



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. 19, No. 8 September 2007

This Month's Meeting...

Thursday, Sept 13th, 2007 at 8:00 PM

Phillips Auditorium

Harvard-Smithsonian Center for Astrophysics

Parking at CfA is allowed for duration of meeting

This month's speaker will be astrophotographer and ATMoB member, Neil Fleming. Neil, a relatively new member to the club, has been involved in astronomy and astrophotography for many years. He enjoys sharing his passion for the hobby. So, if you are looking for some new imaging/ processing tips and tricks, new astro tools, or just interested in seeing some amazing images come join us.

You can visit Neil's web site at:

www.flemingastrophotography.com.

As always, join us for a pre-meeting dinner at 5:45PM at Chang Sho Restaurant located at 1712 Massachusetts Avenue in our fair city, Cambridge, MA.

~ Virginia Renahan ~

President's Message...

Hopefully, everyone had a great summer! Where did the time go?! The change of seasons never ceases to amaze me. Already the trees are starting to show a bit of color. Orion is back on early morning walks with the dog, and the Pleiades shine so brightly at midnight! It's time to take advantage of the changing skies above us. Instead of setting your telescope in the backyard for an evening of observing, try setting it up in the FRONT yard, and inviting neighbors, passers-by, dog-walkers, or new families in the area, to stop and take a look through your scope. Take this opportunity to tell your visitors about light pollution in your area and ask them to help keep our

night skies dark by turning off their outside lights or by shortening the times remote sensing lights are on. A recent early evening observing session drew in a few neighbors who had never looked through a telescope before. We looked at the summer triangle, the Ring, Jupiter and its moons, and Alberio to name a few. My neighbors were thrilled by the views. It was great fun.

Many of us were lucky enough recently to see at least two passes of the combined Shuttle/ISS. Find a few people on the street next time the ISS passes overhead and make them stop and watch it go by. With all the summer tourists here in Gloucester, it's a perfect opportunity for a bit of "guerilla astronomy" – sometimes those few bits of information, like the speed of the shuttle orbiting the earth, or the reason why it slowly fades then "winks" out are enough to keep them looking and asking questions, and maybe you'll have helped plant an interest in space, astronomy in general, and maybe even broaden their perspective on our planet Earth.

This fall the club will see a new Observing Committee. This past spring the Telescope Advisory Committee (TAC) comprised of 5 senior club members: Mario Motta, Phil Rounsville, Gerry Sussman, Paul Valleli and Gary Walker, recommended among other things that the Executive Board re-establish the club's Observing Committee (OC). The Executive Board in a series of meetings formalized the OC's goals and outlined new committee responsibilities. Minutes of those meetings are available to members on the club web site. The OC's official mandate now includes the maintenance, use and disposition of all the loaner telescopes owned by the club. Its goals and objectives include member development for beginners and veteran observers alike through workshops and other training events.

The Observing Committee appointments include Mike Mattei, John Maher and Steve Beckwith. Mike, an optical fabrication expert from MIT's Lincoln Labs, is a veteran member of the club, an active member of the AAVSO and well-known member of ALPO (Association of Lunar and Planetary Observers). He has built several telescopes including a 10" Schupmann and he is currently restoring the club's Schupmann. His current projects with the AAVSO include searching for supernovae. He is also known for his detailed sketches of Mars and we hope to have him lead a seminar at the clubhouse this fall on sketching as an important aspect of observing. John Maher, a newer member, brings great insight into the needs and perspectives of newer, less-seasoned amateur observers. He's already trained several groups on the operation and use of the C-14. John prefers to work with small groups of members to maximize hands-on time for each participant, so don't worry if you haven't had a chance to participate yet in one of his training sessions. There will be others. He'll be working with the clubhouse committee on the use and operation of the C-14. The third member of the OC is our Vice President, Steve Beckwith, a seasoned observer and long-time ATMoB member who's been interested in astronomy since he was 9 years old. Steve has built his own observatory, is also a member of the AAVSO and ALPO, and is accomplished in CCD imaging. Our hope is that in the coming months, this committee will help cultivate newer members' interests in observing, and extend the skills of veteran members through workshops, other training and the loan of telescopes.

