



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

Vol. 20, No. 5 May 2008

## This Month's Meeting...

Thursday, May. 8<sup>th</sup>, 2007 at 8:00 PM

Phillips Auditorium

Harvard-Smithsonian Center for Astrophysics

*Parking at CfA is allowed for duration of meeting*

This month we welcome Dr. Sara Schechner, the David P. Wheatland Curator of the Collection of Historical Scientific Instruments, Harvard University, and the Secretary of the Scientific Instrument Commission of the International Union for the History and Philosophy of Science.

Dr. Schechner's talk, "The Adventures of Captain John Smith, Pocahontas, and a Sundial: Astronomy, Mathematics, and Power at the Time of Jamestown," will give us a interesting look the history of astronomy in pre-colonial America.

While exploring Virginia by canoe in December 1607, Captain John Smith was ambushed by Powhatan Indians and chased into the swamp. Wounded by arrows and mired in the cold mud, Smith surrendered and was led to their chieftain, Opechancanough. Smith played for time. He pulled out his pocket sundial and proceeded to deliver a lecture on astronomy! The Indians marveled at the dancing needle of the magnetic compass, which they could plainly see but not touch because of the glass cover. They apparently thought less of Smith's discourse in a foreign language on the sun, moon, and planets, as within the hour, Smith's captors had him tied to a tree and were ready to shoot him. But then, Opechancanough held the sundial aloft and spared Smith's life. For the next month, Smith was alternately fêted and condemned before being released with the help of Pocahontas. Smith's lucky break with his pocket sundial confirmed his belief that mathematical—indeed, astronomical—instruments were vital to the survival of Jamestown.

This famous event in American history will be our gateway to understanding the importance of astronomy in the exploration of the North America.

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

~ Virginia Renehan ~

## President's Message...

Someone once wrote an equation on the white-board at the clubhouse that went something like this: "uncommon astronomical event + telescopes = complete cloud cover". Sure enough, with the exception of a few days last week, we've had cold cloudy and rainy days because Mercury is visible and very bright (although fading now) in the western sky. Having passed superior conjunction on April 16<sup>th</sup>, it is on its way higher in the sky after sunset, and was brightest on the evening of April 23<sup>rd</sup>.

Thursday night the 24<sup>th</sup>, we managed to catch a quick glimpse of Mercury here in Gloucester before it slid into some low clouds at the horizon. It was very bright, pinkish orange and appeared to move very rapidly as it set. Since then, we've not had the best weather, but we may have a few more opportunities to view Mercury before it passes its greatest elongation on May 14<sup>th</sup>, shining nearly as bright as Procyon. After that, it will continue to dim as it passes through its waning crescent phase and "falls" back towards the Sun and lower in altitude, until it becomes invisible again at the end of May.

Here's a bit of Mercury trivia: at certain points on Mercury's surface, an observer would be able to see the Sun rise, seem to stop, then move backwards and set only to rise again in the same Mercurian day. This happens because as Mercury approaches perihelion, Mercury's orbital speed matches its rotational speed and the Sun's motion across the sky appears to stop. At perihelion, the orbital speed *exceeds* the rotational speed causing the Sun to "move backwards" through the Mercurian sky and set, only to rise again as Mercury moves further away from the Sun.

A few other uncommon events: April 24<sup>th</sup> marked Hubble's 18<sup>th</sup> year observing outer space. Where did the time go?! 100,000 orbits around the Earth - the equivalent of a round-trip to Saturn - 840,000 observations, 540,000 images of some 27,000 celestial objects, and all while traveling at 17,500 mph. Astronomers using Hubble data have generated over 7,500 scientific papers making it one of the most productive scientific instruments ever built. For stunning Hubble images released on Hubble's 18<sup>th</sup> anniversary do a key search for Mayall's Object or check the Hubble web page!

