bruce arrived to tackle wire-brushing years of stain and wear from the three wooden legs. The cleaning was followed by a heavy coat of boiled linseed oil, and the legs were left to dry over the holiday.

While Paul and Bruce kept busy, Ken and Dick applied a coat of special wax to the outside of the tube and mount, installed the original finder brackets and covered extra holes in the tube with brass plugs that Bruce custom made the week before.

‘First Light’ occurred more than 100 years ago, so for us, the term ‘Second Light’ seemed more appropriate. January 11th was chosen to coincide with an open house for about 60 MIT students and alumni hosted by WAO. The team arrived early to set up the f/15 refractor in the chilling cold. Ken fitted a modern eyepiece adapter to the focuser, and for the first time in at least a quarter-century, Saturn’s rings formed a crisp image in the viewers eye.

The group, joined by Melissa Bennett and Ken’s sons Ian and Neil, celebrated with a champagne toast before the 60 or so students and alumni arrived for the tour. The original finder scope and eyepieces have not been found after a search at WAO and the main campus. The Clark Corporation was known to use finders made in France for a while, so it is hard to recognize them once separated from the main scope. If anyone knows of a finder or eyepiece that may be available, please contact Bruce, Ken, or Paul.



Cummings School Star Party

Lou Cohen, a Project Astro volunteer, has been partnered with Marcia Murphy, the 5th grade teacher at the Cummings School, in Somerville, MA, since September 1998.

He volunteers there for 2 hours per week, introducing astronomy topics to Marcia's 5th grade class, and also leading an "Intense Math" group.

Several other ATMoB members have also had Project Astro partners at the Cummings School, including John Hopkins, Kathy Cunningham, Anil Dosaj (also of CFA), and Irene Porro (also of CFA).

As a result, the entire student body of the school has been immersed in astronomy. Almost all children in all grades know the basic facts about the Sun, the Moon and Solar System, and a lot more.



Thanks to the members who attended

Standing, left to right:

Karen Funkenstein
John Reed
Dick Koolish
Howard LeVaux
Michael Carnes
Lou Cohen (the one with rabbit ears)
John Hopkins
George Wood
Peter Psychos

Kneeling:

Tom Calderwood
Kathy Cunningham

This year we had our 5th annual star party at the Cummings School. Parents, students and teachers attended, perhaps 150-200 people in all, with sizeable lines at all 11 scopes. Many parents do not speak English fluently, so their children act as translators and teachers. The parents often have questions about the objects they see in the

telescopes. These questions are translated and relayed to the astronomers by the students. The students are given the answers and are then required to explain them to the parents.

The Cummings School has been a very rewarding place for many ATMoBers, and the Cummings School staff has been very receptive and grateful for our involvement, so it has been a win-win relationship.



John Reed Pointing out M42 to the Kids

Star Party Thank You...

After three postponements, and in frigid weather, the Killam Elementary School in Reading held an extremely successful star party on Tuesday, January 14th. There were almost 400 attendees. I would like to thank the ten club members who cheerfully brought their telescopes to the event: Ted Carlman, Jack Drobot, Steven Feinstein, Ed Los, Charlie McDonald, Howard LeVaux, Eileen Myers, John Reed, Jerry Skala, and Peter Wolf. Several parents brought telescopes or binoculars as well. I also want to thank Marsha Bowman and Karen Funkenstein who were kind enough to staff an information table on the inside, which was very well received. *Astronomy* magazine gave a one-year free subscription to the school, as will the winner of the ballot box entries. The lecturer was the perennial ATMoB wanna-be Galileo Galilei (new club member Paul Manning), who lectured in costume and stayed in character all evening. The school provided hot food and hot drinks, bringing them outside to the folks with telescopes on a regular basis. The next day the science teachers reported that the students could not stop talking about the event and all that they saw through the telescopes. Although the school wanted to make a donation to the club, they agreed that books on astronomy would be purchased with the money instead. Everyone, students and astronomers alike, went home excited, well fed, and happy! **-Charlie McDonald-**

Clubhouse Saturday Schedule

February 8	Rescheduled Messier Marathon !!!	
February 15	Joseph Rothchild	Gary Walker
February 22	John Panaswich	Peter Psyhos
March 1	Bruce Gerhard	Dave Siegrist
March 8	Steve Clougherty	Phil Rounseville

Upcoming Star Parties:

February

Wednesday, February 5 (cloud dates Thurs, Feb 6; Mon, Feb 10) – Barrows School, Reading - Expected attendance 150 – Coordinator Charlie McDonald 781-944-6140

Wednesday, February 5 (cloud date Thurs, Feb 6 – Joshua Eaton Elementary School, Reading – Expected attendance 400+ – Coordinators Charlie McDonald 781-944-6140, Ted Carlman 781-942-1573

Friday, Saturday, and Sunday, February 7,8,9 - Winterfest, Chelmsford Town Common – Expected attendance 200+ each event- Coordinators Mario Motta mmotta@massmed.org, Kelly Beatty

Monday, February 10 (cloud date Tues, Feb 11) – Douglas Elementary School, Acton – Expected attendance 500 (4th grade classes with parents) – Coordinator Steven Feinstein sjf@feinstein.net 978-263-7045

Monday, February 10 (cloud date Wed, Feb 12) Butler Middle School, Lowell - Expected attendance 150-400 - Coordinator Bill Toomey bill@toomey.net 978-682-9999

March

Wednesday, March 5 (cloud dates Thurs, Mar 6; Fri, Mar 7) - St. Michael's Middle School, Andover – Coordinator Bill Toomey bill@toomey.net 978-682-9999

Monday, March 10 (cloud dates Tues, Mar 11, Wed, Mar 12) - Birch Meadow Elementary School, Reading – Expected attendance 400+ - Coordinator Charlie McDonald 718-944-6142

Monday, March 10 – Morey Elementary School, Lowell – Expected attendance 400+ – Coordinator Jack Drobot 978-692-8093

Tuesday, March 11 (cloud date Wed, Mar 12) – Douglas Elementary School – Expected attendance 500 - more 4th graders with parents – Coordinator Stephen Feinstein sjf@feinstein.net 978-263-7045

Saturday, March 22 – Unitarian Church, Reading – for Boy Scouts – Expected attendance 30 – Coordinator Charlie McDonald (also Charlie's birthday!) 781-944-6140

AMToB New Member Assistance

We have decided to try to organize a member assistance program whereby present members will get in contact with a new member to familiarize them with the club, and maybe some other fellow members. If you would like to become an “Astro-Buddy” to a new member, sign up at the next meeting or contact one of the members of the board. Once on the list, you will be notified of a new member if he/she is in your area. You would then introduce yourself in whatever way you wish, from a simple phone call to see if they have any questions about the club or the meetings, to bringing them up the clubhouse for their first visit. If you're interested then let us know.

Request for a Snow Blower Donation

The club snow blower needs replacing. This years heavy snow has just about drained the life out of our current one. If the snow has caused you to decide to move south and you'd like to donate your snow blower please let us know. We are looking for something pretty strong, in the 10-12 HP range, and less than 5 years old. If you have a snow blower that you would like to donate please contact John Reed or Paul Cicchetti.

Clubhouse Donations

If you have some good stuff that you think we could use up at the clubhouse, be it a tool, table, or just old left over wood or metal you want to get rid of please don't just come up and leave it at the club house. You must contact John or Paul first.

Board Meeting Minutes

An executive board meeting was held on January 27th. The following topics were discussed:

- Organizing a new member buddy system
- New membership welcome packet
- New snow blower
- Star parties – coordination and limits
- Signing up for a better internet provider at the clubhouse
- Fixing up the 17” telescope

**March Star Fields deadline
Sunday, March 2nd**

**Email articles to Mike Hill
at noatak@aol.com**

POSTMASTER NOTE: First Class Postage Mailed February 7, 2003

Amateur Telescope Makers of Boston, Inc.
c/o Peter Psyhos, Membership Secretary
41 Fair Oaks Dr
Lexington, MA 02421

FIRST CLASS

EXECUTIVE BOARD 2002-2003

PRESIDENT: Eileen Myers (978) 456-3937
em@wellesley.net (978) 461-1466 (w)

VICE PRES: Bruce Berger (978) 256-9208
SECRETARY: Michael Hill (508) 485-0230
MEMBERSHIP: Peter Psyhos (781) 861-1108

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

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.

February 9 First quarter moon
February 10 Interesting occultation and eclipse event of Jupiters moons
February 15 Pretty conjunction of Moon and Jupiter just after sunset
February 16 Full moon (work party on the 15th at the clubhouse)
At 4:00 am EST ξ^2 Sagittarii (Mag 3.5) lies 9' south of Venus
February 21 Neptune is only 1½° north of Mercury
February 23 Last Quarter Moon