The clubhouse also has a new chimney as of this month, which means the work of painting and organizing the library can proceed without fear of water infiltration. The repair work was completed in a timely and professional manner by mason Jim Sullivan, of Londonderry, NH. Many thanks to members John Maher and John Blomquist, who were on-site to oversee the work and ensure its proper completion.

Eileen Myers has been hard at work organizing the Sky & Telescope Magazine collection, which is soon to be made available to members as part of the library archives. Even after keeping two copies of each magazine we had a ton (literally) of duplicate magazines. After first being offered to the members, the surplus magazines were donated to a literacy project in Westford where they will go to students in the States and abroad. Chuck and June Evans, Steve Beckwith and I spent a couple of days sorting, boxing and delivering the surplus. Chuck was kind enough to make his trailer available for delivery or it would have taken many, many trips. If any member is interested in helping Eileen put the magazine collection in special binders please contact her via the clubhouse committee.

As always, if you have any questions, feel free to contact me at vrenehan@gis.net. Clear Skies!

~ *Virginia Renehan, President* ~

July Meeting Minutes . . .

The July meeting of the Amateur Telescope Makers of Boston and the Bond Astronomical Club was a "Members Night" which featured our own membership giving presentations on all things astronomical.

The meeting started late due to a burned out bulb in the Center for Astrophysics (CFA) projector. Thanks to Kelly Beatty for going back to his office and getting a projector.

Virginia read a message from ATMob member Haldun Menali. He and Dick Parker from the Hartford Club are currently in Turkey putting on a mirror making workshop. Haldun mentioned that "it is the 3rd day and they are already pouring their pitch laps. He found that "the interest is awesome and the participants are enjoying it very much." The ATMob donated some mirrors and supplies to the Turkish group last year. A few images of the workshop were shown to the membership.

Dave Wilber gave a short presentation on his visit to the Mount Wilson Observatory and to get a chance to observe through their 60 inch telescope. This opportunity came about when his wife gave him this present as a gift for his 60th birthday.

The Wilson Observatory is located just north of Los Angeles and is on a mountain 1 mile in altitude above the

basin. Even with the light pollution, work is still being carried out at this facility.

Dave described the wonderful views of the Cats Eye nebula, Saturn and Jupiter.

Al Takeda followed with a discussion of astrophotography with his Canon 20D digital SLR, the Philips ToUCam and the new Takahashi E-180 astrograph.

The Canon 20D has been a milestone camera in that it has generally replaced the film cameras for both daylight and astro-imaging. The E-180 is a hyperbolic astrograph with an effective diameter of 7 inches and an f/ratio of 2.8.

The images presented started with the Moon, progressed outward to show the galaxies of M81/M82 and nebulas such as the first light image of M42 (Orion Nebula) taken at the ATMob clubhouse during February's Full Moon.

Some older film images were also shown to compare them with the newer digital images. Al also mentioned that the Canon 20D has an infrared (IR) blocking filter that blocks most of the hydrogen alpha from being recorded. This limits the camera from easily imaging nebulas but other astronomy subjects are easily recorded.

Mike Hill spoke about cleaning up and refurbishing the attic at the ATMob clubhouse. Most of the work was in vacuuming and organizing items so that people could get to materials. "Shelves were built to move things off the floor and drawers were made to store different types of metal."

Mike then showed some images of some of the items that are stored in that space such as a mount that was owned by Tom Briton.

John Boudreau showed the group a few of his amazing astrophotography images that he had taken. His equipment consists of an SBIG ST-10 monochrome CCD camera, a mono Philips ToUCam, an Imaging Source DKM mono fire wire camera, a Celestron C-11, a Takahasi FS60C and a TEC-140 refractor.

One of his largest images was a 9 panel Hydrogen-Alpha mosaic of the Horsehead-Orion Nebula region that took over 5 months to complete using his TEC-140. Each panel had a total exposure of 3 hours apiece and the entire image has over 27 hours of combined exposure. He explained that there is a 15 degree overlap and the image was stitched together with Maxim DL.