NASA marks its 50<sup>th</sup> anniversary this year. As part of the anniversary celebration the Digital Learning Network (DLN) will host NASA's 50th Anniversary Special Event Series webcasts - a 5 part series geared toward students, highlighting specific topics in NASA's history. Webcasts include: Go Flight!, Astronomy: Bringing the Past to Light, Advancements in Aeronautics, Propulsion: Past, Present, and Future; and Wind Tunnels and Their Use in Aerospace. For details go to:

<http://dlm.nasa.gov/dln/content/catalog/details/?cid=622>

If any of you are interested in sharing your astronomy expertise to inspire the next generation of astronomers, consider participating in Project ASTRO. This year's Project ASTRO summer workshop will take place in Boston at the Museum of Science on July 14 and 15. Coordinator, Cathy Clemens is looking for amateur astronomers to participate. Project ASTRO partners amateur astronomers and teachers, providing training and educational materials and the opportunity for amateurs to share their expertise with students in formal and informal settings. Adopt a class or youth group and make four visits during the year. Project ASTRO uses and makes available to volunteers, great hands-on, inquiry based learning materials and activities. Contact Cathy at [cclemens@cfa.harvard.edu](mailto:cclemens@cfa.harvard.edu) for information on the workshop.

You can also do some armchair outreach to more ATMoB members than you might see at the clubhouse or at monthly meetings. Consider writing a paragraph or two for the newsletter! Tell us what you have been up to - share your most recent telescope project, favorite observing targets, favorite software tools, write an astronomy book review, etc. Whether you are a beginner or advanced observer it is always interesting to hear from other club members about your projects, questions, or observing sessions.

Our thanks to Glenn Chaple for his May newsletter submission on spring double stars. Glen is a long-time club member, variable star observer, and writer for *Astronomy Magazine*. Look for more of Glen's astronomy observing tips in the coming months. See, don't you love reading good content like that! Let's hear from more of you!

In closing, we welcome back Bob Naeye to the Boston area, and congratulate him on his new position as Editor in chief at *Sky & Telescope Magazine*. For the last year, Bob has been working at the Goddard Space Flight Center. We look forward to his return as an active ATMoB member - especially his science updates at our monthly meetings! Already Bob offered to be guest speaker on the GLAST mission at an upcoming meeting. Stay tuned.

As always, if you have any questions or comments, feel free to contact me.

~ Virginia Renehan, President ~

## April Meeting Minutes . . .

In April the Amateur Telescope Makers of Boston including the Bond Astronomical Club celebrated their 800<sup>th</sup> lecture complete with a celebration cake.

The meeting hosted Dr. Warren Brown of the Harvard-Smithsonian Center for Astrophysics talking about hypervelocity stars that are escaping the Milky Way

galaxy. His lecture, *Hypervelocity Stars Ejected from the Galactic Center*, discusses his discovery of these stars.

Dr. Brown first gave us the big picture of the history, theory and properties of a black hole. Dust creates 30th magnitude extinction in the visible spectrum so he showed the group infrared views of the central area of the Milky Way in the Sagittarius A region. The observed stars appear to be orbiting around a point source. Using Keplerian physics the black hole was determined to be at least 4 million solar masses.

In the rest of the galaxy, the space between stars is vast but in the galactic center Brown states that "star densities are so immense that the galactic center is almost a stellar collider. You can have near misses, encounters or outright collisions. Unusual processes can actually happen rather frequently in the galactic center. Twenty years ago, in a Nature paper by a theorist named Jack Hills who predicted that: if you have a massive black hole and a pair of stars, when one star gets captured the other stars gains enough energy it can be ejected at 1000 km per sec (2,000,000 mph)."

It was during a 2005 survey of blue stars that Dr. Brown noticed that the Doppler shift in the spectra he was studying was unusual. "The spectrum told us that this star is moving away from us at 850 km per second. Now that is 1.9 million mph. So no star in the galaxy moves that fast. This is an absurd velocity." Dr. Brown had just discovered the first hypervelocity star. That survey also turned up 7 more hypervelocity stars. He has also discovered 9 more unbound (beyond the escape velocity of the galaxy), hypervelocity stars in February of this year.

Brown predicts that through statistical analysis that 100 hypervelocity stars should be distributed over the entire sky. He noted that "these ejections are rare. Theoretical predictions are a high velocity star will be ejected out of our galaxy about once every 100,000 years."

Hypervelocity stars can spawn many theoretical applications such as measuring the dark matter potential of the galaxy. "By measuring the deviation of their trajectory away from the Galactic center tells you about how the gravitational potential of the galaxy has affected their orbits." Dr. Brown has put forward a proposal to use the Hubble Space Telescope to measure the proper motion with a 2 year baseline.



(L-R) Dr. Warren Brown and Hypervelocity Stars Ejection History

Elections for 3 members of the Nominating Committee proceeded.

While the ballots were being counted Steve Beckwith gave the Membership report for Dave Siegrist, Gary Jacobson gave the Treasurer's report.

Paul Valleli donated \$80 to the club from the sale of his “doughnut” lenses.

Virginia gave the Star Party report. She also reported that Nanette Benoit wrote a short article for the Dark Sky Network and her submission was selected out of 500 entries and she was awarded a projection solar scope for the club.

Steve Clougherty gave a Clubhouse report and mentioned that the last work party was the first one in many months in which “we didn't have to remove snow”. Steve also thanked Steve Morelock on all of the work he's been doing to repair the C-14.

Steve Beckwith gave an Observing report. He reported that he along with Mike Mattei and John Maher collimated the C-14. He reported that the scope was badly out of adjustment. After working on it they aimed the scope toward Saturn and got a “great image”. “Mars looked okay but had a small angular size. It was a really nice night and they were able to increase the power to over 700X”.

Steve also discussed the rocker box for the 20 inch Dobsonian conversion. The first assembly was incorrect due to a measurement error and the dimensions of the box will have to be adjusted.

Virginia announced that the NorthEast Astronomical Forum (NEAF) is at the end of the month. She also announced that astronaut Alan Bean would be talking at the Museum of Science on Tuesday, April 29.

In announcing the 800th meeting of the Amateur Telescope Makers of Boston, Virginia also mentioned that Mario Motta and Art Swedlow's birthdays are also being celebrated.

Congratulations were given to Bernie Kosicki on his tireless efforts in implementing the Acton Lighting Ordinance. Bernie reported that they had gotten approval in converting all the streetlights to flat lights, 700 streetlights in all. It took the Lighting Committee a couple of years for this to happen. Bernie also noted a couple of ATMOB members, Steve Feinstein and Tom McDonagh, for helping in this effort. He mentioned that the Acton Town-wide Star party helped pave the way by tying it in to the lighting ordinance.

The results of the nominating committee voting were announced by Secretary, Al Takeda. The committee will consist of Mike Hill, John Small and the Chairman will be Peter Bealo. Vacant offices for 2008/2009 will include the Vice President, Member at Large and the Treasurer.

Neil Fleming asked if there was any interest in setting up a remote observatory. Please contact Neil if you are interested.

John Small asked the membership if anyone has optics

that can be used by Sarah Hughes, one of the CFA grad students, to help demonstrate optics for one of the Children's Program at the CFA.

Ross Barros-Smith's group, The Youth Science Apprenticeship Program, will be participating in the Cambridge Science Festival and will be utilizing a Starlab. He has requested assistance from a member that has experience using the equipment.

Steve Beckwith announced that he is selling a Cave Astrola 10" f/7.

Paul Valleli talked about Bernie K's 8" f/5 mirror passing Dave Kelly's auto collimation test at the Springfield Telescope Makers. It measured 1/10 wave peak to valley. Paul also auctioned off the 1926 edition (1st printing) of *Amateur Telescope Making*. This copy was originally owned by Chester Cook, an optician at the Harvard Observatory and the Director of the Harvard College Symphonic Orchestra. He made mirrors on the side for the observatory. In 1965, after Cook's death, his wife Marie gave the book to Ed Knight. Alan Sliski, won the book for \$55 in an open auction that evening.



Celebratory cake for the 800th meeting of the ATMob.

~ Al Takeda, Secretary ~

## Nominating Committee . . .

By popular vote at the April meeting, the 2008 Nominating Committee was selected. The results are: Chairperson: Peter Bealo and members: John Small and Mike Hill.