Some of the other images that he presented were Stephens Quintet, Saturn, Mercury showing surface features, Venus cloud bands using an ultraviolet (UV) filter, the International Space Station (ISS) and the Space Shuttle Atlantis.

Paul Valleli showed a Hubble image mosaic of Eta Carina that was over 1.18 Gigabytes in size.

Paul then showed some images of the new 24 inch Richey-Cretien telescope at the Maria Mitchell Observatory in Nantucket that he and Gary Walker assisted in selecting for that facility.

Fred Ward announced that he is putting up a new dome to replace his current one. Bruce Berger presented a 30 second movie of the trial assembly that they performed in Fred's garage.

Bruce explained that the observatory is shaped just like a shed but it is 43 feet tall. They wanted to assemble it on the ground before they attempted to perform this feat on the top. They explained that it was a good thing that they did this because they ran into a few glitches in the assembly.



(L-R) Virginia Renehan and John Boudreau on "Members Night."

The Secretary and the Membership Secretary business reports were given.

Virginia Renehan reported on the Comet 2006BZ13. A telecom on Project Dawn will take place on July 18. Project Astro training will take place on August 20th and 21st.

Al Takeda showed a animated GIF file showing the ISS and Shuttle moving over the Clubhouse.

~ *Al Takeda, Secretary* ~

Membership Report . . .

We have two new members to the club this month:

Philip Levine from Randolph
Suzanne Aleza on the faculty of Northeastern University

Welcome to you both.

This is the time to renew ATMoB membership. The membership renewals are due September 1st. Please visit the club web site www.atmob.org and fill in your information on the renewal (or join) form. Forward a check for the amount of your renewal to:

Dave Siegrist
34 Millwood Dr.
Shrewsbury MA 01545-2228

Subscription renewals to Sky and Telescope can be sent directly to the publisher and the fee paid through the club for the club discount.

If you do not have access to the web, renewal forms can be obtained by dropping me a note or seeing me at the next meeting.

If you have any questions about this process please send an email to membership@atmob.org

~ *Dave Siegrist, Membership Secretary* ~

Clubhouse Report . . .

July 28th: Work Party #8

Thanks go out to John Blomquist, Paul Cicchetti, Steve Clougherty, Chuck Evans, Anna Hillier, Tom Lumenello, John Maher, Eileen Myers, John Reed, Art Swedlow, Dave Prowten, Al Takeda and Sai Vallabha.

The rain definitely placed a damper on this work party but after it stopped Chuck E. and John M mowed the lawn. The "Rain Handler" studs were designed by Dave P. Eileen M. delivered the SMT binders to the library. John R., Paul C. and Dave P. started to put in forms for the access walk to the east side door for the near barn. Eileen vacuumed and cleaned the clubhouse. Al T. continued working on setting up the scanner. Eileen and Al. T reviewed specifications on the computer projector. The Mosquito Magnet was serviced (octonol and propane) by Paul C.

Aug, 25, 2007: Work Party #9

Thanks are in order for the 12 members that contributed to Work Party #9. Steve Beckwith, Paul Cicchetti, Steve Clougherty, Chuck Evans, Dick Koolish, , John Blomquist, John Maher, Eileen Myers, Virginia Renehan, Jack Richardson, Jun-ichi Sano, Art Swedlow, Al Takeda and Sai Vallabha.

It was a hot, hazy and humid day. This had to be the hottest work party for the entire year. Some solar observing was done by Paul C. His hydrogen-alpha scope showed some prominences, sunspots and a few filaments on the sun.

Jack R. trimmed trees and shrubs on the border of the observing field. Jun-ichi S., Paul C, Dick K., John B., John M. stained the front porch railing with the first coat of stain. Steve C. and Al T. stained the east side gable end of the clubhouse with the first coat.

Virginia R. and Chuck E. removed excess Sky and Telescope magazines from the Office. Some issues were discarded and some placed in the near barn.

Steve B. took measurements on the 20 inch for the Dobsonian conversion. Thanks go to John M. for purchasing and placing the new 4 step ladder in the Ed Knight observatory.