If any member is interested in running for any of the Executive Board positions, please contact any of the members listed above.

## Executive Board Meeting...

There will be an Executive Board Meeting on Tuesday, May 27th, 6:30 P.M. at the clubhouse in Westford. The meeting is open to the membership.

~ Virginia Renehan, President ~

## Clubhouse Report . . .

The April work session held on the 19<sup>th</sup> experienced clear skies with welcoming temperatures in the 70s. What a change from past months! The sun showed no sunspots but 2 prominences in H alpha, courtesy of Paul Chicetti's solar scope. Several projects were started or continued during this session. The doghouse replacement pier hole was dug and covered with a safety plank by Sergio Simunovic, George Paquin, John Maher, Helios Lam, Al Takeda, Bill Toomey and Paul Cicchetti.

The near barn outside staging pad excavation was formed and readied for rebar by John Blomquist, Dave Prowten, Helios L, Steve C. Gary Jacobson. They then adjusted the forms to set the pitch of the pad to ensure proper drainage. The modified 20 Dobsonian rocker box was reinstalled and further modified for telescope clearance by Dave P, Steve Beckwith, Mike Mattei, John M. and Sergio S.

The Home Dome footing locations were determined and marked by 4 lengths of rebar by George P, Sergio S. and Bill T. Digging will commence at the May Work session.

Annie Hillier continued with office work and tended the front porch garden.

The last Bailey Hill spaghetti lunch of the season was served by Nina Craven, Sai Vallabha, Art Swedlow, Eileen Myers and John Reed. It consisted of whole wheat spaghetti with thick sauce, garlic bread, salad with vadalia onions and baked chicken. The May work session will revive the gas grill under the direction of Art Swedlow.

During the day, the internet 8 port switch in the electronics room had failed and a new 12 port replacement switch provided by Eileen and Ben Myers was subsequently installed by Al T.

Clear skies continued allowing observing from the observing field and the Ed Knight Observatory. The building was closed at 3 a.m.

Our next work session will be held on the Full Moon Saturday, May 17<sup>th</sup>. You are welcome to join us and we hope to see you.



Installing the 20 inch into the new rocker box. (L-R) Dave Prowten, John Maher, Steve Beckwith, Sergio Simunovic and Mike Mattei

## Clubhouse Saturday Schedule

May 10	Brian Leacu	Phil Rounseville
May 17	Dave Prowten – Work Party	
May 24	Art Swedlow	Sai Vallabha
May 31	Brian Maerz	RIch Nugent
Jun 7	Tom Lumenello	Eileen Myers

~ John Reed, Steve Clougherty, and Dave Prowten ~

## Clubhouse Picnics . . .

The Clubhouse Directors and members of the Clubhouse Committee invite all members of ATMob and their families (and friends) to a **Saturday, July 5<sup>th</sup>** picnic to continue celebrating July 4<sup>th</sup>, and a **Saturday, September 20<sup>th</sup>** picnic to start celebrating the autumnal equinox. The fun starts at 3 PM and depending on observing conditions will continue until about midnight. The picnics will be held even if the weather does not cooperate.

Both picnics will be held at the Tom Britton Clubhouse in Westford. 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, kielbasa, potato chips, 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. Bring lawn chairs or blankets to sit on. Bring suntan lotion and mosquito repellent. Bring your telescope and your observing clothing and gear. The club's scopes will be open too. 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](http://www.atmob.org)

**Questions - Email co-host Eileen Myers at [starleen@charter.net](mailto:starleen@charter.net), or contact co-hosts Dr. Art Swedlow and Sai Vallabha.**

Clear skies,

~Eileen Myers ~

## Membership Report . . .

There were no new members this month.

The membership stands at 289.

~ Dave Siegrist – Membership Secretary ~

## Some Bright Double Stars . . .

To most deep sky enthusiasts, spring means “galaxies.” Hundreds of these island universes – many in the Coma-Virgo cluster – are within the reach of backyard scopes. Often forgotten are the beautiful double stars that also inhabit the spring skies. Here are ten noteworthy examples. Data are from the Washington Double Star Catalog (WDS).

*zeta Cancri* 8h 12.2m +17° 39'; mags 5.1, and 6.2, sep 5.9", P.A. 72° (2004)

Slow-moving binary system with a period over 1100 years. The primary is a close binary (P=59.5Y), whose magnitude 5.6 and 6.0 components are currently separated by one arcsecond. You'll need a good 6 to 8-inch scope, optimum seeing conditions, and a magnifying power in excess of 250X to see zeta Cancri as a triple.

*phi<sup>2</sup> Cancri* 8h 26.8m +26° 56'; mags 6.2 and 6.2, sep 5.2", P.A. 218° (2003)

Pretty twin system, both white, that gleam like cat's eyes from the inky blackness of space. Located about 10 degrees east of Pollux.

*iota Cancri* 8h 46.7m +28° 46'; mags 4.1 and 6.0, sep 30.7", P.A. 318° (2003)

This showpiece double with striking gold and blue colors has been likened to a springtime “Albireo.” Easily split at 30X.

*alpha Leonis* 10h 08.4m +11° 58'; mags 1.4 and 8.2, sep 176.0", P.A. 308° (2000)

Regulus. Despite their wide separation, these two stars share a common proper motion.

*gamma Leonis* 10h 20.0m +19° 50'; mags 2.4 and 3.6, sep 4.6", P.A. 127° (2004)

Algeiba. Beautiful slow-moving binary (P=620Y); both yellow.

*xi Ursae Majoris* 11h 18.2m +31° 32'; mags 4.3 and 4.8, sep 1.7", P.A. 245° (2004)

A rapidly-moving binary system with a period of about 60 years. Currently, a good test for a 3-inch scope.

*N Hydrae* 11h 32.3m -29° 16'; mags 5.6 and 5.7, sep 9.4", P.A. 210° (2003)

(Also known as 17 Crateris). Observers in northerly latitudes usually don't see this beautifully matched far-south pair at its best.

*Wnc 4 Ursae Majoris* 12h 22.2m +58° 05'; mags 9.7 and 10.2, sep 52.3", P.A. 77° (2004)

What is so faint and wide a pair doing on this list? Simple – it's a Messier object! Unable to find a nebulous object reported to be in the area, the great comet hunter found this dim pair and (for reasons we can only guess) assigned it as his 40<sup>th</sup> object. Winnecke 4 is located 1 ½ degrees northeast of delta Ursae Majoris (see finder chart).

*alpha Canum Venaticorum* 12h56.0m +38° 19'; mags 2.9 and 5.5, sep 19.3", P.A. 229° (2004)

Cor Caroli. One of the finest double stars in the sky for small telescopes. Colors have been described as white and slightly yellowish. What do you see?

*zeta Ursae Majoris* 13h 23.9m +54° 56'; mags 2.2 and 3.9, sep 14.3", P.A. 153° (2003)

Mizar. Often cited as the first telescopic double discovered (Jean Baptiste Riccioli – 1650). Recent studies of Galileo's notes prove that he saw and measured this pair in 1617. Like Cor Caroli, Mizar is a small telescope treat and an excellent target for star parties. Forms a naked eye pair with 4<sup>th</sup> magnitude Alcor, located 12' to the east.

~ Glenn Chaple ~

## Star Party Thank You! . . .

### Lexington Planet Party

Hi Virginia,

Many thanks for organizing the ATMob crew for our Planet Party. It was a huge success. I would guess that we had 150-200 people there over the course of the night. We had beautiful viewing and, of course, your members really inspired the kids.

My favorite quote is from a teacher: "6 kids from my class attended and absolutely loved it. I had them share their experiences with the class yesterday am and every other kid was green with envy as they described seeing the moon up close, Saturn's rings, far-away stars, etc..."

The most amazing response was a little girl who said "it was different from what I expected". When I asked her how - she replied "I never really thought it was real before, I thought it was all just pictures. But now I have seen it with my own eyes. "How's that for WOW!"