Clubhouse Saturday Schedule

Sept 15	Brian Maerz	Rich Nugent
Sept 22	WP#10: John Reed + workshop leader	
Sept 29	John Panaswich	Sai Vallabha
Oct 6	Shilpa Lawande	TBD
Oct 13	Eileen Myers	Rich Nugent

~ *John Reed, Steve Clougherty, and Dave Prowten* ~



M-45 (Pleiades) in Taurus. Imaged at the Clubhouse on 7 Sept.2007
Canon 20D, 30 minutes total exposure. Image by Al Takeda

Observers corner

Twelve ATMOb members and friends were on hand for our "red light" observing session which took place last Friday 9/7 at the clubhouse under hazy but generally clear skies. The Ed Knight roll-off observatory was opened for those who were primarily interested in observing and imaging with the C-14. A total of six scopes were set up on the South observing field. Jupiter was viewed early in the evening, and the great not-so-red spot was barely discerned on Jupiter's central meridian at 9 P.M. A good variety of deep sky objects having fairly high surface brightness was seen during the evening. Show piece globular clusters including M5, M13, M92, M2 and M15 were nicely placed for viewing. Planetary nebulas looked very good in the telescope using a narrow band or O3 (Oxygen-III) filter. M57 (Ring) and M27 (Dumbbell) looked truly outstanding in the largest telescope with the filter in place. A variety of smaller lesser known NGC planetaries were observed by several members in the big scope as well. Despite their small size and normally faint appearance, detail such as 2-lobed features can be seen in many planetaries using high magnification and a narrow band filter.

By 10 P.M. we were able to easily pick out "tiny" Neptune located in Capricorn. An hour later we found Uranus which is East of Neptune in Aquarius, showing itself as a pale-green disc quite a bit larger in size than Neptune.

Despite the hazy sky conditions the majority of observers stayed until after midnight. We hope to do more of these Friday night "red light" observing sessions throughout the year. They will be announced on the Announce List during the early afternoon of that Friday.

Hope to see you there soon!

~ *Steve Clougherty* ~

ATMoB AAVSO Letter . . .

September 2007

In response to a request for contributions to the AAVSO building fund, ATMoB members donated \$500 in ATMoB's name. This was matched by \$500 from the club. The \$1000 donation results in special recognition of ATMoB by AAVSO (Gary Walker can provide details).

I received the following note from AAVSO:

"Hi Gary (and the rest of the ATMoB),

Thanks for your generous contribution to our building fund. We are extremely pleased with the new building, and expect it will serve our needs for the foreseeable future. It solves all of our old problems such as a moldy archive (not a good thing for papers!). I hope you all have a chance to come visit, see what we are doing and how your support is appreciated.

Arne Henden
Director"

Members desiring to make additional tax deductible donations to the AAVSO building fund may do so to:

AAVSO
49 Bay State Road
Cambridge, MA 02138

~ *Gary Jacobson, Treasurer* ~

Glass Team Needed . . .

In the Fall of 2006, I collected a large quantity of high quality optical glass blocks, disks, and finished lenses that had become surplus to the needs of my employer. Most of the lenses are of very high quality and some have minor defects. The stock is to be split about even between ATMoB's and STM's.

The glass varies in size from 6mm to 25-inches and larger. It is all of Grade A, striae-free quality and cost from \$10 to \$50 per pound. Materials are BK-7, F-4, many Schott types, Pyrex, Fused Silica, Schott Zerodur, O-I CerVit, OHara E6 low-exp, aluminum, silicon and even some ED glass. Most is wrapped in lens tissue or boxed and most is marked by type.

Well, a year has gone by and I need the use of my garage/machine shop back by the end of October. Much could be stored outdoors, as long as it is covered and kept dry. I need a team of volunteers to sort through it, sort it, catalog the pieces and move it to a location where it can be decided whether to sell it on Ebay, AstroMart, keep it for future club use, or scrap some of it. Some blocks would need to be shaped into disks for ATM use.

All profit would go to the club treasury. Silicon can make an excellent mirror and there are several finished parabolic mirrors that have a section cut out to make an off-axis unobscured mirror.