The ATMob volunteer list included John Blomquist, Tom Calderwood, Neil Fleming, Anna Hillier, John Maher, Christine Moulen, Anthony Moulen, George Paquin, (Al Takeda – Editor) and Bruce Tinkler.

We also had 4 telescopes from Lexington, including the head of the School Committee!!

Best, Fran



Lexington Planet Party

# A Woman's Place is in the Dome: A Short History of Women in Astronomy

North East Astronomy Forum, April 26, 2008

Mary Lou West, Math/Physics, Montclair State University

## 1. Ancient times to 1900

Hypatia \_\_\_\_\_  
Caroline Herschel \_\_\_\_\_  
Maria Mitchell \_\_\_\_\_  
Dorothea Klumpke \_\_\_\_\_  
Henrietta Leavitt \_\_\_\_\_  
Annie Jump Cannon \_\_\_\_\_

## Can you find a match?

A) Leonid Meteors  
B) discovered first American comet  
C) discovered 8 comets  
D) classified stellar spectra  
E) mathematics of astrolabe  
F) cepheids in SMC

## 2. Twentieth Century

Cecilia Payne-Gaposchkin \_\_\_\_\_  
E. Margaret Burbidge \_\_\_\_\_  
Sidney Wolff \_\_\_\_\_  
Vera Rubin \_\_\_\_\_  
Beatrice Tinsley \_\_\_\_\_  
Sandra Faber \_\_\_\_\_  
Neta Bahcall \_\_\_\_\_  
Jocelyn Bell Burnell \_\_\_\_\_  
Gillian Knapp \_\_\_\_\_  
Nancy Roman \_\_\_\_\_  
Margaret Geller \_\_\_\_\_  
Carolyn Porco \_\_\_\_\_  
Linda Morabito \_\_\_\_\_  
Carolyn Shoemaker \_\_\_\_\_  
Jill Tarter \_\_\_\_\_  
Heidi Hammel \_\_\_\_\_

A) galaxy rotation curves, DM  
B) chemical evolution of galaxies  
C) Cassini at Saturn  
D) radio astronomy of ISM  
E) Cold Dark Matter  
F) nucleosynthesis in stars  
G) galaxies in a slice of universe  
H) Director of Kitt Peak Obs.  
I) SETI  
J) chemical abundances in stars  
K) discovered pulsars  
L) spacecraft developer  
M) great wall of galaxies  
N) ice giants  
O) many asteroids and comets  
P) volcano on Io

## 3. Women in the U.S. Space Program

Sally Ride \_\_\_\_\_  
Judith Resnick \_\_\_\_\_  
Kathryn Sullivan \_\_\_\_\_  
Nancy Boggess \_\_\_\_\_  
Shannon Lucid \_\_\_\_\_  
Donna Shirley \_\_\_\_\_  
Dorothy Metcalf-Lindenburger \_\_\_\_\_

A) MIR  
B) Educator Mission Specialist  
C) Mars Sojourner  
D) Challenger victim  
E) Infrared astronomy spacecraft  
F) First woman astronaut  
G) First woman spacewalk

## 4. Hope for the future

We celebrate the contributions of women to astronomy from the time of the Roman Empire to the US Space Program. Pulsars, dark matter, volcanoes on Io, and the great wall of galaxies are some of the things which have been discovered or developed by women. We look forward to more exciting times ahead.

## Northeast Astronomy Forum & Telescope Show (NEAF) and Northeast Astro Imaging Conference (NEAIC) . . .

To quote ATMoB Secretary Al Takeda, who in anticipation was saying this since March, "We are the astronomers who say "NEAF"". And there were at least 20 ATMoB members among the 1,000 or so amateur astronomers at NEAF this year, held on Sat-Sun, April 26th-27th. Located at the Rockland Community College in Suffern, NY, over 120 vendors displayed products. Many club members drove home happy with their wonderful purchases, not the least of which were 8mm and 13mm Tele Vue Ethos eyepieces. Some of the highlights of the event:

The astro-imaging conference, attended by hundreds of astrophotographers on Thursday and Friday, was sold-out. There was much to see and learn, and with three events going on simultaneously at different venues, choices had to be made as to which ones to attend. There were about 21 different seminars, so ask Paul Valleli and Neil Fleming which ones they attended when you see them. Neil was also a presenter – his talk was entitled "Narrowband Imaging - Great Results from Poor Locales".

The theme on Saturday was Recognizing Women in Astronomy. Mary Lou West, Professor of Math and Physics at Montclair State University, presented us with a quiz "A Woman's Place is in the Dome: A Short History of Women in Astronomy". The quiz is included in this newsletter. Do you know the accomplishments of these women?

Astronaut Dorothy Metcalf-Lindenburger, born in 1975 and the youngest astronaut working for NASA, gave a presentation about what led her to becoming a mission specialist-educator astronaut. She talked about growing up in Colorado, the teachers she had, her studies in geology, her experiences teaching earth science and astronomy, and the telescope she and her husband built. She first learned of NASA's teacher program when she searched the Internet seeking an answer to a student's question: "How do you go to the bathroom in space?" She shared with us the thrill of being notified that she was selected for astronaut training while standing at the phone in her classroom, and then described the grueling training program. She is also a cross-country coach and marathon runner.

There was much excitement during the introduction of Heidi Hammel before her presentation. Everyone recalled the impact of Comet Shoemaker-Levy 9 with Jupiter in July 1994. Dr. Hammel led the Hubble Space Telescope Team that investigated Jupiter's atmospheric response to the collisions. For most of us, she is the human face we all remember as the images of the impacts first appeared on our TV screens. She is an expert on the planet Neptune, and was a member of the Imaging Science Team for the

Voyager 2 encounter with the gas giant in 1989. Her latest research involves studies of Neptune and Uranus with Hubble and other Earth-based observatories. She certainly pressed home the point that Neptune is not boring! Dr. Hammel is also an Interdisciplinary Scientist for Hubble's successor, the James Webb Space Telescope, which is scheduled for launch in 2013.

Once again Barlow Bob organized the Solar Star Party, with over two-dozen amateur astronomers bringing telescopes for solar observing, including some that showed the solar spectrum. Unfortunately, the Sun was visible for only short time on Saturday.

The Springfield Telescope Makers demonstrated mirror grinding both days of the event, and had several interesting homemade telescopes on hand, including one made from a metal beer keg.

As usual there was great anticipation over the wonderful raffle prizes. This year Howard LeVaux won a Vixen 5-inch reflector telescope, and Eileen Myers won a gift certificate from Lumicon, thank you Lumicon very much.

~ Eileen Myers ~



NEAF Solar Star Party – Eileen Myers (standing) and Nina Craven



NEAF Raffle – Howard LeVaux wins a Vixen 5 in. reflector

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**June Star Fields deadline  
Sat., May 31<sup>st</sup>**

**Email articles to Al Takeda at  
secretary@atmob.org**

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**POSTMASTER NOTE:** First Class Postage Mailed May. 6<sup>th</sup>, 2008

Amateur Telescope Makers of Boston, Inc.  
c/o Dave Siegrist, Membership Secretary  
34 Millwood Dr  
Shrewsbury, MA 01545-2228  
**FIRST CLASS**

#### EXECUTIVE BOARD 2007-2008

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#### COMMITTEES

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Steve Clougherty (781) 784-3024  
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HISTORIAN: Anna Hillier (781) 861-8338

OBSERVING: Stephen Beckwith (978) 779-5227  
Mike Mattei (978) 264-0017  
John Maher (978) 568-1253

## 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 The Month . . .

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

May 10 Moon 0.2 deg. S. of M44 (Beehive), 02 hrs UT (10 EDT)  
May 11 First Quarter Moon  
May 19 Full Moon  
May 23 Mars 0.01 deg. N. of M44 (Beehive), 6 hrs UT (2 EDT)  
May 27 Last Quarter Moon  
Jun 3 New Moon  
Jun 10 First Quarter Moon