The team members would have to determine when to meet at my house and other logistics. I am not prepared to do the selling or moving myself and I cannot wait for a swap meet.

valleli@rcn.com 781-272-8946

~ Paul Valleli ~

Deep Space Mysteries 2008 Calendars For Sale ...

I will once again have the Kalmbach Publishing calendar (Deep Space Mysteries 2008 Calendar) available for sale for \$8.00/copy. More details about the calendar are at <http://kalmbachcatalog.stores.yahoo.net/68150.html>.

PLEASE HAVE EXACT CHANGE! Or, make checks payable to the Amateur Telescope Makers of Boston, Inc.

I will *NOT* take "reservations". These are for sale ONLY AT THE MEETING. If you'd like one and can't make the meeting, perhaps I'll have some left in October or, better yet, make arrangements with someone going to the meeting to purchase (and deliver) a copy for you.

~ Bernie Volz ~

Annual Club Picnic ...

Saturday, October 20th is this year's date for the Annual Club Picnic at the Tom Britton Clubhouse in Westford. Starting at 3:00 P.M. enjoy the day with other ATMob members, sharing your astronomy stories and experiences. Bring any astrophotography you would like to show. Please bring a tasty dish to share - salad, main dish, dessert, soup, appetizer, fancy bread, anything goes! A serving utensil would be helpful. We will provide the hamburgers, potato chips, ketchup, mustard, coffee, paper goods and plastic cutlery. The food is always varied and delicious. There will be solar viewing during the day and night sky observing after sunset (all weather permitting). The picnic is on rain or shine. Bring lawn chairs or blankets to sit on. Depending on the weather, bring your favorite suntan lotion and mosquito repellent. Observing will continue until Midnight if the sky is clear, so bring your telescope and your observing clothing and gear. The club's scopes will be open too.

Club members, their families and friends are invited. Do bring the kids and grandchildren. There will be a tour of the clubhouse facilities and a demonstration of mirror grinding. There will be opportunities for kids to take part in astronomy activities. We also plan to walk "up the hill", stopping along the way to talk about the MIT Haystack Observatory facility.

Directions to the clubhouse can be found on the last page of *Star Fields* and at the club website www.atmob.org.

Questions - Email Eileen Myers at starleen@charter.net.

Don't miss the fun! Clear skies,

~ Eileen Myers ~

A Lunar Eclipse Party in Maynard ...

A few weary ATMob members traveled to Maynard, MA to witness a total lunar eclipse in the early morning hours of August 28th. John Blomquist, Grace Cho, John Maher, Eileen Myers and Al Takeda eagerly waited for the shadow of the earth to glide across the face of the Moon but the clouds stubbornly clung to the southwestern horizon. A small "sucker hole" opened up and we were able to get a brief glimpse of the partial phase but that view didn't last long.

After a few hours the rest of the sky cleared but the clouds continued to follow the setting Moon. With hope fading for a view of totality, Eileen pointed her Unitron refractor to Venus which was rising in the morning twilight. Its thin crescent "boiled" in the unstable air low on the horizon. The dawn sky glowed with a brilliant orange as the nearby clock tower announced the hour with a resonant "bong".

This was our last observing session with Grace. She is currently in California and will be moving back to Korea to live with her father for a year. We give her our best wishes for a safe journey.

~ Al Takeda ~



(L-R) Eileen and Grace with the best picture of the Moon that morning.

Oct. Star Fields deadline
Sat., Sept 29th

Email articles to Al Takeda at
secretary@atmob.org

POSTMASTER NOTE: First Class Postage Mailed Sept. 12th, 2007

Amateur Telescope Makers of Boston, Inc.
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FIRST CLASS

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Stephen Beckwith (978) 779-5227

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 The Month . . .

To calculate Eastern Daylight Time (EDT) from Universal Time (UT) subtract 4 from UT.

Sept 11 New Moon
Sept 19 First Quarter Moon
Sept 23 Autumnal Equinox
Sept 26 Full Moon
Sept 29 Mercury is at greatest eastern elongation (26 deg.)
Oct 3 Last Quarter Moon